

## Questions and epistemic stance: Some examples from Italian conversations

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### ABSTRACT

Through the analysis of presuppositions, question design, social action and preference organisation in short fragments of Italian question-answer sequences, this paper aims to show that (1) *wh*-questions, on the one hand, and alternative and polar questions (i.e., polar interrogatives, tag and declarative questions), on the other, come from two different epistemic positions: unknowing and uncertain, respectively; (2) alternative and polar questions convey different degrees of uncertainty, thus placing themselves in different points along the epistemic continuum of the uncertain position.

### 1. Introduction

This paper focuses on the relationship between questions and epistemic stance (or epistemic position). Differing from Heritage's model [61,63], according to which *wh*-questions, polar interrogatives, tag and declarative questions convey the questioner's *less knowledgeable* (K-) position, we argue that those questions (to which we add alternative questions) convey two different epistemic positions, either unknowing or uncertain. In other words, we keep unknowledge (lack of knowledge) and uncertainty (less of certainty) apart, while Heritage's K- is undifferentiated in this respect.

In order to show the unknowing or uncertain stance of questions, we use examples taken from corpora of spoken Italian. As far as this language is concerned, though several studies have focused on questions (e.g. Refs. [1–9]), on the one side, and on epistemicity and evidentiality (e.g. Refs. [10–17]), on the other, no study, to the best of our knowledge, has investigated the relationship between Italian questions and epistemic stance. Since the literature on this topic prevalently concerns the English language, we also give examples of questions taken from the relevant English literature.

Questions have been extensively investigated from different perspectives: formal, functional, interactional, etc. (see for example, [18–27]). A systematic cross-linguistic survey of the question-response system in everyday conversations was given by the research team participating in the Multimodal Interaction Project at the Max Planck Institute for Psycholinguistics [28]. This study aimed to qualitatively describe and quantitatively document, from a Conversation Analysis

perspective, the ways in which speakers *design* and *use* questions and responses in ten different languages from five continents [28], among which American-English [29] and Italian [8]. A team of ten researchers, each working on a different language, developed and used the same scheme for coding 350 question-response sequences, each in their own language-specific corpus of video-taped conversations in a range of dyadic and multi-participants interactions. The details of the coding scheme, including explanations of each coding category, are described by Ref. [30].

In line with previous studies [31,32], they identify three primary question types: *wh*-questions (also called content questions, Q-word questions, etc.), *alternative questions* and *polar questions* (also called yes-no questions). The latter are further subdivided in three sub-types: *polar interrogatives*, *tag* and *declarative* questions.

In this paper, we focus on such question types and take the above-mentioned survey by Ref. [28] and, in particular, the analysis of the Italian corpus made by Ref. [8] as a point of reference and comparison.

Epistemic stance has been thoroughly investigated as well (see, among others, [33–56]; etc.). With the term *epistemic stance* or *epistemic position* (which we consider as synonymous), some authors refer to speakers' commitment towards the truth of the propositional content being communicated (see for example, [39]; for other authors, the source of information/modes of knowing should also be included: 'epistemic stance refers to knowledge or belief vis-à-vis some focus of concern, including degrees of certainty or knowledge, degrees of commitment to truth of propositions, and sources of knowledge, among other epistemic qualities' [49]; p. 410).

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Our view [56] is closer to the latter perspective: epistemic stance refers to both the epistemic and the evidential positions (i.e., commitment and source of information) which speakers take in the here and now of communication and which they express through lexical and morphosyntactic, i.e., grammatical markers.

In conversations (as well as in written texts) such markers can refer either to the speaker (e.g. *Vedo che p/I see that p; Sono certo che p/I am certain that p*) or to somebody else (e.g. *Giovanni vede che p/John sees that p; Giovanni è certo che p/John is certain that p*), either to the present or past or future. Epistemic stance refers only to the speaker (not to somebody else) in the here and now of communication, i.e., to how s/he positions her/himself in terms of knowledge (evidentiality) and certainty/uncertainty (epistemicity) towards the information s/he is conveying in the present (not in the past nor in the future), while communicating [56].

For example, if the speaker says *Non sono certo che p/I am not certain that p*, s/he communicates that s/he is currently uncertain about the information *p*. If s/he says *Non ero certo che p/I was not certain that p*, the epistemic marker again refers to her/his uncertainty but, unlike the first example, in the past and not in the present. It means that, in the here and now of communication, the speaker *remembers*, i.e. knows, that there and then (i.e., in the past) s/he was uncertain about the information. In other words, in the here and now, the speaker is communicating as *certain* and *known* a piece of information concerning her/his past uncertainty. Something similar holds for sentences in the future.

Analogously, if the speaker says *Giovanni non è/era/sarà certo che p/John is not/was not/will not be certain that p*, the epistemic marker in the present, past or future refers to John and not to the speaker. In other words, the speaker, in the here and now of communication, is communicating as *certain* a piece of information referring to the uncertainty of someone different from her/himself.

We want to stress that epistemic stance is a *linguistic, communicative* notion, not a mental one, and that it is encoded in what speakers say. For example, both in Italian and in English, a sentence like *Daniele è in spiaggia/Daniel is on the beach* as an answer to the question *Dov'è Daniele?/Where is Daniel?* is usually understood as conveying that the speaker's commitment towards the truth of the information is high, since the sentence is an epistemically 'unmarked' [57] or 'unqualified' [58] declarative sentence: the presence of this grammatical epistemic marker allows us to say that the information is *communicated* by the speaker as something s/he knows (evidentiality) and is certain about (epistemicity) [56], independent of whether such information really corresponds to a mental state or whether the speaker is lying. Vice versa, an answer like, for example, *Forse Daniele è in spiaggia/Maybe Daniel is on the beach* is normally understood as conveying that the speaker's commitment towards the truth of the information is low, because of the presence of the epistemic adverb *maybe*: this lexical marker of uncertainty allows us to say that the information is communicated by the speaker as something s/he is uncertain about, again independent of whether such information really corresponds to a mental state or whether the speaker is lying.

In principle, those who analyse epistemic stance in conversation neither treat the linguistic data as mental nor are they interested in knowing whether such data corresponds to possible mental states. They try to understand what kind of epistemic stance the linguistic data conveys, mainly through the analysis of the epistemic and evidential markers, both lexical and morphosyntactic, which speakers use to refer to themselves in the here and now of communication.

As for questions, the problem is to establish, for example, what the speaker's epistemic position is in wh-questions (e.g. *Dov'è Daniele?/Where is Daniel?*), in polar interrogatives (e.g. *Daniele è in spiaggia?/Is Daniel on the beach?*), in tag questions (e.g. *Daniele è in spiaggia, vero?/Daniel is on the beach, isn't he?*), and so on.

In the field of Conversation Analysis, the main frame of reference on

the epistemic stance are John Heritage and his colleagues' studies (see, for example [28,59–68]), which are partially based on the pioneering works of [69] on information classification, [70] on preference organisation, [71–75] on territories of information.

By making a distinction between *epistemic status* and *epistemic stance*, Heritage took Kamio's theory a step further. The *epistemic status* refers to 'the distribution of rights and responsibilities regarding what participants can accountably know, how they know it, whether they have rights to describe it' [65]; p. 15). It is 'based upon the participants' evaluation of one another's epistemic access and rights to specific domains of knowledge and information. The epistemic status is distinct from the epistemic stance that is encoded, moment by moment, in turns at talk' [61]; p. 7).

[61,76] also deals with the *relationship* between *questions* and *epistemic stance*, a topic less investigated in the literature. In particular, introducing the concept of *epistemic asymmetry*, he focuses on the relationship between different types of questions and different levels of epistemic gap between a *less knowledgeable* questioner (K–) and a *more knowledgeable* respondent (K+). In this respect, the notion of *epistemic gradient* is fundamental [66]; p. 180):

'the act of questioning, however it is managed, invokes a claim that the questioner lacks certain information (or lacks certainty about it). We will refer to this as a 'K-' position. At the same time it also invokes the claim that the addressee has this information (or is likely to have it). The addressee is projected as in a knowledgeable, or 'K+' position. The act of questioning invokes this relative K–/K+ epistemic gradient between questioner and answerer, and, with it, the relevance of a response to the question.'

For instance, the different epistemic gradients established by questions such as (Q1) *Who did you talk to?* (wh-question), (Q2) *Did you talk to John?* (polar interrogative), (Q3) *You talked to John, didn't you?* (tag question), (Q4) *You talked to John?* (declarative question) are illustrated in Fig. 1:

The four questions are on four different levels of the epistemic gradient, going from K– to K+. The questions are not casually placed, but they follow an order, a logic, i.e., the logic and order of knowledge: for example, Q1 is the nearest to questioner's K– and the farthest from answerer's K+. For inverse reasons, Q4 is the nearest to answerer's K+ and the farthest from questioner's K–.

## 2. Aims

Although we generally agree with Heritage's notion of epistemic gradient and his distinction between a less knowledgeable questioner (K–) and a more knowledgeable respondent (K+), we argue that the K– position is too generic, and we propose to distinguish, within the K– position, between a less knowledgeable questioner who asks a question because *s/he does not know* a piece of information, i.e. s/he is ignorant about it, and a less knowledgeable questioner who asks a

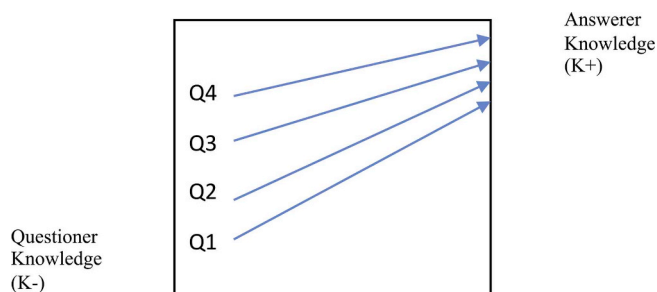


Fig. 1. Epistemic gradient [66]; p. 181). Q1, Q2, Q3, Q4 represent respectively the above-mentioned four examples: wh-question, polar interrogative, tag and declarative question.

question because *s/he does not know whether* a piece of information is true or false, i.e. *s/he* is uncertain about it. In other words, we aim to show that questions do not come from an undifferentiated K– position but from two distinct epistemic positions, that in previous works we called *unknowing* and *uncertain*<sup>1</sup> [38,50,56]. Namely, *wh*-questions arise from the *unknowing* position since they convey a *lack of knowledge* (= un-knowledge) concerning the identity of a *wh*-word (*who*, *what*, etc.), while the other three types of question analysed by Heritage in Fig. 1 (i.e., polar interrogatives, tag and declarative questions), plus a fourth type (alternative questions) included in Ref. [29] typology, arise from the *uncertain* position since they convey a *lack of certainty* (= un-certainty) concerning the truth value of one complete proposition, as in polar questions, or two (or more) propositions, as in alternative questions. In this sense, *wh*-questions are *unknowing questions*, while the other four types of question are *uncertain questions*. Heritage's K+ position corresponds to what we called *knowing position* [56]. Thus, hereafter, question-answer sequences will be seen as originating from the questioner's either *unknowing* or *uncertain* position and as being directed at the respondent's *knowing* position.

The *uncertain* position, which turns out to be the main difference between Heritage's model and ours, will be presented in section 5, before discussing the *uncertain* questions.

### 3. Methodology

#### 3.1. Data set

In order to show the relationship between questioner's epistemic positions and different types of questions, we present a qualitative analysis of short fragments of question-answer sequences extracted from four different corpora of Italian conversations: informal trouble talk interactions; TV talk shows about crime cases; doctor-patient conversations; video-recorded in-depth group interviews. Each corpus will be described in detail in the sections devoted to the analysis of the excerpts.<sup>2</sup>

#### 3.2. Procedures of analysis

For each question type we give the corresponding definition taken from the abovementioned special issue edited by Ref. [28] and one *canonical* example taken from our corpora, i.e., an example that is intended to be *paradigmatic*, *representative* of the specific question type under examination.

The main purpose of the qualitative analysis of the examples is to point out the relationship between questions and epistemic stances by highlighting their presuppositions, question design, social action and preference organisation.

As regards presuppositions in questions, we will make reference mainly to [76]: what *wh*-questions presuppose is true, what alternative and polar questions presuppose is possible.

The term 'question design' (we will also use the expression *linguistic design* as synonymous) refers to the formal coding of questions, i.e., to the lexico-morpho-syntactic or prosodic interrogative marking they rely on [30]; p. 2621). The three question types (*wh*-, alternative, and polar questions) the present paper focuses on are very different in this respect. Their question design and definition will be given at the

<sup>1</sup>In our view, this distinction is adumbrated in Heritage and Raymond's (2012, pp. 180–181) above-quoted statement: 'the act of questioning, however it is managed, invokes a claim that the questioner lacks certain information (or lacks certainty about it). We will refer to this as a 'K-' position'.

<sup>2</sup>The selection criteria of the excerpts were to choose, among the many possible examples, those which could be representative (1) of each question type (2) in different contexts (i.e., corpora), not in a single one. In other words, we were not interested in studying questions and epistemic stance only in one specific context.

beginning of the next sections.

The term 'social action' refers to the actions performed by questions, i.e., their *communicative functions*. In Ref. [30] coding-scheme, seven types of social actions are listed. According to the results of the qualitative and quantitative analysis of all ten languages investigated in Ref. [28]; the main social actions are *request for information* (or *information seeking*) and *request for confirmation* (or *confirmation seeking*). These are the most frequent and are strictly related to the type of question design and expected response.<sup>3</sup> Polar questions are mainly *confirmation seeking* and require a 'yes' or 'no' answer, while *wh*-questions and alternative questions are mainly *information seeking*. *Wh*-questions require a response specifying the identity of the *wh*-word, while alternative questions require a response specifying which alternative is chosen by the respondent.<sup>4</sup>

The term 'preference organisation' refers to a 'set of constraints that questions impose upon recipients' [20]; p. 404). Among these constraints, we focus on preference for type conformity over non-conformity of responses: *yes* or *no* are type conforming answers to polar questions [77]; choosing one alternative over the other is a type conforming answer to alternative questions, while specifying the reference of the *wh*-word (a person for *who*, a place for *where*, etc.) is a type conforming answer for content questions [20].

Finally, on the basis of the qualitative analysis of the examples, we will make explicit and formally represent the different *epistemic design* underlying *wh*-questions, on the one hand, and alternative and polar questions, on the other. The verbal expressions introducing the two epistemic designs (*I do not know* for *wh*-questions vs *I do not know whether* for alternative and polar questions) will also function as a *linguistic test* to distinguish between the two question types.

### 4. Wh-questions

'A content or 'Q-word' question (or 'Wh' question) is where part of a proposition is presupposed, and the utterance seeks the identity of one element of the proposition. Thus, in 'Who stole my newspaper' it is presupposed that 'Someone stole my newspaper', and the purpose of the question (at least nominally) is to ascertain the identity of the person corresponding to this 'someone' [30]; p. 2621).

According to Heritage (2010, p. 47), 'all questions embody presuppositions about the states of affairs to which they are directed'. For example, in a doctor-patient interaction, the *wh*-question *What kind of contraception do you use?* linguistically presupposes that the patient does use contraceptives, i.e., that the proposition *the patient uses contraceptives is true*.<sup>5</sup> Since the doctor does not know what kind of contraception is being used, he asks to find out.

In this sense, the social action of *wh*-questions is *information-seeking*<sup>6</sup> and the answer they expect<sup>7</sup> is a content response that provides information on the identity of the specific *wh*-word featured in the question.

<sup>3</sup>'Distinctions between types of question based on information structure (e.g., polar versus content questions) cross-cut the kinds of social action they may be used for' [94]; p. 2654).

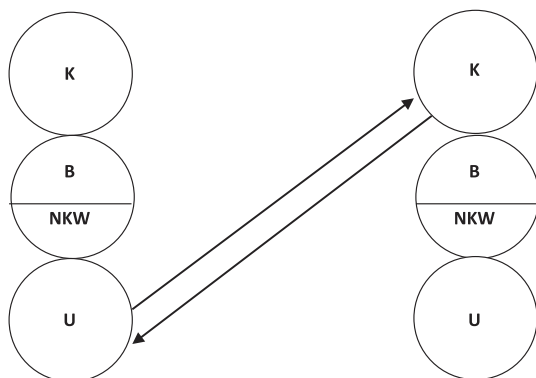
<sup>4</sup>'The difference between this action [requesting confirmation] and requesting information is that the speaker displays she *already* has some idea of the answer and is merely requesting that the others confirm this' [95]; p. 2715).

<sup>5</sup>As regards presuppositions and truth in pragmatics, see also [32,96–100].

<sup>6</sup>In the Italian corpus of questions analysed by Ref. [8], Table 10), the main social actions of content questions are *information request* (75%) and *initiation of repair* (21%). No content question has *confirmation request* as its social action. In our view, initiation of repair also can be considered as a sub-type of information request, since their aim is to obtain information about something in the interlocutor's prior turn that was misunderstood or misheard, e.g., *What did you say?* or *You're going where?*, etc.

<sup>7</sup>The terms to *expect* and *expectations*, as well as *neutral* and *non-neutral* (section 7.1.1), are related to the notion of preference organisation.

## Wh-question (1)



F: *Chi era 'sta gente che spaccava i vetri in generale?*

*Who were these people who broke the windows in general?*

A: *Spacciatori.*

*Drug dealers.*

**Fig. 2.** The arrows indicate the epistemic origin (U= Unknowing position) and destination (K = Knowing position) of F's question and A's response (K → U). B (Believing) and NKW (Not Knowing Whether) refer to the two poles of the uncertain position that will be introduced in the next section. The parallel arrows show that A's response is an answer-response type (i.e. it aligns with F's expectations).

## Extract (1)

1. B: [...] *c'erano quelli che rompeva spaccavano le i vetri eccetera*  
[...] there were those who broke smashed the glasses etcetera
2. F: → *Chi era 'sta gente che spaccava i vetri in generale?*  
*Who were these people who broke the windows in general?*
3. A: [[*Spacciatori.*  
[[*Drug dealers.*
4. B: [[*Manco abitavano qua. Alcuni era spacciatori*  
[[*They did not even live here. Some of them were drug dealers*
5. *manco st- stanno*  
*they do not even st-stay*
6. *non abitano all'Hotel House.*  
*they do not live in the Hotel House.*
7. *Vengono da fuori e fanno casino qua*  
*They come from the outside and make a mess here*
8. *perché sa che qua il controllo è poco.*  
*because they know there is little control here.*

From now on, we call  $p$  the content of the question. In the above examples,  $p$  = who stole my newspaper/what kind of contraception you use.

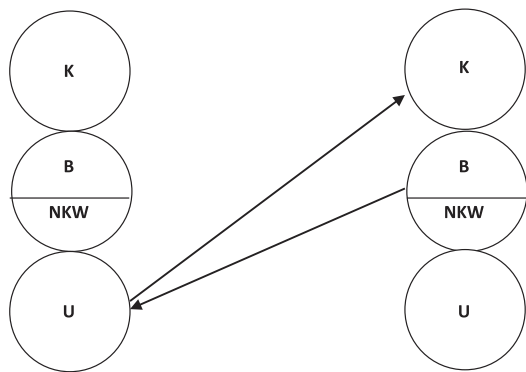
In Italian, wh-questions can be identified by the occurrence of question words, i.e., interrogative pronouns, adjectives or adverbs such as *chi* (*who*), *che cosa*, or simply *cosa* or *che* (*what*), *come* (*how*), *dove* (*where*), *perché* (*why*), *quale* (*which*), *quando* (*when*), *quanto* (*how much*) [78]; p. 71), by the occurrence of 'specific rising intonation on those question words and by syntactic inversion (though not for all of them)' [8]; p. 2765).

Extract (1) is taken from the *Hotel House* (HH14) corpus, which includes 2 video-recorded in-depth interviews between a facilitator (F) and two groups of adolescents (age 13–17): 6 males (5 from Bangladesh and 1 from Senegal) and 5 females (5 from Bangladesh and 1 from Macedonia), living in an exceptional situation of ethnic ghettoization, that of a skyscraper (named Hotel House) in Porto Recanati (Italy), almost exclusively inhabited by migrants. The two groups of adolescents were interviewed separately in the context of a Participatory Action Research [79], aimed at investigating the adolescents' post-migration experiences in identity achievement. Italian is the second or third language for all participants.

In the immediately preceding turns of extract (1), a group of male adolescents, among whom A and B, were telling the facilitator (F) about a brawl they witnessed a few days ago, and which occurred among some residents of the building where they lived. During the brawl, some windows were broken. F therefore knows about the brawl and the broken windows and he uses a wh-question in order to know something he does not know, i.e., *who* were the people directly involved.



Wh-question (1)



F: *Chi era 'sta gente che spaccava i vetri in generale?*

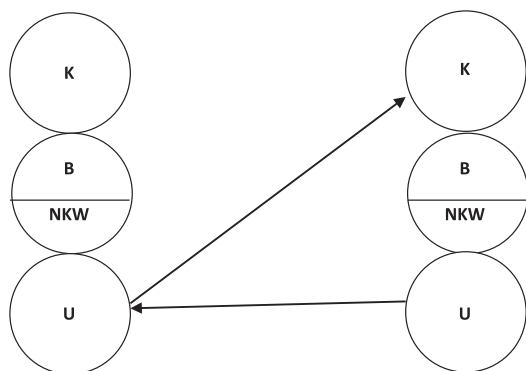
*Who were these people who broke the windows in general?*

A: *Penso che fossero spacciatori.*

*I think they were drug dealers.*

Fig. 3. Origin and destination of F's question (U → K) and A's answer (B → U).

Wh-question (1)



F: *Chi era 'sta gente che spaccava i vetri in generale?*

*Who were these people who broke the windows in general?*

A: *Non so chi era 'sta gente.*

*I don't know who these people were.*

Fig. 4. Origin and destination of F's question (U → K) and A's answer (U → U).

In F's question, the wh-word is *chi* (who); *p* is *chi era 'sta gente che spaccava i vetri in generale* (who were these people who broke the windows, in general); the expression *in generale* (in general) suggests that F is interested in knowing the kind of people who took part in the brawl, not their specific identities or names.

F is seeking a piece of information he does not possess (K-) and A is assumed to have (K+). This piece of information is totally unknown to F, it represents an informative void. In Heritage's model, in using a wh-question F puts himself in a less knowledgeable position and his interlocutors (eyewitnesses of the brawl) in a complementary more knowledgeable one. He asks for information belonging to the recipients' epistemic domain and expects a content response as a type conforming answer. The question arises from the questioner's *unknowing* position and it is directed at the respondent's *knowing* position.

The answer of one of the boys (A) is an answer-response type<sup>8</sup> that

<sup>8</sup> Three types of responses are listed in Ref. [28] coding scheme: an *answer-response* directly answers the question; a *non-answer response* fails to directly

aligns with F's expectations, i.e. knowing *who these people were in general*. In fact, A replies from a knowing position by shortly indicating the kind of people responsible for the brawl: (these people were) *drug dealers*. The information is communicated from A's knowing position since it is conveyed by a plain declarative sentence. B's answer aligns with F's expectations as well. It adds information about the identity of the wh-word featured in F's question: *Non abitano all'Hotel House/They do not live in the Hotel House; Vengono da fuori/They come from outside*, etc.

The epistemic dynamics involved in the question-response sequence between F and A is illustrated in Fig. 2 with the help of circles and arrows, which simply means to visually represent what is encoded in communication.

When a piece of information (*spacciatori/drug dealers*) is communicated from a knowing position, i.e., as *known* (evidentiality) to the speaker, it is simultaneously communicated as being *certain* (epistemicity), i.e., as something true (e.g., *Sento che qualcuno sta suonando la chitarra/I hear that someone is playing the guitar; Sono certa che Kika è a casa/I'm certain that Kika is at home; 2 più 2 fa 4/2 and 2 is 4; Ilaria è nata il primo gennaio/Hilary was born on the 1st of January; etc.*) [56].

Instead, if A had adopted an uncertain position and stated for instance *Penso che fossero spacciatori/I think they were drug dealers*, A would have partially aligned with F's question (Fig. 3), while a lack of knowledge claim such as *Non so chi era 'sta gente/I don't know who these people were* (unknowing position) would have been perceived as a misalignment (Fig. 4):

In the field of Conversation Analysis, both responses would be considered non-answer responses (see footnote 8). Yet, in our view, they substantially differ from one another. The partial alignment to the question in Fig. 3 and the misalignment in Fig. 4 are shown by the arrows: they are no longer parallel as they were in Fig. 2. The wider the angle formed by the two arrows, the greater the misalignment.

Going back to F's wh-question, the epistemic position (unknowing) is made explicit if we transform the direct interrogative *Chi era 'sta gente ... ?/Who were these people ... ?* in an indirect one using the introducing verb *sapere* (to know) [80]; pp. 675–720 [78]; pp. 70–112):

*Io non so chi era 'sta gente*

*I do not know who these people were*

The expression *Io non so/I do not know* highlights F's ignorance, his total lack of knowledge concerning the identity of *who*. Thus, in a formal way, the *epistemic design*<sup>9</sup> of wh-questions may be represented as follows:

*Io non so + p*

*I do not know + p*

The main point made in this section is that, if questions are wh-questions (i.e., they have a wh-word in their question design, their social action is information-seeking, their preference organisation expects a content response), then they arise from the questioner's unknowing position.

The unknowing position can be communicated also by means of declarative sentences, as in the following examples: *Non ricordo il suo nome/I do not remember her name; La loro sorte rimane un mistero/Their fate remains a mystery; L'identità dell'assassino è ancora ignota/The identity of the assassin is still unknown*, etc. In all of these cases the information is communicated as missing, absent [56].

While wh-questions come from the *unknowing* position, alternative

(footnote continued)

answer the question (*I don't know./What?/Maybe./Possibly./etc.*); a *non-response* is no response at all.

<sup>9</sup> The epistemic design represents the logical semantic structure of the questioner's epistemic position.

*I do not know whether p or non p.....I believe that p*

Fig. 5. The two poles of the uncertain position.

(I am equally uncertain whether p is true or false) (I am inclined to believe that p is true)

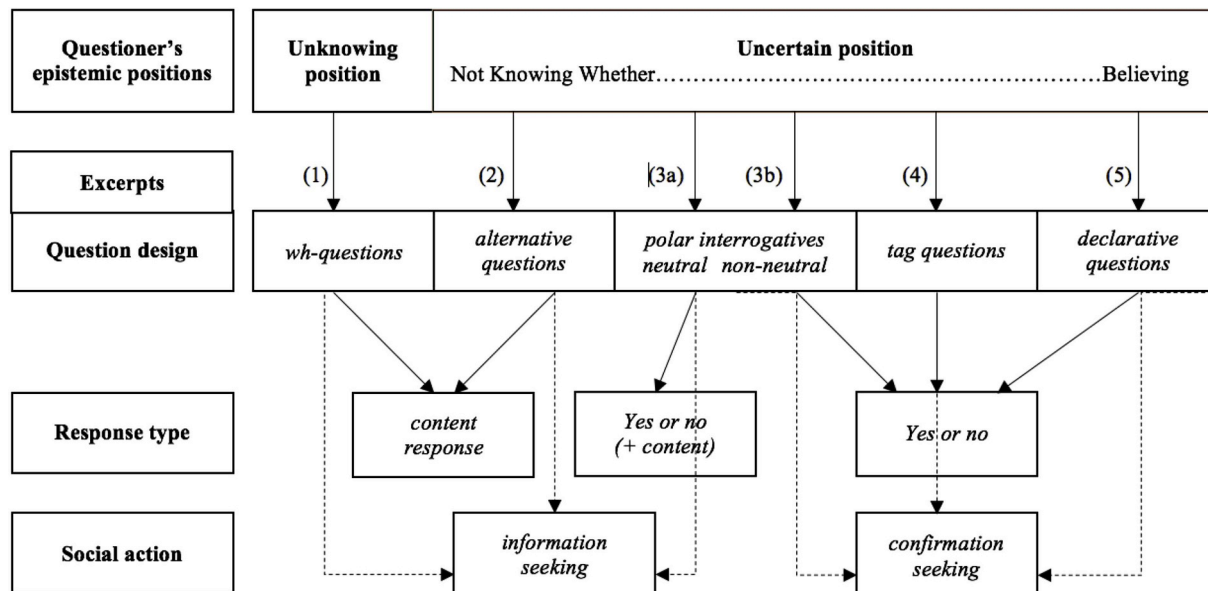


Fig. 6. Questioner's unknowing and uncertain positions, question types, response types and social actions.

questions and the three sub-types of polar questions come from the uncertain position.

5. The uncertain epistemic position

Similar to the unknowing position, the uncertain position can be communicated through interrogative sentences (polar interrogatives, tag, declarative and alternative questions) as well as by means of declarative sentences. All information communicated – lexically or morphosyntactically – as being possible, probable, supposed, hypothesized, believed, doubted can be included in the domain of uncertainty.

Our definition of uncertainty includes, in addition to the strict sense of uncertainty (*Non so se .../I do not know whether ...; Non sono certo che .../I'm not certain that ...; Sono incerto riguardo a .../I'm uncertain about ...*), also *possibility* (as expressed, for example, by the epistemic use of the modal verbs *potere, dovere/can, may, must*, both in the present indicative and in the conditional mood; by expressions such as *è possibile/probabile/it is possible/probable*; by epistemic future; if clauses, etc.) and *subjectivity* (i.e., the communication of the speaker's point of view, such as *secondo la mia opinione/in my opinion, penso/I think, suppongo/I suppose, dubito/I doubt, ipotizzo/I guess*, etc.). Since these concepts partially overlap, we prefer to use the more generic term 'uncertainty', which encompasses them all.

In our model, the uncertain position is thought of as an epistemic continuum which ranges between two opposite poles, *Not Knowing Whether p* (NKW) and *Believing that p* (B), where *p* stands for the proposition (see Fig. 5).

The NKW pole represents the maximum degree of uncertainty (uncertainty in a strict sense): the speaker communicates the information as something s/he does not know whether it is true or false. Sentences like *Non so se andrò al cinema o no/I do not know whether I'll go to the movie or not* and like *Non so se andrò al cinema o al teatro/I do not know whether I'll go to the movie or to the theatre*, i.e., sentences whose design can be formally represented as *I do not know whether p or non p* and *I do not know whether p<sub>1</sub> or p<sub>2</sub>*, usually express, respectively, that *p* and *non p*, on the one hand, and *p<sub>1</sub>* and *p<sub>2</sub>*, on the other, are equally possible to be true and that the speaker is equally uncertain about the two

possibilities. No indication of considering one of the options as being more probable than the other is given; both options are possibly true to the same degree. This proportion represents the maximum degree of uncertainty.

The B pole, on the contrary, represents a minimum degree of uncertainty (uncertainty in the sense of speaker's subjectivity): the speaker communicates the information as something s/he believes to be true (or false). Sentences like *Credo che andrò al cinema/I believe that I'll go to the movie, Penso che Rosy stia cucinando/I think that Rosy is cooking*, i.e., sentences whose design can be formally represented as *I believe that p*, normally convey that, although the speaker does not know whether *p* is true or false, s/he is nonetheless inclined to believe that the explicit (lexicalized) positive alternative (*p*) is more likely to be true than the implicit (not lexicalized) negative (*non p*). This design allows the speaker to indicate a preference for *p*, which is assigned a higher degree of probability of being true than *non p*. From equal probability (NKW pole) the speaker's commitment shifts gradually towards unequal probability (B pole), from maximum uncertainty to minimum uncertainty [56].

In the following sections, we present the different question types that convey an uncertain position. As shown in Fig. 6, they are situated in different points along the uncertain epistemic continuum, ranging from the NKW to the B pole (see Fig. 5).

6. Alternative questions

Alternative questions include 'the proposal of a restricted set of alternative answers in their formulation (e.g., 'Were you drunk or were you sober.' Or 'Do you want corn or flour tortillas.')

As far as presuppositions are concerned, unlike wh-questions, 'an alternative question presupposes the truth of only one of the propositions' [32]; p. 823).

Let's call the first alternative provided to the recipient (*you were drunk; you want corn tortillas*) *p<sub>1</sub>* and the second (*you were sober; you want flour tortillas*) *p<sub>2</sub>*. The two alternatives are joined by the disjunctive

‘or’ which means that for the questioner any alternative is possible, but not both, i.e., only one alternative is true (you were either drunk or sober; you want either corn or flour tortillas). The linguistic design conveys that the questioner is equally uncertain between the two possibilities: no indication is given of whether s/he considers one of the options as being more (or less) probable to be true than the other. The recipient’s response is expected to let the questioner know which alternative is actually true.

In this sense, alternative questions are information-seeking just like wh-questions. Both expect a content response: wh-questions request the answerer to specify the identity of a wh-word; alternative questions require the answerer to specify which the true alternative is.

The following extract (2) is taken from the *Crime Cases (CC14)* corpus<sup>10</sup>, namely from the TV show *La Vita in Diretta* (Life Broadcast Live); it tackles the mysterious disappearance of a young woman, Elena Ceste, and was broadcast on the 6th of May 2014, when the missing woman was presumed to be still alive. The moderator (M) interviews her guest, a woman who claims to be a clairvoyant (C); during the interview, M shows trust in C’s extrasensory perceptions. The TV show was rebroadcast on the 12th of November 2014, after the discovery of Elena Ceste’s corpse and the arrest of her husband on a charge of murder.

### Extract (2)

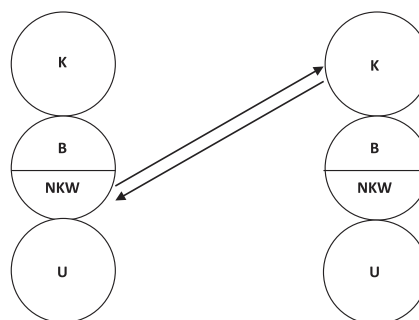
- 1.M: *In relazione ad Elena Ceste.*  
Concerning Elena Ceste.
2. *Tu che tipo di, appunto visioni hai avuto?*  
You what kind of, visions indeed have you had?
- 3.C: *Ne ho avute tante perché è 'na persona che*  
I've had many because she's a person who
4. *io vedo sempre davanti ai miei occhi,*  
I always see before my eyes,
5. *e:: una donna sofferente, e: come cercasse aiuto. (..)*  
a::nd a woman in pain, a:nd as if she were looking for help.(..)
- 6.M: → *Ma tu la vedi viva o morta?*  
But do you see her alive or dead?
- 7.C: *Io non la vedo assolutamente viva. Mi dispiace dirlo.*  
I absolutely don't see her alive. I'm sorry to say this.

In lines 1–2, M seems to be interested in finding out something only C can know since it belongs to C’s epistemic domain of knowledge. Therefore, through a wh-question, M asks C to be explicit about the content of her visions.

In lines 3–5, C answers M’s wh-question (lines 1–2) by asserting that

<sup>10</sup> It includes three episodes of TV talk-shows debating crime cases that recently shook Italian public opinion.

### Alternative question (2)



M: *Ma tu la vedi viva o morta?*

*But do you see her alive or dead?*

C: *Io non la vedo assolutamente viva. Mi dispiace dirlo.*

*I absolutely don't see her alive. I'm sorry to say this.*

Fig. 7. Origin and destination of M’s question (NKW → K) and C’s response (K → NKW).

she has had numerous visions of Elena Ceste, where she appears as being in pain and seeking help.

In line 6, M requests C to clarify Elena Ceste’s state by choosing from two alternatives provided in the question. From C’s previous answer (lines 3–5), according to which the missing woman appears suffering and seeking help, it is not clear if she is alive or dead (this is the most important information), since Elena Ceste is still missing. This could explain the onset of M’s turn with the adversative conjunction *ma/but*.

As said above, during the interview M shows trust in C's extrasensory perceptions; thus, asking such a question, M does not mean to cast doubt on what C previously claimed, or to discredit her extrasensory powers and authority, i.e., her epistemic status. The question design conveys that, for M, any of the two alternatives is *equally possible* (it can be true that C sees Elena alive or that C sees her dead).

In other words, M's question does not convey any preference for a particular response, i.e. for *vedo Elena viva/I see Elena alive* or *vedo Elena morta/I see Elena dead*. C's response is expected to let M know which of the two alternatives is actually true. Indeed, C replies to M's information request from a knowing position (line 7), claiming not to see Elena alive. The missing woman is therefore, on the basis of the clairvoyant's visions, absolutely dead. Since C has chosen one of the two provided alternatives, her reply completely aligns with M's expectations.

From the epistemic stance perspective, M's question comes from the NKW pole of the uncertain position, i.e., from maximum uncertainty, since M does not signal to be more inclined towards any of the two opposite alternatives she advances (see Fig. 7).

If we transform the direct question *tu la vedi viva o morta?* (do you see her alive or dead?) in an indirect question (cf. [80]; pp. 675–720 [78]; pp. 70–112), again using the verb *sapere* (to know), from an epistemic stance perspective, we have:

*Io non so se p<sub>1</sub> (tu la vedi viva) o p<sub>2</sub> (tu la vedi morta)*

*I do not know whether p<sub>1</sub> (you see her alive) or p<sub>2</sub> (you see her dead)*

The expression *Io non so se/I do not know whether* makes explicit the questioner's epistemic position of uncertainty between the two alternatives, and it gives rise to a grammatically acceptable sentence. On the contrary, if we place the expression *Io non so/I do not know*, as in the case of wh-questions (see section 6), before *p<sub>1</sub>* and *p<sub>2</sub>*, we would give rise to a grammatically unacceptable sentence:

\* *Io non so tu la vedi viva o morta*

\* *I do not know you see her alive or dead*

The expression *Io non so/I do not know* suits only wh-questions. Alternative questions require instead *Io non so se/I do not know whether*.

The transformation of direct to indirect questions with their suitable epistemic complement (*I do not know* vs *I do not know whether*) functions as a 'linguistic test' aimed at checking out whether a question is unknowing or uncertain. From an epistemic stance perspective, there is a great difference between *not knowing* and *not knowing whether*, as much as between *unknowledge* and *uncertainty*: information communicated as unknown involves absence of knowledge rather than beliefs or suppositions, etc., which are unconfirmed or uncertain.

Unlike wh-questions, where questioners adopt an unknowing position, alternative questions do not seem 'to completely grope in the dark', since they ask the interlocutors to choose between two alternatives advanced by the questioners. Therefore, although their linguistic design conveys that questioners are equally uncertain about two (or more) possibilities, such questions are information-seeking,<sup>11</sup> in that (1) their question design is *neutral*, not oriented in favour of either *p<sub>1</sub>* or *p<sub>2</sub>*, and (2) the interlocutor's response must specify which alternative is the true one.

Thus, in a formal way, the epistemic design of alternative questions may be represented as follows:

*Io non so se + p<sub>1</sub> o p<sub>2</sub>*

*I do not know whether + p<sub>1</sub> or p<sub>2</sub>*

<sup>11</sup> In the Italian corpus analysed by Ref. [8]; alternative questions occur only rarely (2%, 7 questions, Table 1, p. 2758) and are all information-seeking (Table 10, p. 2769).

The main point made in this section is that, if questions are alternative questions (i.e. their linguistic design includes listed alternatives, their social action is information-seeking, their preference organisation expects a response specifying the chosen alternative), then they arise from the NKW pole of the uncertain position, the pole of maximum uncertainty.

## 7. Polar questions: definition and sub-types

'A polar question is any question that makes relevant affirmation/confirmation or disconfirmation. It contains a proposition with two possible answers in semantic terms: *true/the case* versus *not true/not the case*. The question might involve a question particle, inversion, or a tag. It did not necessarily involve formal interrogative marking (as in a declarative question). It could be positive or negative' [30]; p. 2621).

This means that, unlike wh- and alternative questions, polar questions must be answered with a 'yes' or a 'no', explicitly or implicitly.

Polar interrogatives, tag and declarative questions are sub-types of polar questions. In the following sections, we present examples of each sub-type.

### 7.1. Polar interrogatives

'With a polar question - e.g., Is it still snowing outside? - a speaker makes reference to a complete proposition (in this case, 'It's still snowing outside'), and expresses a lack of knowledge as to the truth of this proposition. A typical communicative function of a question is to induce the addressee to state whether the proposition is true (yes or equivalent) or false (no or equivalent)' [81]; p. 193).

Polar interrogatives differ from wh- and alternative questions in that wh-questions focus on one element (a wh-word) of the proposition; alternative questions include two propositions; while polar interrogatives refer to just one proposition (*p*). Rather than 'a lack of knowledge', as stated in the above definition, we argue that polar interrogatives convey 'a lack of certainty' as to the truthfulness/falseness of *p*: the uncertainty here regards whether *p* is true or false. It is as if the question were: *Is it true or false that p, i.e., that it is still snowing outside?* The questioner expects confirmation or disconfirmation as a type-conforming answer.

Unlike the doctor who asks the patient the wh-question *What kind of contraception do you use?* (section 4), which presupposes *you are using contraception*, the polar interrogative asked by another physician '*Are you using any contraception?*' is more cautious, since it conveys the doctor's view 'that the patient *might* be using contraception but does not presuppose it' [76]; p. 47). In other words, the question design does not presuppose that the proposition 'you are using contraception' is *true* but that it is *possibly true*, i.e. it leaves open the *possibility* that the patient uses contraception (*p*) or that she does not (*non p*). In this sense, in principle, the alternatives in polar interrogatives may also be thought of as being *p* or *non p* and their question design can also be read as expressing the doctor's uncertainty about which of the two propositions is true: *p* or *non p*? The second alternative is not lexicalized in the question, it remains implicit, since it is the negative opposite of *p*.

If the respondent's reply is 'yes', then *p* (*you are using contraception*) is true, and *non p* (*you are not using contraception*) is false. Vice versa, if the respondent's reply is 'no', then *p* is false, and *non p* is true.

#### 7.1.1. Neutral (information seeking) and non-neutral (confirmation seeking) polar interrogatives

Possibly for the abovementioned reasons, in the linguistic literature there are two opposite views on the design of polar interrogatives: some authors [82–88] suggested that a polar interrogative is nothing but an incomplete alternative question, i.e., a special type of alternative question in which the second alternative (*or not*) has been suppressed



and remains implicit, not lexicalized: it is present at a mental, logical level [82]; p. 22) or, as generative linguists claim, it is present in the deep structure of the question [85,86].

Contrary to the above view [89], claims that the conjunction ‘if rather than *whether* is the true embedder of questions’ [89]; p. 95) and that a polar interrogative advances a hypothesis for confirmation: it ‘hypothesizes that something is true and confirmed, amended, or disconfirmed by an interlocutor’ [89]; p. 102).

The dispute between Bolinger and Coleman is not idle, since the different way of reading the linguistic design of polar interrogatives reverberates on the type of social action assigned to them and thus on their epistemic design as well. For instance, interpreting [90] example *Is it still snowing outside?* from Coleman’s perspective, is tantamount to considering it an implicit alternative question seeking information and thus neutral in respect to a yes or a no as a response: both possibilities (*it is still snowing* and *it is not snowing anymore*) are equally expected. The questioner is advancing no hypothesis.<sup>12</sup>

Instead, interpreting the same question from Bolinger’s perspective is tantamount to considering it as a hypothesis seeking confirmation, and thus non-neutral in respect to a yes or a no as a response: it expects a yes (= *it is still snowing*), not a no (= *it is not snowing anymore*), since the former possibility, being lexicalized, is assigned more probability to be true than the negative.

The question design being equivalent, in Coleman’s view the social action of polar interrogatives is information seeking and the preference organisation is neutral, while in Bolinger’s view the social action is confirmation seeking and the preference organisation is non-neutral, i.e. it is in favour of a yes/no answer, depending on whether the question is in the affirmative or negative form [77].

The presence in the literature of the two aforementioned readings of polar interrogatives can perhaps be due to their linguistic design: nothing indicates whether a hypothesis has been advanced or not. While the design of tag and declarative questions (see sections 7.2 and 7.3) clearly advances a hypothesis seeking confirmation, and *wh-* and alternative questions are clearly information-seeking, the design of polar interrogatives seems instead to be open to both readings, at least in Italian. Apart from prosody, only the turn sequential position and propositional content can help establish whether a polar interrogative is information- or confirmation-seeking, and therefore neutral or non-neutral.<sup>13</sup>

Indeed, in our corpora, some polar interrogatives seem to lend themselves to a neutral and information-seeking reading (see extract 3a below), while some others seem to lend themselves to a non-neutral and confirmation-seeking reading (see extract 3b below).

### 7.1.2. An example of neutral polar interrogative information seeking

Extract (3a) is taken from the *Doctor-Patient (DP01)* corpus, which includes 5 audio-recorded interactions between a gynaecologist and 5 pregnant patients; sometime patients’ husbands attended the encounters and participated in the exchanges.

Extract (3a) is from the first visit between a gynaecologist (D), a pregnant patient (P) and her husband (H).

<sup>12</sup> As Bolinger himself claims, *whether*, differently from *if*, ‘seems to treat the facts as something that really has to be found out. [...] seems to treat with equal seriousness the possibility of a yes and the possibility of a no, [...] is impartial, [...] appears to imply something about laying hold of information. The speaker has already taken the alternative possibilities under consideration and wants to make up his mind about them’ [89]; p. 96). ‘It poses alternatives that are already in mind. [...] *Whether* presupposes that there are alternatives [...]; *whether* always implies contrasted propositions, hence an intellectual content of some sort’ [89]; p. 99).

<sup>13</sup> Unfortunately, in the Italian corpus analysed by Ref. [8]; the quantitative data concerning polar questions are given all mixed up without making any difference among polar interrogatives, tag and declarative questions.

### Extract (3a)

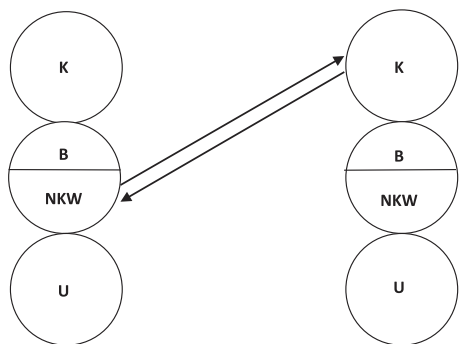
- 1.D: → *Malattie importanti in famiglia?*  
Any serious diseases in your family?
- 2.P: *N- nulla di rilevante.*  
N- Nothing significant.
- 3.D: → *Malattie ereditarie in entrambe le famiglie?*  
Any hereditary diseases in the two families?
4. → *[Mhm figli con difetti congeniti?]*  
[Any mm babies with birth defe[cts?]
- 5.P: *[No.]*  
[No.]
- 6.P: *[No no niente.]*  
[No no [nothing.]
- 7.H: *[°Niente°.]*  
*[°Nothing°.]*
- 8.D: → *Negativa. Malattie tue invece importanti?*  
Negative. Any serious diseases in your case?
- 9.P: *Niente.*  
Nothing.

At the beginning of all D’s questions, the expression *Ci sono state/Have there been* is implicit. Thus, the question is designed and understood as *Ci sono state malattie importanti in famiglia?/Have there been any serious diseases in your family?* An interesting feature of these questions is their *minimality*. As pointed out by Ref. [8], ‘Italian questions are often produced without a verb’. In these four questions, minimality also concerns the absence of indefinite adjectives (*qualche, nessuna/any, some, no*), which is mainly favoured by the plural of the noun *malattie/diseases* and *figli/babies*.<sup>14</sup>

All four questions have a similar structure and content: they concern the medical history (serious or hereditary diseases, babies with birth defects) of the families of P and her husband (lines 1 and 3–4) and of P herself (line 8). Moreover, all four questions are answered by negative expressions: ‘*nulla di rilevante*’ (line 2); ‘*no*’ (line 5); ‘*no no niente*’ (line 6); ‘*niente*’ (lines 7 and 9). ‘*Nulla*’ and ‘*niente*’ in Italian are synonyms (= nothing), and are tantamount to a negative answer (‘no’). Such negative expressions are understood by both interlocutors as closing each adjacency pair and allowing D to ask new questions. For the above reasons, we limit ourselves to analyse the first question *Malattie importanti in famiglia?/Any serious diseases in your family?* and its negative response *Nulla di rilevante/Nothing significant*.

<sup>14</sup> In the English translation of these four questions, the indefinite adjective *any* is added, since *any* indicates no preference for a yes or a no as a response.

Polar interrogative (3a)



D: *Malattie importanti in famiglia?*

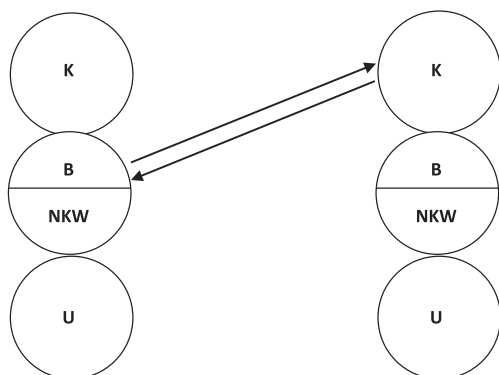
*Any serious diseases in your family?*

P: *N- nulla di rilevante.*

*N- nothing significant.*

Fig. 8. Origin and destination of D's question (NKW → K) and P's response (K → NKW).

Polar interrogative (3b)



G: *Si vede?*

*Have you noticed?*

S: *No però è vero che sei dimagrita.*

*No but it's true that you have lost weight.*

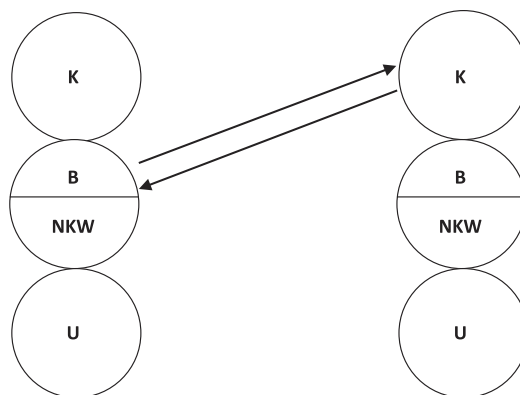
Fig. 9. Origin and destination of G's question (B → K) and S's response (K → B).

In our view, as said above, due to the turn sequential position and propositional content, D's question seems to lend itself to a neutral and information-seeking reading. Such reading is more in line with [90] definition of polar interrogatives (section 7.1), where no mention is made about hypotheses.

(1) Turn sequential position: D's questions occur at the very beginning of a first medical (gynaecological) visit, prior to physical examination, where D is gathering information about P's medical history. Unlike the United States, where 'patients are ordinarily seen by nurses or medical assistants (MAs) prior to physicians' [91]; p. 90), in Italy the medical visits are usually not preceded by encounters with nurses or MAs. Therefore, when D meets P, he knows nothing about her medical history, except that she is pregnant. Prior to the extract transcribed, D opens the visit, i.e. greets P and H, secures P's identity; then he begins filling in P's clinical chart by asking the abovementioned questions. Thus, this phase of the gynaecological visit seems to be similar to what [91] refer to as a pre-visit or an information gathering phase: D is gathering clinical data (anamnesis) about P and her pregnancy.

Thus, the social action of D's questions is information seeking, and

Tag question (4)



D: *Questa è la prima gravidanza, no?*

*This is your first pregnancy, isn't it?*

P: *Sì.*

*Yes.*

Fig. 10. Origin and destination of D's question (B → K) and P's response (K → B).

the expected answer is either yes or no in equal measure.

(2) Propositional content: as we already mentioned, the minimality of D's questions is also reflected by the absence of indefinite adjectives. D might have used an indefinite adjective and asked, for example, *Nessuna malattia importante?/No serious disease?*, thus suggesting he expected a negative response. But since D uses no indefinite adjective, his question conveys no indication of the expected response: the design is neutral, both yes and no answers are equally expected.

To sum up, D is advancing no hypotheses in his questions, he is gathering information to find out which of the two alternatives is true: the (lexicalized) alternative *p* (In your family there are serious diseases, etc.) or the (not lexicalized) alternative *non p* (In your family there are no serious diseases, etc.). Both alternatives are equally expected. In order to gather information, D uses a polar interrogative which can be read, in line with Coleman's view, as an incomplete alternative question, i.e., a special type of alternative question in which the negative alternative *or not* has been suppressed and remains implicit, not lexicalized.

Thus, the linguistic design of D's questions signals that he is equally uncertain about the possibility that the family members of the patient or of her husband are affected (or not) by hereditary or other serious diseases (lines 1 and 3–4) and about the possibility that the patient herself suffers (or does not suffer) from some important illness (line 8). Both replies (yes or no) are equally possible, expected and socially acceptable. The question design does not suggest that he would assign greater probability to the lexicalized possibility (there are serious diseases in your family). D's questions seem to convey no hypotheses.

Therefore, following this reading, if we transform D's direct question into an indirect one, from an epistemic stance perspective we have

*Io non so se p (o non p)*

*I do not know whether p (or non p)*

where *p* = *there have been serious diseases in your family/ci sono state malattie importanti in famiglia*, and *non p* = *there have been no serious diseases in your family/non ci sono state malattie importanti in famiglia*.

This epistemic design is similar to that of alternative questions (section 6) in that, along the epistemic continuum of uncertainty, D's questions come from the NKW pole, as alternative questions do (see Fig. 6), and are directed at the interlocutors' knowing position (see Fig. 8).

The main point made in this section is that, if the question design of

polar interrogatives is read as neutral, their social action as information-seeking, their preference organisation as expecting either a yes or a no response, then such questions arise from the uncertain position, specifically from the NKW pole, the pole of maximum uncertainty.

### 7.1.3. An example of non-neutral polar interrogative confirmation seeking

Extract (3b) is taken from the *Trouble telling (TT16)* corpus. It includes 60 conversations, audio-recorded in ecological contexts, prevalently among young adults (university students) being in close relationship (friends, relatives, siblings, etc.) and tackling several problematic issues (work and study, love, family, friendship, health, etc.).<sup>15</sup>

In extract (3b), during an informal meeting between a female university student (G), her sister (S) and one of their male friends (F), G asks them whether they notice that she has lost two kilos.

#### Extract (3b)

- 1.G: → *Ragazzi mi sono dimagrita di due chili. Si vede?*  
Guys, I have lost two kilos. Have you noticed?
- 2.S: (.) No.  
(.) No.
- 3.F: (.) *Spogliati che ti devo di'.* (.)  
(.) Take your clothes off what should I tell you. (.)  
(G pretends to start taking off her clothes))
4. *E no mo [fermati dai però mbe'! So' suscettibile!*  
And no [stop it now! I am oversensitive!
- 5.S: *[(ride)] No però è vero che sei dimagrita.*  
[(laughs)] No but it's true that you have lost weight.

G's polar interrogative *Si vede?* (Have you noticed?) is preceded by the declarative sentence *Mi sono dimagrita di due chili* (I have lost two kilos), thus meaning *Si vede che mi sono dimagrita di due chili?* (Have you noticed that I have lost two kilos?) and suggesting that (1) having lost weight is something positive for her, (2) she thinks that S and F can notice her weight loss, (3) she expects to receive an affirmative answer aligned with her being visibly slimmer. In other terms, she is asking for confirmation of her own hypothesis, thus the preferred answer is *yes* [77,92]. G's question has the function of seeking *agreement* [30,93]) about the previous statement *Ho perso due chili* (I have lost two kilos).

If we transform G's direct question into an indirect one, from an epistemic stance perspective we have

*Io non so se p o non p ma sono incline a credere che p*

*I do not know whether p or non p but I am inclined to believe that p*

<sup>15</sup> Dialectal terms traceable to the substandard varieties spoken in Central Italy (namely in the Marche region) recur in these exchanges.

where  $p = si\ vede\ che\ mi\ sono\ dimagrita\ di\ due\ chili/you\ have\ noticed\ that\ I\ have\ lost\ two\ kilos$  and  $non\ p = non\ si\ vede\ che\ mi\ sono\ dimagrita\ di\ due\ chili/you\ have\ not\ noticed\ that\ I\ have\ lost\ two\ kilos$ .

This representation differs from those in excerpts 2 (alternative question) and 3a (neutral polar interrogative), since it makes explicit that G is advancing the hypothesis (*I am inclined to believe*) that S and F can notice her weight loss, i.e., it makes explicit that  $p$  is supposed to be somewhat more likely than  $non\ p$ . Along the epistemic continuum of uncertainty, G's question comes from a point that precedes tag questions (see Fig. 6) and is directed at her interlocutors' knowing position.

Contrary to G's expectations, S provides a negative answer (namely implying that G's weight loss is not visible), which, nevertheless, is not to be read as serious, but as humorous and playful. For this reason, such a reply does not seem to represent a dis-preferred response, i.e., a dis-confirmation of G's expectations. Moreover, F's reply (who facetiously

invites G to undress in order to check her slimming) seems to support this ironic reading. It is only in line 5 that the 'true' reply – aligned and preferred – occurs: *No però è vero che sei dimagrita/No but it's true that you have lost weight*, which means *Sì, vedo che sei dimagrita/Yes, I have noticed that you have lost weight* (see Fig. 9).

The main point made in this section is that, if the question design of polar interrogatives is read as non-neutral, their social action as confirmation-seeking, their preference organisation as expecting a confirmatory response, then they arise from the uncertain position, more precisely from a point near tag questions (see Fig. 6).

What seems to emerge from extracts (3a) and (3b) is that polar interrogatives, at least in Italian, may accomplish two main different types of action. As a consequence, they assume different degrees of uncertainty along the epistemic continuum, depending on their specific sequential order and propositional content. Neutral polar interrogatives such as D's questions in extract (3a), arise from the NKW pole (since they convey an equal degree of uncertainty, none of the two possibilities ( $p$  or  $non\ p$ ) being preferred); while non-neutral polar interrogatives such as G's question in extract (3b), arise from a point closer

to the B pole (since the speaker assigns more probability to the lexicalized possibility).

## 7.2. Tag questions

Tag questions are

‘declaratively formatted turns that assert a proposition and add a ‘turn-final element’ that marks questionhood: these turn-final elements include question particles (e.g., Japanese *ka*), lexical items (e.g., “Right” or “Yeah?”) or ‘tag’ type clauses (e.g., “Don’t ya think?” or “Did she?”) [30]; p. 2622).

Indeed, a tag question is typically ‘a way of requesting information, normally confirmation of the assertion made in the declarative component of the utterance’ [61]; p. 14).

In Italian, tag questions ‘are usually produced with either rising intonation on the tag or at least not falling intonation and the words used are usually: no, okay, eh’ [8]; p. 2764).

Let us look at an example taken from the *Doctor-Patient (DP01)* corpus: D is the same doctor of extract (3a), while P is a different patient.

### Extract (4)

- 1D: → *Questa è la prima gravidanza, no?*  
This is your first pregnancy, isn’t it?
- 2.P: *Sì. Vuol vedere una delle cartelle cliniche dell’*  
Yes. Do you want to see one of the health records of
3. *dell’intervento?* [dell’ mhm,  
of the surgery? [of mhm,
- 4.D: [Mhm  
[Mhm

After the declarative component, *Questa è la prima gravidanza/This is your first pregnancy*, D adds the tag *no?/isn’t it?* The question design conveys that, although D does not know whether this is P’s first pregnancy (or not), he is more inclined to believe that it is (P is twenty years old), but, not being sure, he asks for confirmation (see Fig. 10). In other words, the tag element gives the declarative component of the question the value of a ‘strong hunch’ [76]; p. 48) in favour of the lexicalized positive alternative. Both *p* (this is your first pregnancy) and *non p* (this is not your first pregnancy) are *possible*, but *p* is supposed to be *more likely* than *non p*. Therefore, the preferred answer is yes; P confirms the correctness of D’s assumption by answering affirmatively from a knowing position, i.e. her response aligns with D’s expectations.

If we transform D’s direct question into an indirect one, from an epistemic stance perspective we have:

*Io non so se p o non p ma sono incline a credere che p*

*I do not know whether p or non p but I am inclined to believe that p*

where *p* = *questa è la sua prima gravidanza/this is your first pregnancy* and *non p* = *questa non è la sua prima gravidanza/this is not your first pregnancy*.

This epistemic design is the same as that of non-neutral polar interrogatives (extract 3b), but there the degree of uncertainty was higher than here: the presence of the tag makes it clear that the questioner is advancing a hypothesis seeking confirmation.<sup>16</sup> For this reason, it is possible to say that, along the uncertainty epistemic continuum going from pole NKW to pole B, tag questions come after non-neutral polar interrogatives and before declarative questions; in the latter type, the question design conveys an even stronger commitment towards the truth of *p* (see Fig. 6 and next section).

The main point made in this section is that, if questions are tag questions (i.e. their linguistic design includes a tag component, their social action is confirmation seeking, their preference organisation ex-

pects a confirmatory response), they come from the uncertain position, more precisely from a point between non-neutral polar interrogatives and declarative questions.

## 7.3. Declarative questions

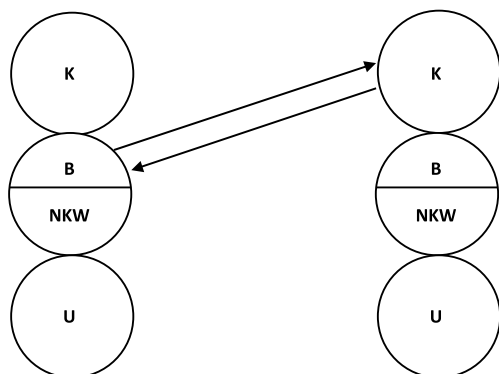
‘These utterances can be considered questions because of what they are about and because they make relevant a yes or no answer after their production [...]. In these cases, if the speaker “states” something s/he cannot know as well as the recipient, confirmation or disconfirmation by the recipient is relevant and the latter typically treats the utterance as a question’ [8]; p. 2762).

Grammatically speaking, in English the difference between a polar

<sup>16</sup> See footnote 12.



## Declarative question (5)



M: *Non vedi l'ora che lui ti cerchi di nuovo.*

*You can't wait for him to contact you again.*

A: *°Sì sì.°*

*°Yes yes.°*

Fig. 11. Origin and destination of M's question (B → K) and A's response (K → B).

## Extract (5)

- 1.A: *Anche se faccio la to::sta quando vie::ne capito e:h.*  
Even if I play ha::rd to get when he co::mes, you understand e:h.
2. *E::, però: dentro so' contenta poi alla fine che lui*  
E:hm bu:t deep inside in the end I am happy that he
3. *mi cerca ancora e tutto. Solo che la sensazione*  
still wants to be in touch with me and so on. Only that the  
feeling'
4. *del dopo, quando se ne va, è un po' triste.*  
I have after, once he leaves, it's a bit sad.
- 5.M: → *Non vedi l'ora che lui ti cerchi di nuovo.*  
*You can't wait for him to contact you again.*
- 6.A: *°Sì sì.°*  
*°Yes yes.°*

interrogative such as *Are you married?* and a declarative question as *You are married?* [76]; p. 48) is that in the first one there is subject-verb inversion, in the second there is no inversion. In Italian there is no such difference as neither of the two requires subject-verb inversion ('*Sei sposato?*').

'In general, declarative questions claim a more nearly equal epistemic footing with the respondent than do interrogatives, and are more frequently used to seek confirmation for information that is already "in play"' [66]; pp. 180–181).

In this respect, it might be useful to see the difference between the declarative question *You are married?* and the corresponding

assertion *You are married*. This latter comes from a knowing position and can be paraphrased as: I tell you that *I know/I am certain* that you are married. If the declarative question *You are married?* functions as a question and not simply as an assertion, the questioner must have at least a minimum degree of uncertainty. Such question design can be paraphrased as: I tell you that I am almost certain that *p*, I strongly suppose that *p*, but I am not completely sure, therefore I ask you for confirmation. In this sense, also declarative questions come from the uncertain position, specifically from the B pole, which represents the minimum uncertainty.

In terms of epistemic stance, if compared to the corresponding tag question *You're married, aren't you?*, the

'declarative question proposes a still stronger commitment to the likelihood that the respondent is married and a correspondingly shallow "K- to K+" epistemic gradient. This latter format is predominantly used when the speaker has already been told (or independently knows) the information requested and merely seeks to reconfirm or alternatively to convey inferences, assumptions, or other kinds of 'best guesses' [76]; p. 48–49).

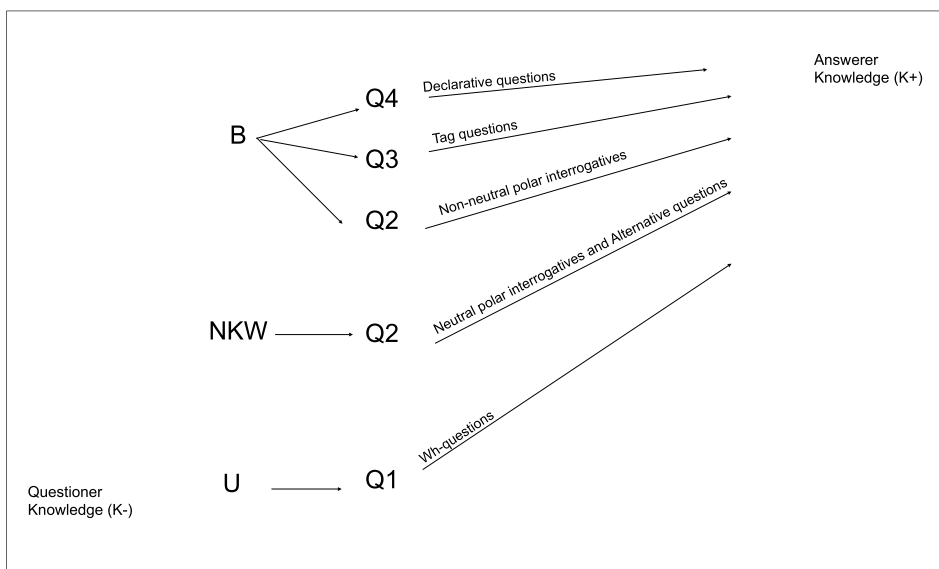
In extract (5), taken from the *Trouble Telling (TT16)* corpus, two girls, A and M, university students, are talking about A's romantic problems:

In lines 1–4, A describes her own conflicting behaviour (she plays hard to get) and feelings towards her ex-boyfriend (she is happy that he still wants to be in touch with her and sad when he leaves). In line 5 M uses a declarative expression (*Non vedi l'ora che lui ti cerchi di nuovo/You can't wait for him to contact you again*) that, on the one hand, communicates what she has inferred from A's story in lines 1–4 and, on the other hand, can be interpreted as a request for confirmation (yes) of the validity of her inference, since it concerns A's epistemic domain of knowledge.

Although both rising tone (as in the case of a polar interrogative) and tag components (as in the case of a tag question) are lacking, A nevertheless interprets M's turn as a declarative question seeking for confirmation.

**Table 1**  
Question type, epistemic design and social action.

Question type	Epistemic design	Social Action
Wh-questions	I do not know p	Informative
Alternative questions	I do not know whether p <sub>1</sub> or p <sub>2</sub> is true	
Neutral polar interrogatives	I do not know whether p (or non p) is true	
Non-neutral polar interrogatives	I do not know whether p (or non p) is true but I am inclined to believe that p is true	Confirmative
Tag questions		
Declarative questions		



**Fig. 12.** Our unknowing (U) position and the NKW/B poles of the uncertain position superposed to Heritage’s K– position.

The epistemic design is similar to that of tag question (excerpt 4), but there the degree of uncertainty was higher than here.

By advancing a hypothesis on A’s desires (*Non vedi l’ora che lui ti cerchi di nuovo/You can’t wait for him to contact you again*), M’s question comes from the B pole of the uncertain position, which is the closest to knowledge/certainty: the question design conveys that, although M cannot be sure about her friend’s desires, she nevertheless has a strong hunch in this respect.<sup>17</sup> A replies from a knowing position with a double confirmative yes (line 6).

The main point made in this section is that, if questions are declarative questions (i.e. their linguistic design is made up of a declarative sentence functioning as a strong supposition, their social action is confirmation seeking, their preference organisation expects a confirmatory response), then they come from the uncertain position, specifically from the B pole, the minimum uncertainty (see Fig. 11).

**8. Conclusions**

Through the analysis of presuppositions, question design, social action and preference organisation in short fragments of Italian question-answer sequences considered as representative of the specific question type under examination, we tried to show that (1) wh-questions, on the one hand, and alternative and polar questions, on the other, come from two different epistemic positions, unknowing and

uncertain; (2) alternative and polar questions convey different degrees of uncertainty, thus placing themselves in different points along the epistemic continuum of the uncertain position ranging from the NKW pole, the maximum uncertainty, to the B pole, the minimum uncertainty. Namely, alternative questions and neutral polar interrogatives are closer to the NKW pole, while non-neutral polar interrogatives, tag and declarative questions are closer to the B pole.

Wh-questions come from the unknowing position, since they communicate lack of knowledge concerning the identity of a wh-word, are information-seeking and expect a content response. The questioner aims to find out the only unknown element within a state of affairs presupposed to be true, i.e., as known and certain to her/him. The wh-word acts as a pro-form for the missing information.

The linguistic design of *alternative questions* conveys that the questioner is equally uncertain about the truthfulness/falseness of two explicit, lexicalized propositions: each alternative is attributed the same probability. Such questions are information-seeking and expect a content response specifying which alternative is chosen by the respondent.

As for *polar interrogatives*, we tried to show that, due to their turn sequential position and propositional content, they may have, at least in Italian, either a *neutral* (information seeking) or a *non-neutral* (confirmation seeking) reading, since in their linguistic design there is nothing that conveys whether a hypothesis is being made or not. In both cases, they expect a yes-no response.

According to the *neutral* reading of *polar interrogatives*, the questioner seems to be equally uncertain between the possibilities *p* and *non p* (one of the two being implicit, not lexicalized), without being inclined to believe

<sup>17</sup> See footnote 13.

that the lexicalized possibility is more likely to be true than the not lexicalized one, i.e., without advancing any hypothesis.

Instead, according to the *non-neutral* reading of *polar interrogatives*, the questioner seems to be inclined to believe that the lexicalized possibility is more likely to be true than the not lexicalized one, i.e., s/he is advancing a hypothesis.

Also, in *tag questions*, the questioner does not know whether *p* is true or false, but s/he supposes it to be true with decreasing uncertainty in comparison to non-neutral polar interrogatives: the tag element gives the declarative component of the question the function of an explicit hypothesis seeking confirmation and expecting a yes-no response.

*Declarative questions* come from the farthest part of the B pole, and get the closest to the respondent's knowing position, i.e. to K+ in Heritage's gradient. The questioner's epistemic commitment towards the truth of *p* is very high, nearly close to certainty: s/he is almost completely certain that the hypothesis is true, requests confirmation and expects a yes-no response.

The difference among all the uncertain questions is given by their degree of uncertainty: the closer a question gets to the B pole, the less uncertain it is.

In all the uncertain questions, the questioner wants to move from *possible* states of affairs, more or less uncertain, to a *true* state, thanks to the recipient's response. In other words, the recipient's response is expected to dissolve the questioner's uncertainty, letting the questioner know which possibility is actually true.

Table 1 represents the epistemic designs underlying the different question types. The main difference in the epistemic designs of unknowing and uncertain questions is given by the expression *I do not know* versus *I do not know whether*. As shown in section 6, both expressions can function as a linguistic test to ascertain whether a question is either unknowing or uncertain. Uncertainty, by definition, implies *alternatives*, i.e., the questioner is faced with at least two different possibilities: the linguistic construction *whether ... or ...* well expresses this sense of epistemic uncertainty.

The epistemic continuum ranging from the unknowing position to the believing pole of the uncertain position in Fig. 6 can be compared to Heritage's epistemic gradient in Fig. 1 which includes a K– questioner and a K+ recipient. Fig. 12 presents a superposition of the two models.

The similarity between the two epistemic continua – Heritage's and ours – is that Q1-Q4 are placed in the same order along the epistemic gradient. The differences are the following: (1) alternative questions, neutral and non-neutral polar interrogatives are added to Heritage's examples Q1-Q4 in [ure 1](#): Q2 (polar interrogative) comes from NKW or B depending on neutral or non-neutral reading; (2) in our model, Heritage's K– is further divided into two distinct epistemic positions: the unknowing and the uncertain. In other words, our model keeps 'unknowledge' (lack of knowledge) and 'uncertainty' (lack of certainty) apart, while Heritage's K– is undifferentiated in this respect.

In our view, the uncertain position has an epistemic status of its own, different from the one of knowing and unknowing. Epistemic stance is not only a matter of knowing more or less (K+ or K–) than the interlocutor, i.e., of *knowing* and *not knowing*, as Heritage claims, but also of *not knowing whether* and *believing*. The epistemic expressions *I do not know whether p* and *I believe that p* refer to linguistic phenomena that are different from those referred to by *I know p* and *I do not know p* and convey a third epistemic position, the uncertain.

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#### Transcription notes

- [ ] Square brackets mark the start and end of overlapping speech  
 [[ Double brackets indicate simultaneous speech orientations to prior turn  
 Underlining Indicates emphasis  
 °Degree signs° Enclose hearably quieter speech  
 (.) (...) (...) Indicates a micropause  
 ((comment)) Additional comments from the transcriber, e.g. about features of context or delivery  
 Co::lons Show degrees of elongation of the prior sound  
 Comma Continuation marker; indicates a suspensive tone, irrespective of grammar  
 Question mark? Questioning intonation  
 Exclamation mark! Exclamatory intonation  
 Full stop. Falling, stopping intonation, irrespective of grammar  
 ‘ (Apostrophe) Sounds’ omission or contraction  
 Hyphen Marks a cut-off of the preceding sound

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