Interrogative or relative clauses?

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An area in which the linguists' evaluations lack consistency, and in which the data are discordant, is the distinction between interrogative clauses and independent relatives in those languages of Indo-European derivation where there is an identity of morphological realization between interrogative and independent relative pronouns (*Kw* clauses).

Although the two omophonous constructions are acknowledged as syntactically and semantically different, a review of the linguistic literature on the topic reveals a discordance in their interpretation, oscillating between interrogative and relative, mainly in the evaluation of *Kw* complements depending on semifactive assertive families of predicates indicanting forms of communication, or perception, or mental states. The same structure, depending on semifactive assertive predicates, is interpreted either as interrogative or as relative according to the topic being dealt with: relatives or interrogatives. This discordant treatment of data constitutes, in itself, grounds for analysis.

In the first part of this paper, a systematic control of a property essential to an interrogative interpretation, *indeterminacy*, reveals that it is an intrinsic property of semifactive assertive predicates to present a specific interaction with "contextual" markers of negation, of a non assertive act, of temporal and modal indicators of future, volition, desire. The presence of such features in the main clause *allows* an interrogative interpretation of *Kw* subordinates, while their absence *excludes* it. In order to evaluate these *Kw* clauses properly as interrogative or relative, it is essential to have the appropriate semantic and pragmatic characterization which takes into account the context sensitivity of semifactive assertive predicates. The confusion in the interpretation of the two structures, interrogative and relative, finds its first justification in the scarce attention that is given, in much linguistic analysis, to those contextual features. Although their effect on the predicate is predictable on the base of the intrinsic properties of all these predicate families, it is essential to pay attention to these features in order to obtain the appropriate characterization of the *Kw* subordinates.

The second part of this paper examines whether or not the systematic differences revealed in the semantic and pragmatic characterization of *Kw* subordinates may be confirmed at a syntactic level within the framework of one of the most restrictive theories of grammar, where the problem of the variation between languages becomes the problem of determining the boundaries of the Universal Grammar. An accurate characterization of the two types of subordinates is essential if descriptive adequacy is to be achieved, since they have very different syntactic configurations (the interrogatives S' and the independent relatives NP S' or NP S). Examination of the syntactic data shows a paradox: some of the most well known syntactic predictions on the distinction between interrogative and relative clauses, which find reciprocal confirmation and which have been widely discussed in the generative literature, are based on a description which conflates the non-interrogative subordinates depending on semifactive assertive predicate with the interrogative. These analyses, however, seem justified, since these non-interrogative *Kw* clauses seem to share more properties with interrogatives than with independent relatives.

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Again, as for interrogatives, the properties of independent relatives are examined at different levels. A fuller examination of some of their properties reveals that the non-interrogative *Kw* clauses depending on semifactive assertive predicates present a series of peculiar characteristics, both on a syntactic and on a semantic level, which link them both to the interrogative and to independent relatives. Moreover, a description which conflates the non-interrogative *Kw* clauses with the interrogative proves inadequate not only on semantic and pragmatic grounds, but also on syntactic one. Consideration of more than one level of grammatical description (morphosyntactic distribution and semantic characteristics) allows to distinguish two types of independent relatives; in particular, the non-interrogatives *Kw* clauses depending on semifactive assertive predicates are a class of marked independent relatives.

0. *On linguistic data.*

The treatment of linguistic data is not always satisfactory, as the criticism on the empirical adequacy of many linguistic analyses indicates. Moreover, especially as formal analyses have developed, the evaluation of data has been found to be a very difficult point involving decisions on which scholars do not always agree. Although the debate has centered primarily on what is grammatical and what is not, on what is acceptable and what is not, sometimes the problem also lies within these distinctions themselves. The point I intend to deal with here is that of the relevance of the proposed *data* in relation to the *facts* being analyzed (cf. Chomsky 1965), that is, "bare" data versus data as a basis of the argumentation.

One area in linguistic literature in which the intuitions of linguists are anything but uniform, even if unknowingly, and the evaluations of the data are discordant is that of indirect *x*-interrogatives [1] vs independent relatives [2] in those languages of Indo-European derivation, such as the Romance, Germanic and Balto-Slavic languages in which the interrogative and relative pronominal systems share the same *significans* deriving from the indefinite/interrogative **Kw*.[3]

[1] Introduced by a pronoun of the interrogative/relative series. The terminology adopted is rather varied: Lyons (1977) quoting Jespersen utilizes that of *x-questions*, which indicates that in these structures reference is made to an "unknown quantity" (an *x* indicated in the question), exactly as in an algebraic equation (cf. Jespersen 1927, III: 39 and 1933: 305). Another way, perhaps the most widespread in generative terminology, of indicating interrogative clauses, is that of calling them *WH-questions*, a term that recalls the orthographical realization that the interrogative pronouns have in English (*who*, *what*, *where*, etc.). Following Lyons I will always maintain the distinction between *questions*, whose characterization is semantic and pragmatic, and *interrogatives*, as the grammatical structures directly associated with these: by asserting that an untterance is a question, a part of its "meaning" in a wide sense of the term is established, independently from its grammatical form, while in saying that an utterance has interrogative form, some syntactic properties are established (cf. Fava 1984, 1987).

[2] The independent relatives (term utilized in thorough analyses of Italian relative pronouns; cf. Nordhof 1937, Cinque 1988) are also called *free relatives*, *headless* or *acephalous* relatives or relatives with *zero significans*.

[3] In the Indo-European languages the group of terms with the **Kwi* theme acts both as interrogative and indefinite; in some of these languages it also has the function of relative, in some cases also with some formal differences.

In many cases the distinction between the two homophonous types of structures – interrogatives and independent relatives – is very clear even intuitively: for instance, in spite of the apparent formal identity of the subordinate clauses *chi aveva telefonato* ("who had telephoned") in (1) e (2), only in the first case, is there an indirect interrogative clause, while in the second case, there is a relative clause in which the same pronominal element (the independent relative pronoun) at the same time has the role of relative pronoun (a role which logically belongs to the subordinate relative clause) and that of antecedent of the relative clause (a role which logically belongs to the main clause):

(1) Chiesero chi aveva telefonato.
"They asked who had telephoned."

(2) Punirono chi aveva telefonato.
"They punished (the one) who had telephoned."

Evidence on this intuitive contrast has been found in the semantic and pragmatic as well as in the syntactic literature. In both domains it has been pointed out, with different arguments, that the type of predicate that governs the first subordinate clause, – e.g., *chiedere* ("*ask*") in (1) – which belongs to a restricted semantic class, contributes to its identification as an indirect *x*-interrogative. Moreover, the interrogatives introduced by a pronoun present a univocal characterization which is accounted for in the term "*of type x*", which indicates that in these structures reference is made to an "unknown quantity" (an *x* indicated in the question), exactly as in an algebraic equation. In the semantic and pragmatic literature this indeterminacy is assumed to be a systematic feature of the meaning of the interrogative clause and the discussion is how it can be accounted for. This special indefinite nature of the interrogative pronoun is also systematically pointed out in comparative grammar, in which it is noted that the two meanings – interrogative and indefinite – coexist in the same etymon in many linguistic families. In syntax the contrast between interrogative and relative is often used to describe *island* phenomena since, notwithstanding their apparent similarity, indirect interrogative and independent relative clauses are characterized by different structures, the former as having a sentential structure (S') and the latter a nominal one (NP S').

Nevertheless, in spite of these acclaimed semantic and syntactic differences between these two types of omophonus structures, the literature on the topic reveals numerous oscillations in the evaluation of a subordinate as interrogative or relative when the predicate on which the subordinate depends is semifactive assertive [4] indicating forms of communication [like *dire* ("tell")]

[4] The semifactive predicates describe, according to a standard definition, "processes of knowing or coming to know" (Hooper 1975: 117). Their classification is due to Karttunen (1971: cf. also Hooper 1975, Munsat 1986), who distinguishes two types of presuppositions, those that characterize factive predicates, presupposing the truth of their complements under any condition, and the weaker ones, of the semifactive predicates, in which the truth of the complement cannot always be inferred from the entire sentence.

or forms of perception [like *vedere* ("see") or *sentire* ("hear")], or mental states [like *sapere* ("know")]. While subordinates of the type in (1), i.e. depending on a predicate like *chiedere* ("ask"), seem to give rise to uniform intuitions and are consistently identified as interrogative, a subordinate in the declarative form of (3) or (4) depending on a semifactive predicate like *sapere* in Italian or *know* in English has at varying times in the literature been interpretated as interrogative (Rizzi 1982: 61 and also 1984; Karttunen 1978: 183; Grimshaw 1979: 282) or as independent relative (Hirschbühler & Rivero 1983a: 505ff; Groos & Van Riemsdjik 1981: 173):

(3) So che cosa hai detto.
"I know what you said."

(4) I know what you said.

An analogous uncertainty characterizes the subordinates depending on a verb of perception, as in the declarative form of (5), which is identified by some (Cinque 1988: 496; cf. also Schmitt Jensen 1970) as being ambigous between the two interpretations of interrogative and relative, while utterances of the same structure, i.e., depending on a verb of perception, are treated as univocally relative by others (cf. Suñer 1984a: 369; cf. also Bresnan & Grimshaw 1978: 365; cf. the interrogative interpretation with *notice* in Chomsky 1978: 18).

(5) Ho visto chi mi ha rubato il portafoglio.
"I saw who stole my wallet."

Generalizing, the same structure, depending on semifactive assertive predicates, is interpreted either as interrogative or as relative according to the topic being dealt with: relatives or interogatives. This discordant treatment of data constitutes, in itself, grounds for analysis and has consequences, not only on the adequacy of the description, but also on the theory itself. Even if uncertainties and oscillations do occur in traditional grammar as well,[5] the formal rigour that characterizes the recent linguistic debate is such that from these contradictory interpretations grammatical analyses descend which are irreconcilable. For instance in generative studies within a

[5] In this research quantitative data are not given. That the distinction between interrogative and relative is not always satisfactory has often been noted: Jespersen (1927, III: 73), for instance, observed that even in important grammatical descriptions pronouns that in his opinion are indubitably interrogative, like *whom*, in *I did not see to whom he gave it*, are treated as indefinite or general. Jespersen himself, on the other hand, in his attempt to distinguish between the two types often oscillates between semantic and syntactic criteria. To give another example of the confusion in the description, Rohlfs can be cited (1969: 195). Observing that in a Veneto dialect, the interrogative pronoun *chi* ("who") is reinforced with the relative pronoun *che* ("that"), Rohlfs offers the following utterance *Chi che va in leto senza sena, tuta la note se ramena* ("Who (that) goes to bed without dinner, tosses all night long"). The pronoun *chi* is, instead, an independent relative, and it is both the subject of *va* ("goes") and (a part of) the subject of *se ramena* ("tosses"). *Che*, rather than a relative, could be a declarative complementizer of the type studied for the constructions of sub-standard French *"L'homme qui que tu aimes"* in Kayne (1976).

restrictive theory of grammar, where the problem of variation in natural languages is identified with the problem of restricting the domain of this variation to precise finite values (*parameters*), it is from an evaluation of (5) as an interrogative, and not as a relative, that the well known analysis of subjacency and of a parameter that could differentiate Italian from other languages (like, for example, English) descends.

One purpose of this paper is to argue in favour of an evaluation of the data in a perspective which includes various levels of representation. If from a theoretical point of view it has been asserted that it is appropriate to analyze linguistic properties at a particular level of representation (semantic, syntactic or pragmatic), independently of the relationship postulated with the other levels (isomorphic, modular, etc. cf. Chomsky, 1977, 1985), this pattern of argument is rather unsatisfactory in evaluating the hypotesis against the empirical evidence, and it has often been said that, in detail, the date seem debatable (cf. *Studi di grammatica italiana* 1978). In the case of the subordinates introduced by an interrogative/relative pronoun and depending on assertive semifactive predicates, for instance, the lack of consistency in their interpretation between interrogatives and relatives seems due to a peculiar set of properties which make it difficult to analyze anyone level in a descriptively adequate way without an appropriate semantic and syntactic characterization which is verified systematically in a variety of different contexts.

This paper is articulated as follows. In the first part (§ 1., 2. and 3.) I attempt to demostrate that in order to provide the proper description of subordinates in (3) and (5) as interrogative or relative, a systematic analysis of some contextual features in the main clause is required (such as the presence of markers of negation, or of illocutionary force indicating devices of non-assertivity). For example, the absence of such features in (3) and (5) excludes an interrogative interpretation of the subordinate, while the presence of the negation in (6) and (7) determine it.

(6) Non so che cosa ha detto.
"I dont't know what he said."

(7) Non ho visto chi mi ha rubato il portafoglio.
"I didn't see who stole my wallet."

It is an intrinsic property of semifactive assertive predicates to present a specific interaction with these features, whose presence can *allow* the possibility of an interrogative interpretation, while their absence *excludes* it. Now, if it is true that their effect on the predicate is predictable on the basis of the intrinsic properties of these semifactive assertive predicate families, it is essential to take into account these 'contextual' markers to have the appropriate interpretation. A first cause of the confusion in the interpretation of the two structures, interrogatives and relatives, can be imputed to the scarce attention addressed, in most of the linguistic analyses, to precisely those features that would permit the correct interpretation.

In the second part of this paper (§ 4., 5. and 6.) I examine whether or not the systematic differences pointed out so far also find verification and confirmation in syntax. At first glance, it seems that a treatment that assimilates non-interrogative to interrogative subordinates, even if not justified on semantic and pragmatic grounds, is rather apropriate on syntactic ones, insofar as non-interrogative clauses disregard the normal (syntactic) characterization of the independent relatives: the distinction proposed between interrogative clauses as in (6) and (7) on one hand, and relative clauses on the other, as in (3) and (5), seems to conflict with the configuration of facts enucleated in the most important syntactic analyses on Italian interrogative and relative structures. This paradox, nevertheless, is only apparent: verifying the properties of the independent relative clauses at various levels of grammatical description provides not only a precise confirmation of the thesis of the contextual dependence of these subordinates, but also a redefinition, for Italian, of the typology of the independent relative clauses.

1. *On the classification of governing predicates: necessary and sufficient conditions.*

As mentioned earlier, the relationship between the predicate and the "types" of sentential complements depending on it has always been an object of theorization within grammatical research. The intuitive idea is that every type of subordinate must be identified as a declarative, interrogative, or relative, or something else at a semantic and/or syntactic level and that the "type" of predicate on which the subordinate depends contributes to its identification.

It is well known, in fact, that not all classes of predicates occur indiscriminately with all types of sentential complements. A structural description of the indirect interrogative [either *alternative* introduced by *se* ("whether") [6] or of type *x*] cannot be limited to the subordinate clause, but must include information on the semantic class of the predicate (which can be a verb, an adjective, or a noun) on which the sentential complement depends.[7]

(8) Dubitava *se/su che cosa* gli fosse veramente permesso.
"He doubted whether/what he was truly allowed to do (something)."

(9) Dubbioso *se/su che cosa* gli fosse veramente permesso.
"(He was) doubtful whether/about what he was truly allowed to do (something)."

(10) Il dubbio *se/su che cosa* gli fosse veramente permesso lo paralizzava.
"The doubt about whether/about what he was truly allowed to do (something) paralyzed him."

[6] This type of interrogative clause has various designations: *alternative* indirect interrogatives, *nexus questions* (for Jespersen), or *yes-no questions*. Every designation is intended to show that such questions offer a binary choice of alternatives (*yes*, *no*).

[7] Note that, within the same lexical category, there are some syntactic dissimilarities among nouns, verbs and adjectives. In this paper the exemplification is mainly with verbs.

Predicates that may be in construction with an indirect interrogative, instances of which are *dubitare* ("to doubt"), *dubbioso* ("doubtful"), *dubbio* ("doubt"), are limited to a rather restricted class; other predicates such as *asserire* ("assert"), or *ordinare* ("order"), which admit of sentential complements introduced by *che* ("that"), are not allowed to be in constructions with interrogative subordinates.

(11) a. Affermava che aveva osato fare questo.
"He asserted that he had dared to do this."
b. *Affermava se/chi abbia osato fare questo.
"He asserted whether/who (he) has dared to do this."

(12) a. Ordinarono che partissero subito.
"They ordered that they leave immediately."
b'. ?? Gli avrei ordinato, se mi avesse chiesto scusa.
"I would have ordered for him, if he had excused himself to me."
b". ?? Avrei ordinato, a chi mi avesse chiesto scusa.
"I would have ordered, for (the one) who had excused himself to me."

If the "interrogative clause", introduced by *se* or by an interrogative/relative pronoun, is not governed by one of the verbs, adjectives or nouns of the "appropriate" class, the utterance is either uninterpretable as in example (11b), or it has interpretations different form those of indirect interrogatives, as in (12b') and (12b"), whose subordinates have the values of, respectively, a hypothetical clause (where *se* means "in case", "in the case that") [8] and an independent relative (on the different characterization of the latter, with respect to the interrogative, cf. below § 5.).

In describing restrictions on the type of complement that a predicate can take predominantly lexical criteria have been considered. For instance, there exist many lexical classifications of predicates which may occur with an interrogative subordinate clause including *nonfactive*, *weak assertive*, such as *immaginare* ("imagine"), or *non-assertive*, *nonfactive*, such as *dubitare* ("doubt"), or *non-assertive*, *factive* such as *dimenticare* ("forget"), *assertive*, *semifactive* such as *scoprire* ("discover") predicates, etc.[9] However, in order to formulate

[8] Grammarians maintain the distinction, at least on an intuitive level, between "hypothetical" and "interrogative" coniunctions, a distinction that is also lexicalized in some languages (cf. *si/an* in Latin, *if/whether* in English).

[9] A first important attempt to characterize, in this direction, the predicates which can occur with interrogative subordinate, whether *alternative* or type *x*, is in Baker (1970) who organized them into four semantic classes. A more exhaustive list is in Karttunen (1977; 1978: 168), who distinguishes the following classes (in order):
a) verb of retaining knowledge: *know*, *be aware*, *recall*, *remember*, *forget*, etc.,
b) verbs of acquiring knowledge: *learn*, *notice*, *find out*, *discover*, etc.,
c) verbs of communication: *tell*, *show*, *indicate*, *inform*, *disclose*, etc.,
d) verbs of decision: *decide*, *determine*, *specify*, *agree on*, *control*, etc.,
e) verbs of conjecture: *guess*, *predict*, *bet on*, *estimate*, etc.,
f) opinion verbs: *be certain about*, *have an idea about*, *be convinced about*, etc.,
g) inquisitive verbs: *ask*, *wonder*, *investigate*, *be interested in*, etc.,
h) verbs of relevance: *matter*, *be relevant*, *care*, *be significant*, etc.,
i) verbs of dependency: *depend on*, *be related to*, *have an influence on*, *be a function of*, *make a difference to*, etc.

adequate criteria for the well-formedness of an interrogative, the contextual meaning, i.e. the specific interaction between the meaning of the lexeme and other grammatical features in the utterance, has to be considered (Fava 1984). Based on Karttunen's (1977) rather heterogeneous list of predicates, which remains the most exhaustive, at least two groups of predicates have to be distinguished:

I. A first group in which the lexical meaning of the predicate (belonging to one of the classes in question), together with the "introducers of interrogative" – like *se* or the series of interrogative/relative pronouns – constitutes a necessary and sufficient condition for interrogative well-formedness. The following classes belong to this first sub-group:

a) predicates of request. Some truly performative, or better, illocutionary verbs, – of the interrogative type, i.e. that specify how to understand what follows [classified as directives by Searle (1969) and expositives by Austin (1975)] – such as *chiedere*, ("ask"), *domandare* ("ask for"), *esaminare* ("examine"), *interrogare* ("ask about") (cf. *infra* § 3. and 3.2.) Other predicates of propositional attitude of the inquisitive type that express, for example, an epistemic relation, such as *chiedersi* ("to ask oneself"), *interrogarsi* ("to ask oneself about"), etc. (cf. Karttunen's class *g*).

To this first subgroup also belong perhaps the following class, which, however, presents some problems not discussed here:

b) dubitative predicates, such as *mettere in dubbio* ("to throw doubt on"), *essere dubbioso* ("to be doubtful"), etc.

II. A second group in which the lexical meaning of the predicate constitutes a necessary but not sufficient condition for interrogative well-formedness. To this second subgroup belongs a family of assertive semifactive predicates indicating:

c) communication, such as *dire* ("tell"), *indicare* ("indicate"), *informare* ("inform"), *raccontare* ("tell"), etc. (cf. Karttunen's class *c*);

d) perception, such as *vedere* ("see") *guardare*, ("look at"), *osservare* ("observe"), *sentire* ("hear"), etc;

e) epistemic relations and of mental attitude, of the retaining knowledge type, such as *sapere* ("know"), *essere a conoscenza* ("be aware of"), *ricordare* ("remember"), etc. (cf. Karttunen's class *a*);

f) epistemic relations and of mental attitude, indicating awareness being acquired, such as *scoprire* ("discover"), *trovare* ("find"), *notare* ("notice"), etc. (cf. Karttunen's class *b*).

(This is not an exhaustive list.)

In Type I predicates the lexical meaning of the predicate on which the clause depends is sufficient in itself to predict indirect interrogative well-formedness. In other words, Type I predicates may always appear, independently of context, in constructions with an indirect interrogative. When the subordinate clauses introduced by the interrogative/relative pronoun depend

on one of the verbs, adjectives or nouns that belong to this first subgroup, they are generally the objects of "clear" intuitions: these seem to receive, in the linguistic literature, uniform interpretations, i.e., univocally interrogative.

Instead, the complements depending on Type II predicates, which receive uncertain or contradictory evaluations, oscillating between interrogative and relative, actually allow, according to the thesis presented here, an interpretation as indirect interrogative, bu only in the presence of certain contextual features, whose typology can be distinguished, along very general lines, into three areas: the first linked to speech acts and to indirect discourse; the second to negation; and the third to the morphological or lexical clusters indicating future or modality.[10]

In the first case, relevant contextual features are those of non-assertive illocutionary force indicating devices, i.e., those morphosyntactic "features" of direct or reported speech acts that signal the non-declarative (and therefore, non-assertive) nature of the utterance, of which the subordinate is part. Among the devices of non-assertive force, i.e., the linguistic markers that permit recognition and interpretation of the act as non-assertive, Italian presents the raising intonation, inflectional characteristics of the verb, such as the imperative and subjunctive, word order, particular conjunctions, etc.[11]

[10] Such context sensitivity is a systematic feature of semi-factive assertive predicates also characterizing propositional complements; cf. Karttunen (1971), Hooper (1975).

Concerning the lists of predicates proposed by Karttunen, some additional classes and ulterior distinctions have been proposed. For instance the predicates of perception are included; among the predicates indicating retaining knowledge, *dimenticare* ("forget"), which is factive, was excluded. Predicates of non-knowledge, such as *ignorare* ("to ignore"), *mistero* ("mystery"), etc. present an interrelation with negation different from that considered for Types II Predicates:

*(Non) dimenticava che cosa facevano, *e precisamente...*

"He (didn't forget) forgot what they were doing, *and precisely ..."

Other nonfactive predicates, such as *immaginare* ("imagine"), or among those of decision, *decidere* ("to decide"), etc. may be sensitive to the contextual features discussed in this paper, but only under particular conditions (see below § 5 and note 23).

There are thorough analyses of particular syntactic constructions of some classes of predicates considered. Particular attention was turned to some constructions of predicates indicating knowledge, perception, etc. of the type, *I know the capitals of Europe (concealed questions)*, where the nominal phrase *the Capitals of Europe* is analysed as a concealed question, having the meaning of a WH-interrogative whose noun phrase can be paraphrased as *(I know) which are the capitals of Europe* (Heim 1979: 51, Baker 1968, Grimshaw 1979, Suñer 1981). Regarding verbs of perception, the *pseudo-relative construction*, of the type, *Lo vedo che arriva* ("I see he is arriving") has been extensively discussed both by "traditional" (cf. Grevisse 1955) and by generative (cf. Graffi 1980) grammarians.

[11] In this perspective the research opened by Austin (1975, 2nd edition) has particular relevance in defining the levels of representation of those *locutionary* elements, or clusters of elements, which can function as illocutionary force devices (intended as the linguistic features which may bear the force of the utterance). In Italian, as in most of the Romance languages, where the moods, intended as inflectional characteristics of the verb, can function as illocutionary force devices, not only the imperative, but also the subjunctive has to be considered. The latter is not only the mood of subordination, as is often affirmed, but, besides occurring in the subordinate clauses, it can also occur in the main clauses, and in this case it expresses particular illocutionary force (cf. *Viene* ["come [+3rd person ind.] ((He) comes)"] vs. *Venga!* ["come [+3rd. person subj.] (Come!)"] (Fava 1987). Utterances in which there is reproduction or transposition in the indirect discourse of non-assertive acts obviously also have characteristics of non-assertivity. (For a linguistic typology see Garavelli Mortara 1988).

The second type of context concerns cases in which the utterance of which the subordinate is part presents features peculiar to negation, like the quantifier *nessuno* («nobody») or the connective *non* ("not"), i.e., where the main clause (or the utterance as a whole) is not interpretable as an assertion of the positive type.[12] The third type of context, for which a systematic typology is lacking, is linked to modal or temporal devices indicating future, volition, desire, etc., having either morphological expression or a periphrastic structure.[13]

In order to evaluate the clauses depending on Type II predicates properly as interrogative or relative, it is essential to have an appropriate semantic and pragmatic characterization which takes into account those 'contextual' variations. Of course, these assertive, semifactive predicates present a systematic relationship with such variations due to characteristics which are inherent in them. In the following sections (§ 2 and 3) some evidence from sentence and discourse grammar is provided to demostrate that the interrogative interpretation is allowed only in contextual conditions of non-declarativity, negativity, future. Although the arguments proposed can be semantically characterized cross-linguistically, only Italian structures will be discussed, in order to investigate some of the problems which their description raises for a syntactic analysis.

2. *An asymmetry in the distribution of the subjunctive.*

The distinction between predicates whose lexical meaning constitutes a necessary and sufficient condition for interrogative well-formedness (Type I) and those whose meaning constitutes a necessary, but not sufficient, condition for interrogative well-formedness (Type II) allows some predictions on the distributional properties of subordinates introduced by *se*, or by *Kw*, where *se* is used to indicate a conjunction with interrogative or hypothetical meaning and *Kw* is the equivalent of the English notation WH. This allows leaving aside, at least initially, the semantic characterization of the *Kw* clauses, on which "intuitions" are not clear, permitting instead some "asymmetries" in their well-formedness to be registered in relation to the presence or absence of contextual features.

The two types of indirect interrogative (*x*-interrogatives and *alternative*) have virtually the same distribution. In all the cases in which it is possible to formulate an alternative it is possible to formulate an *x*-interrogative [cf. (10)] and vice-versa. In other words, conditions of well-formedness of a subordinate as indirect interrogative are the same both for the *alternative* and the *x* type. Traditionally, in the literature on this topic, this distributional

[12] Some negation markers can be implicit: cf. an implicit negative quantifier of the type *Solo Mario sa se/quando sia venuto* ("Only Mario knows whether/when he came") in the sense of "nobody except Mario" (Longobardi 1988: 653ff).

[13] Cf. Jespersen (1927, III: 74).

property is used to verify the interrogative *vs* non-interrogative nature of a given complement. For instance, the distribution of *se/Kw* subordinates depending on a predicate such as *credere* ("believe") in (13) confirms the relative and non-interrogative nature of the *Kw* subordinate:

(13) Credo a che cosa/*se mi ha detto.
"I believe what/whether he told me."

The presence or absence of some contextual features of negation markers, of illocutionary force devices of non-assertivity, etc. in the governing predicate does not determine variations in the well-formedness of the *se/Kw* clauses depening on Type I predicates, but only in these depending on Type II. Such variations are more clearly evidenced in those contexts in which the *subjunctive/indicative* alternation is allowed [14]: among the *se/Kw* subordinates depending on Type II predicates, only those introduced by *Kw* present systematic acceptability, and only when the mood of the subordinate's verb is *indicative*. Moreover, according to the thesis presented here, since only in the presence of precisely those features considered are there, in Type II predicates, interrogatives, the *Kw* subordinates between the Type II predicates in such contexts and Type I predicates present the same distribution. Vice-versa, the distribution is different between the latter and Type II in contexts which are positive, declarative, etc.

Consider first the presence of markers peculiar to negation in the governing predicate in those contexts that systematically allow the *subjunctive/ indicative* alternation [(14)-(17)]. As predicted, in Type I predicates

[14] An analogous asymmetry in the distributional characteristics of the *subjunctive/indicative* also exists, in Italian, and in other Romance languages, in the propositional complements depending on assertive predicates (cf. Spanish *que* clauses in Hooper 1975). The *subjunctive/indicative* alternation in the interrogative subordination reflects complex semantic aspects of which the "meaning" of the predicate is only one element. The subjunctive neither characterizes the indirect interrogatives in a unitary way nor, on the other hand, must be excluded from the independent relatives. In the indirect interrogatives, the alternation between subjunctive and indicative is not allowed when in the governing predicate there is an "imperative" or "future" marker. In the following examples with the imperative in the main clause, the subordinate may take the indicative present (case *i*) or the future (case *ii*), but not the subjunctive (case *iii*):

i *Chiedigli se/quando viene.*
"Ask him whether/when he come [+pres. indic.] (is coming)"

ii *Chiedigli se verrà.*
"Ask him whether/when he come [+fut.indic.] (will come)"

iii * *Chiedigli se/quando venga.*
"Ask him whether/when he come [+subj.] (is coming)"

This example, alone, belies two very widespread but both inexact generalizations on the distribution of the subjunctive. The first defines a systematic connection between subordinate moods and certain semantic elements peculiar to the governing predicate (while the presence of identical combinations of semantic features does not explain the above-mentioned alterations); the second considers indicative and subjunctive alternation as peculiar to the interrogative structures (cf. Schmitt Jensen 1970: 645ff).

Even in the case of independent relatives the possibility of having constructions with the subjunctive is not excluded (cf. Cinque 1988).

the presence (or absence) of the negation in the main clause does not determine significant variations in form and interpretation of the *se/Kw* clauses:

(14) i. Non gli chiedevo spesso se/quando volesse venire.
"I didn't ask him often whether/when he want [+ subj.] (wanted) to come."
ii. Non gli chiedevo spesso se/quando voleva venire.
"I didn't ask him often whether/when he want [+ indic.] (wanted) to come."

(15) i. Gli chiedevo spesso se/quando volesse venire.
"I often asked him whether/when he want [+ subj.] (wanted) to come."
ii. Gli chiedevo spesso se/quando voleva venire.
"I often asked him whether/when he want [+ indic.] (wanted) to come."

Negative declarative utterances as in (14) or non-negative declarative utterances as in (15) do not present variations in their distribution. Moreover, the possibility of an alternation between subjunctive and indicative in the subordinate verb that characterizes (14) also characterizes (15).

On the other hand, *se/Kw* subordinates depending on Type II predicates undergo significant variations in distributional characteristics according to the presence/absence of negative markers in the governing predicate. When the governing predicate is characterized as negative as in (16), the *se/Kw* clauses are perfectly acceptable, both when the verb is in subjunctive form and when in indicative form.

(16) i. Nessuno sa se/quando venga.
"Nobody knows whether/when he come [+ subj.] (will come).
ii. Nessuno sa se/quando viene.
"Nobody knows whether/when he come [+ indic.] (will come)."

However, when utterances with the same governing predicate are considered, but in a positive context, as in (17), the subordinate presenting the subjunctive is unacceptable, both when it is introduced by *se*, as in (17)*ia*, and when it is introduced by a *Kw* pronoun, as in (17)*ib*.

(17) i a. *Qualcuno sa se venga.
"Someone knows whether he come [+ subj.] (will come)."
b. ??Qualcuno sa quando venga.
"Someone knows when he come [+ indic.] (will come)."
ii a. ?Qualcuno sa se viene.
"Someone knows whther he come [+ indic.] (will come)."
b. Qualcuno sa quando viene.
"Someone knows when he come [+ indic.] (will come)..."

Moreover, the distribution of the *se+indicative* clauses also seems to have rather controversial results: the acceptability of (17ii a) is dubious, even if it moves towards a hypothetical interpretation. Only the *Kw+indicative* clause of (17ib) is perfectly acceptable.

The same distributional properties just noted also exist when the main clause (or the utterance as a whole) is not interpretable as a positive assertion,

and presents morphosyntactic features that signal its non-declarative (and therefore non-assertive) nature. The distribution characterizing the negative and non-negative contexts of (16) and (17) also characterizes the *interrogative* versus *declarative* utterances (18)-(19). The presence of features of illocutionary force devices of a question, such as interrogative intonation, makes the examples in (18) fully acceptable,

(18) i. Hanno visto se/dove sia caduto?
"Did they see whether/where he fall [+ subj.] (fell)?"
ii. Hanno visto se/dove è caduto?
"Did they whether/where he fall [+ indic.] (fell)?"

while the corresponding declaratives in (19) present the same asymmetries alreadly noted above for the non-negative in (17):

(19) i a. *Hanno visto se sia caduto.
"They saw whether he fall [+ subj.] (fell)."
b. ??Hanno visto dove sia caduto.
"They saw where he fall [+ subj.] (fell)."
ii a. ??Hanno visto se è caduto.
"They saw whether he fall [+ indic.] (fell)."
b. Hanno visto dove è caduto.
"They saw where he fall [+ indic.] (fell)."

The utterance in (19 i a) with *se/Kw+subjunctive* clauses is unacceptable. The acceptability of *se+indicative* subordinate in (19 ii a) is dubious. Instead, the *Kw+indicative* subordinate in (19 ii b) is perfectly acceptable.

The contextual restrictions characterizing Type II predicates are confirmed by the well-formedness of the *se/Kw* clauses, in the presence of some of the three above-mentioned groups of contextual features, as is the unacceptability, in their absence, of the *se* and *Kw+subjunctive* subordinates. Among the *se/Kw* subordinates depending on Type II predicates in contexts which are positive, declarative, etc., only those introduced by *Kw* present systematic acceptability, and only when the mood of the subordinate's verb is *indicative*.

The asymmetries and symmetries in the distribution of *se/Kw* clauses just considered in (14)-(19) are summarized in Table I.

Table I

		subordinate	
	Contextual features	*se* mood	*Kw* mood
Type I		+ Subjunctive + Indicative	+ Subjunctive + Indicative
Type II	+ non-declarative + negative, + future, etc.	+ Subjunctive + Indicative	+ Subjunctive + Indicative

Type II	- non-declarative - negative, - future, etc.	- Subjunctive ? Indicative	- Subjunctive + Indicative

The parallelism in the distribution of the clauses depending on Type II predicates in negative, non-declarative, future contexts, and those depending on Type I predicates, and, on the other hand, the differences between the former cases and those belonging to Type I may be explained as determined by diverse semantic properties (§ 3. and 5.).

3. *On a fundamental property of direct and indirect interrogatives: indeterminacy.*

In this section a fundamental property of indirect *x*-interrogatives, as of direct *x*-interrogatives, is discussed.

These interrogatives are characterized by the presence of an interrogative pronoun, adjective or adverb which presents, in reference to a particular grammatical category, a set of alternative responses, possibly infinite, depending on how many elements can stand for *x*. Each pronoun constrains the set of *x*-elements, requiring them to satisfy some specific features.

Each pronoun presents a characterization of the different types of domain, within which the response is selected, but its reference within the domain in question is, however, *indeterminate*. For instance, *chi* ("who") requires the *x* element(s) to be human individual(s).

(20) (Gli avevano chiesto) chi, tra gli studenti, era passato allo scritto.
"(They had asked him) who, among the students, had passed the exam."

In (20) the value of *x*, where *x* is a student, can be any student, but *which* student is indeterminate: the essential feature of direct and indirect interrogative sentences is therefore the indeterminacy of this *x*.

An account of this pretheoretical, intuitive characterization has been given in the literature in different ways. In comparative grammar it is observed that interrogative and indefinite forms are often etymologically related; for example, in Indo-European languages the group of terms with the theme **Kwi* has an interrogative and indefinite meaning. The coexistence of these two senses within similar forms (peculiar also to the Semitic languages) has frequently been the object of linguistic reflection, although, in trying to explain their relation, the interest of the grammarians has more often been concerned with searching for a filiation in time of the two values so that one is derived from the other (cf. Meillet 1922: 19; Frei 1940). [15]

[15] Frei (1940: 12ff), following Meunier (1875), considers the passage in Indo-European languages from interrogative to indefinite as a passage from the *langue* to the *parole*. On the contrary, the priority of the indefinite over the interrogative, argued in Wegener (1885: 76), is maintained in, among others, Meillet and Vendryes (1979, 5 ed.: §. 888) and Serbat (1968).

During the second half of this century, in which the debate on the "meaning" and the structure of questions seems to have particularly attracted linguists, philosophers, and logicians (cf. Hiz 1978), this value of indefiniteness or indeterminacy has constituted the nucleus of research, even if the reasons for the interest are different and the problem has been treated differently in the various fields of research.

For some philosophers and logicians the problem of explaining some aspects of the "meaning" of a question in natural language coincides with its formalization. Already Ajdukiewicz, in 1928, described questions as consisting of a sentential matrix (a sentence with one or more of its components replaced by variables) preceded by an interrogative operator *'for which x'*. For example, the direct interrogative in (20) *chi era passato allo scritto* is rendered as

For which *x*, *x* has passed the exam?

and is represented as

(*x*?) *x* has passed the exam.

This proposal, in which the interrogative operator plays a role similar to that played by a quantifier in that it binds the free variables to the matrix sentence, is taken up again largely in the successive literature which develops alternatives on the types of variables allowed and on the set of elements that the variable represents.

Together with a vast logical literature, many transformational studies aiming at characterizing grammatical structure in relation to quantifiers have with increasingly numerous contributions debated about the representations of interrogatives. For instance, their peculiar semantic characterization has been compared to that of the relatives. [16]

> "... the wh-word actually has semantic content. It is, in fact, a kind of quantifier. In relatives, however, the wh-word has no semantic content. Thus it is reasonable to suppose that one of the rules of interpretation assigns... representations in logical form... But there is no reason to assume a quantifier representation in LF in the case of relatives..., which simply marks a certain category." (Chomsky & Lasnik 1977: 447).

For other philosophers and logicians interested in language as a form of action, questions represent a type of act whose multivalence is recognized and whose empirical domain turns out to be very rich. As speech acts, in fact, questions constitute a privileged area of research, because they offer the possibility, at least in principle, of a clear distinction between the gram-

[16] Logical Form concerns a level of grammatical representation. The representation of each syntactic level (Logical Form, P-Structure and S-Structure) are projected by lexicon since they respect some properties of lexical items (Chomsky 1981: 29). In this way many aspects of syntactic representation are deducible from semantic properties of lexical items. As concerns the quantification in relative clauses, the question is fairly controversial. For Hintikka (1974: 130), for instance, relative clauses imply a kind of cross reference. Also in Chomsky (1981: 84-85) it is argued that they may have quantified representation.

matical properties of an utterance on one hand,[17] and its pragmatic properties on the other.[18]

The possibility of utilizing linguistic strategies to indicate a question characterizes a large part, if not all, of the languages in the world, even if linguistic force devices interact with other non linguistic devices to determine the force of what is said. The relationship between interrogatives and questions is regulated, in fact, not only by linguistic conventions in the strict sense, but also by social rules of use that interact with the former. In the same way that not all that has the effect of a question has an interrogative form, not all "interrogative" utterances are interpreted or function as questions.

Whichever account is proposed in philosophical semantics as well as in conversational analysis to explain the "meaning" of questions, a central role is given to the answer or the reply.[19] Indeed, it is the answer which possibly supplies the "determinate" the question is looking for, and it is the reply which by supplying it, or by acknowledging the problems in supplying it, makes what has come before into a question. This indirectly confirms its indeterminate character.

[17] The development of a grammatical theory linked to speech acts is, however, rather controversial. The frequent imprecision, in the literature, in defining linguistic categories which partecipate in the representation of illucutionary force devices together with an absence of a clear distinction between the grammatical properties of an utterance on one hand and its pragmatic properties on the other, has been discussed elsewhere (cf. Fava 1987).

Note that although languages have various grammatical and lexical devices to specify an utterance's force – i.e., to distinguish whether or not it is a question, a request for action or permission – in trying to distinguish the type of act performed in issuing an utterance, grammatical criteria may be used in some cases only. With regard to *grammatical* properties of questions, however, since in all languages there seems to be the possibility of making direct question acts, a universal interrogative system has been postulated (Ultan 1978; Chrisholm 1984). A question act is *implicit* when morphosyntactic devices (such as the occurrence of a relative/interrogative pronoun) are used in order to indicate the illocutionary force of a question (cf. *Quando intendi rispondermi?* ("When do you intend to answer me?"). It is *explicit* if there is the occurrence of an illocutionary verb that names the act in question (as the verb *chiedere* ("ask") in the first person singular indicative). Cf. *Ti chiedo per l'ennesima volta quando tu intenda rispondermi* ("I'm asking you for the umteenth time when you intend to answer me").

[18] Insofar as the *pragmatic* properties of a question are concerned, grammatical criteria alone do not allow to solve in each case the problem of determining what kind of act the speaker is performing in saying something. There are social rules of use that interact with linguistic conventions. Moreover, the characterization of questions in a typology of actions organized sequentially into two turns (questions/answers) allows, or favours, an immediate conversational control on the effects or on the consequences of asking something.

[19] Questions can receive various kinds of replies by listeners, only some of which have the form of a direct answer, as in *a*; replies can take the form of a (another) question, as in *b*, of an affirmation that negates the possibility of giving an answer, as in *c*, as well as many others.

S: Verrai domani? ("Will you come tomorrow?")
I a.: Si/no. ("Yes/no.")
b. Dove? ("Where?")
c. Non so. ("I don't know.")
etc.

One of the main problems of erotetic logic is precisely that of deciding what constitutes a valid response to a question. In the vast literature on the logic of interrogatives there has been a series of developments linked to speech acts that relate questions with their possible answers. Naturally the set of possible responses depends on certain characteristics of erotetic logic, on which the logic of questions is based: for instance, for Karttunen (1978) the meaning of a question is the set of its true answers; for Hintikka (1974, 1978), instead, the criteria determining when a reply has the value of an answer are not in its truth-value but in its epistemic relevance.

In summary, research both in formal logic and in semantics and pragmatics is concerned with the "meaning" of questions, even if with very different methodologies and arguments, but while for the analysis of the former it is crucial to define in some way the indeterminate nature of a referent within a class, in the latter this semantic feature becomes a presupposition on the base of which to verify the development of the interaction.

In the following sections (§ 3.1., 3.2., 3.3), some arguments, taken from sentence and discourse grammar, are proposed to verify this indeterminacy property for the classes of predicates considered above (§ 1.).

3.1 *On indeterminacy in utterances.*

Indeterminacy is, therefore, the essential feature which univocally characterizes the interrogative pronoun in indirect *x*-interrogatives.

There are many tests to evaluate it in the utterance. For instance, "intuitions", which are not always shared, on what is interrogative and on what is not, may be verified by an "expansion" test (Vendler 1972: 110, Munsat 1986: 193, and Grimshaw 1979).

The test, which predicts that interrogative pronouns systematically exclude the acceptability of a parenthetical *e precisamente...* ("and precisely"), has been proposed from slightly different perspectives: Vendler and Munsat are concerned with disambiguating interrogatives from relatives, while Grimshaw deals with the difference between interrogatives and exclamatives. While the possibility of specifying what a speaker is talking about by introducing a parenthetical such as "and precisely" is excluded in interrogatives, since these characterize the *x* as indefinite and indefinable for the speaker and therefore not specifiable by him, it is allowed both in relatives and in exclamatives since these do not fall the within domain of indeterminacy.

The application of the "expansion" test to the *Kw* clauses depending on Type I and Type II predicates reveals the same parallelism previously noted in the distribution of the subjunctive between subordinates depending on Type II predicates, in the presence of certain contextual features, on one hand, and those depending on Type I predicates on the other. *Kw* clauses depending on Type I predicates systematically exclude the acceptability of the parenthetical *e precisamente* ("and precisely") independently of the presence of any contextual features.

(21) i Gli chiedevo spesso quando volesse/voleva venire, *e precisamente lunedì.
*I often asked him when he want [+subj.] /want [+ind.] (wanted) to come, *and precisely Monday."
ii Non gli chiedevo spesso quando volesse/voleva venire, *e precisamente lunedì.
"I didn't often ask him when he want [+subj.] /want [+ind.] (wanted) to come, *and precisely Monday."

In (21), for instance, the possibility of specifying the value of *x* within the same utterance is systematically excluded and the *Kw* pronoun receives univocally the interrogative/indefinite interpretation. The use of *e precisamen-*

te is different in utterances like *Gli chiedevo spesso quando volesse venire, e precisamente se lunedì o martedì* ("I often asked him when he wanted to come, and precisely Monday or Tuesday"), in which the domain of the question is reduced to an alternative interrogative. Instead, in the assertive semifactive Type II predicates there is an asymmetry in the distribution of parentheticals between those contexts that present negative, non-declarative, etc., features and those that do not. When the main clause (or the utterance as a whole) presents morphosyntactic markers that signal its non-declarative (and therefore non-assertive) nature, as in (22i), the possibility of expansion in the *kw* clauses is systematically excluded.

(22) i. Nessuno sa quando venga/viene, *e precisamente lunedì.
"Nobody knows when he come [+subj.] /come [+indic.] (will come), and precisely Monday."

The indeterminate interpretation is the only one possible, analogous with Type I predicates.

Differently from *Kw* subordinates depending on Type I predicates, instead, those depening on Type II predicates in a declarative context allow expansion, as in (22ii), and the interrogative meaning is therefore excluded: [20]

ii. Sa quando viene, e precisamente lunedì.
"He knows when he come [+indic.] (will come), and precisely Monday."

Analogous behaviour characterizes the independent relatives, which, when presenting the *indicative* mood, may allow expansion of the *Kw* pronoun and therefore a determinate interpretation, as in example (2') (cf. § 5.).

(2)' Punirono chi aveva telefonato, e precisamente Gigi.
"They punished (the one) who had telephoned, and precisely Gigi."

There is symmetry between Type II predicates, in the presence of certain features, on one hand, and Type I predicates on the other; both excluding an interpretation of the pronoun as determinate, they directly confirm the thesis of an interrogative reading. Vice-versa, in the absence of such features, the *Kw* pronoun in Type II predicates allows a determinate interpretation, excluding, therefore, the possibility of an interrogative interpretation.

The interrogative/non-interrogative nature of a clause may also be ascertained by another test, regarding the conjunction and/or disjunction of an appositive phrase (cf. Ross 1973, Munsat 1987; see also § 4.2).

The possibility of a disjunctive expansion in interrogatives is also linked to the "indeterminate" character of the pronoun. In fact, an *x*-question presupposes the disjunction of a set of propositions, in which each member of the set differs from every other member in that it furnishes a different value for the variable (cf. Lyons 1977: 257). Now, when the variable is reduced to only two values, it is necessary that they be disjunct.

[20] Note that the corresponding subjunctive clauses are excluded from the beginning, as has been seen earlier.

Considering a phrase such as *beer and/or wine*, and imagining a discourse universe in which there are two referents, beer and/or wine, not necessarily in alternative, and only these two, (so as to exclude the possibility of interpreting the phrase *beer and/or wine* as opposed to something else), it is a property of interrogatives to allow a disjunctive, and not conjunctive apposition of the phrase considered. Thus, the fact that Type I predicates bind a disjunctive apposition, and exclude a conjunctive apposition follows from the determinate versus indeterminate distinction.

(23) i. (Non) si domandava che cosa nascondevano, se birra o vino.
"He (didn't wonder) wondered what they were hiding, whether beer or wine."
ii. (Non) si domandava che cosa nascondevano, *birra e vino.
"He (didn't wonder) wondered what they were hiding, *beer and wine.

Only in (23i) does he disjunctive apposition respect the requisite of indeterminacy. Although the two values of *che cosa* ("what") are specified, the effective one is not specified; the choice between beer or wine is not determined. In (23ii) it is affirmed that one of the two drinks was hidden, it does not matter which one, but not both. Conforming to the thesis sustained here, Type II predicates in negative form act analogously to those of group I, and require a disjunctive apposition, as in (24i), excluding an apposition like the one in (24ii):

(24) i. Non sapeva che cosa nascondevano, se birra o vino.
"He didn't know what they were hiding, whether beer or wine.
ii. Non sapeva che cosa nascondevano, *birra e vino.
"He didn't know they were hiding, *beer and wine.

Instead, the *Kw* pronoun in Type II predicates in a positive, declarative context can also take a conjunctive appositive value and it need not necessarily be disjunctive as in (25ii), which is perfectly acceptable:

(25) i. Sapeva che cosa nascondevano, se birra o vino.
"He knew what they were hiding, whether beer or wine."
ii. Sapeva che cosa nascondevano, birra e vino.
"He knew what they were hinding, beer and wine."

In (25ii), differently from (23ii) and (24ii), the semantic requisite of indeterminacy is no longer respected.

This constitutes further evidence of the parallelism between subordinates depending on Type II predicates, in the presence of certain "contextual" features, on the one hand, and those depending on Type I predicates, on the other. Both excluding an interpretation of the pronoun as determinate, they confirm the interrogative nature of such subordinates. Instead, in the absence of such markers, the *Kw* pronoun in Type II predicates allows a determinate reading, thereby excluding an interrogative interpretation. The analysis of the requirement of indeterminacy in the utterance directly confirms the interrogative nature of *Kw* clauses depending on Type II predicates only in the presence of certain contextual markers.

3.2. *On indeterminacy in discourse.*

The indeterminacy feature may also be evaluated in discourse.

However, the treatment of indirect interrogatives, in relation to questions, is rather complex from a pragmatic point of view, because they cover rather heterogeneous material. Many indirect interrogatives function as indirect questions, in which accounts given and question posed by others or by ourselves in another place or at another time are reported. They may be questions which either were asked by someone not participating directly in the conversation (or, more generally, in the communicative act) or by someone taking part in the conversation but at a time prior to when the conversation takes place. Only some of the "indirect interrogatives" are explicit interrogative illocutions. It is the case of some Type I predicates, including exactly those illocutives like *domandare*, *chiedere*, ("ask") in the first person present indicative (non-negative) which allow the specification of the type of action performed in issuing an utterance, such as a question.

The analysis of conversational exchanges reveals that Type II predicates in the presence of certain contextual features on one hand, and Type I predicates, on the other, follow substantially similar strategies peculiar to the question/answer mechanism.

For this purpose, I will consider the question of illocutionary acts of asking for information (therefore a subtype of the exercitives) whose illocutionary point is to get an answer (in conversational analysis it is said that the question-answer pair is an *adjacency pair*). The giving of the answer to a question concerns instead the perlocutionary effect that may or may not be obtained, even intentionally. There is however a point of connection between illocution and perlocution: saying something normally has determinate consequences, and in the case of questions, one is asking for an answer. The achievement of this perlocutionary effect is not part of the illocution, but is obliquely connected to it. In this framework, answers, at least direct ones, may be considered as a way of defining what is indefinite and of determining what is indeterminate. An effective verification of the relationship between illocution and perlocution may be detailed by turning to conversational analysis.

Considering the interrogative features used to make questions and specifying the different classes of direct replies, i.e. the classes of utterances which can be used to respond exhaustively and completely to different types of questions, the direct answers can be distinguished within the set of appropriate replies, which can at times be even non-verbal action. Consider a *Speaker* (*S*) utterance in (26) and a series of possible replies by *Interlocutor* (*I*) in (27).

(26) S: Ti vorrei chiedere chi è venuto a cercarlo ieri.
"I would like to ask you who came to look for him yersterday."

(27) I a: Giovanni. ("John")
b: Chiedilo a Giorgio. ("Ask George.")
c: Cercherò di informarmi. ("I'll try to find out.")
d: Non posso dirtelo. Mi spiace. ("I can't tell you. I'm sorry.")

e: Anch'io lo so. Giovanni. ("I know too. John.")
f: Non lo so. ("I don't know.")
g: Dovrei saperlo? ("Should I know?")
h: Lo so e te lo dirò. ("I know and I'll tell you.")
i: Te lo sto dicendo. ("I'm telling you.")
j: Posso dirtelo, se vuoi. ("I can tell you, if you like.")
k: Lo saprai appena me lo comunicheranno. ("You'll know as soon as they communicate it to me.")
l: Non ho ragione per non dirtelo. ("I have no reason not to tell you.")

(26) is an explicit direct *x*-question, [21] in which the interrogative pronoun *chi* ("who") presents a possibly infinite set of alternative answers of the element that stands for *x*: the domains in which it can be given constructions with *chi*, which has animate references, bring out its character as predication on individuals, determinate or indeterminate, definite or indefinite: "who?" (John, Frank, Luigi, a colleague, etc.). (27a) is an example of a direct answer: *Giovanni* is the individual whose coming is asked about.

Among the replies a series of appropriate ones may be distinguished from (27e), which appears meaningless. Apart from answers like (27a), which can be semantically definite (Belnap and Steel 1976), the other appropriate replies, (27b-f and g-l), can be considered as referrable to felicity conditions of the illocutionary act of asking, considered as types of presuppositions ordered in a hierarchy, in which the lower ones presuppose those that are higher (see Table II). [22] In short, all the answers that deal with the felicity conditions of the question are appropriate.

Table II

	a	b
(1)	S does not know A	
(2)	S thinks that	I has not said and knows A
(3)	S thinks that	I is not going to tell A
(4)	S thinks that	I can tell him A
(5)	S thinks that	I will not tell A to him independently of the question
(6)	S thinks that	I will not supply A to him and has no reason for not telling A to him
(7)	S wants a reason for	I to tell A

A = any propositional content
a = conditions based on S
b = conditions based on I

[21] The distinction between *direct* and *indirect* questions, and between direct and indirect speech acts in general, comes precisely from the necessity of specifying the role that the literal aspect of an utterance has in a message. A speech act is *direct* when its illocutionary force is congruent with that which would be attributed to it on the basis of the linguistic force devices present in the utterance expressed to make it, while a speech act is defined as *indirect* when its illocutionary force is divergent (not congruent) with that which would be attribued to it based on linguistic force devices present in the utterance.

[22] Searle (1969) treats speech acts as governed by four types of conditions: propositional content, preparatory, sincerity and essential conditions. The heterogeneity of these conditions was discussed in, among others, Parret (1979) and Lang (1979). In Benincà *et al.* (1977) the connections between propositional content and preparatory and sincerity conditions are discussed.

For example, (27d and f) negate respectively that conditions (4) and (2) are given; *c* is a self-imposed obligation to satisfy condition (2) so as to be able to respond later; *b* is a refusal to answer, suggesting another as a source of the requested information; *h* is a pre-response: it affirms that condition (2) is effectively given and announces that the information asked for will follow. *D*, *h*, *g*, *l* confirm the hierarchy of conditions (1)-(7): *d* takes for granted that the interlocutor possesses the required information, but negates the possibility of giving it, *h* says that the interlocutor has the information and that nobody hinders the giving of it, *g* denies condition (2), *l* says that also condition (7) is satisfied and therefore the interlocutor is not able to deny the information.

But the relationship between interrogative and question is regulated, it is said, not only by linguistic convention in a strict sense but also by rules of social use that interact with the former. Not everything that has the effect of a question has interrogative form; for example, the utterances issued by *S* in (28) and (29) are declarative, but are regularly interpreted as requests for information. Although neither of these utterances are direct questions, in the *S* utterance of (28) and (29) each of these functions as a question: they are *indirect* questions.

(28) S: Non so chi è venuto a cercarlo ieri. ("I don't know who came to look for him yesterday.")

(29) S: Hai capito chi è venuto a cercarlo ieri? ("Do you understand who came to look for him yesterday?")

Now, the felicity conditions which allow the appropriateness of the relation interrogatives/questions and replies to be controlled, also allows the relation between indirect speech acts of questions and their appropriate replies to be more precisely defined. The *S* utterances in (28) and (29) are indirect speech acts of questioning referrable in some way to the felicity conditions of direct speech acts of the same illocutionary force. In (28) one of the conditions based on *S* is asserted, while in (29) what is asserted is one of the conditions on *I*. Considering also the sequences (28)/(27) and (29)/(27), a strategy analogous to (26)/(27) identifies the *S*/*I* exchanges as a sequence of two turns, of question/answer. They are instances of one type of linguistic exchange, in which the first turn typically functions as a direct or indirect question, and the second as the response or the reply. Moreover, the strategy observed in the reply is analogous to that already observed in (26)/(27) and can be applied in the exact same manner: all the replies are appropriate, except (27e) which appears meaningless.

Instead, utterances like (30) and (31) present interactional strategies which are very different from those observed above: (30)/(27) and (31)/(27) exemplify a different type of exchange by turn by predicting information rather than results; they confirm or approve of what is being said.

(30) S: So chi è venuto a cercarlo ieri. ("I know who came to look for him yesterday.")

(31) S: Hai (finalmente) capito chi è venuto a cercarlo ieri. ("You have (at last) understood who came to look for him yesterday.)

The distribution of the appropriate replies to (26), (28) and (29) is the exact inverse of that of (30) and (31): (27a) and partially *e* are rather utterances interpretable as glosses; *b*, *c* and *d* are inappropriate because they put the conditions of the preceding act into discussion and because they reply to it as if it were a question. In (31) the reply (27e), differently from (30), is inappropriate because of the use of *anche* ("too"), with which it is presupposed that others besides *I* know it. Moreover, extending the conversational analysis of utterances (30) or (31) to the turn immediately preceding that of *S*, they can be considered in their turn as types of replies or glosses. For example, the utterance expressed by *S* in (30) can be considered in its turn a reply to the question *Chi è venuto a cercarlo ieri?* ("Who came to look for him yesterday?"), while (31) seems interpretable rather as a gloss.

The examination of some discourse strategies of *Kw* clauses depending on Type II and Type I predicates reveals the same parallelism previously noted in sentence phenomena between the former, in the presence of certain contextual markers, and the latter.

3.3 *On the contextual dependency of some classes of predicates and on the variations of form and function: some diachronic observations.*

Kw complements depending on Type II predicates, which have apparently identical structures and which have been treated as identical in the literature, have revealed a series of differences depending on contextual features. The interrogative interpretation, limited to the requisite of *indeterminacy*, is possible only in the presence of certain features. Nevertheless, the possibility of the complement's having an interrogative interpretation *does not exclude* the relative one; there are cases in which even if the main clause presents negative, non-declarative, future markers, the *Kw* clause also allows an independent relative interpretation. Consider cases in which the utterance is in the first person [23] as in:

(32) Non ho detto quando voglio partire per Roma, e precisamente...
"I didn't say when I want to leave for Rome, and precisely..."

(32) may have, besides an interrogative interpretation (for which day, in *x* days, I want to leave for Rome is indeterminate), also an independent relative interpretation (for which it is intended "that day *x*, (and precisely Thursday) on which I decided to leave for Rome) specifying and referring to a choice between a definite and definable number (cf. § 5.2.). That the governing predicate belongs to one of the above-mentioned classes constitutes a necessary condition for *Kw* well-formedness, but it does not allow a prediction whether the subordinate will be interrogative or relative.

[23] The distinction between first person and non-first person contexts is also relevant for *that*-complements (Hooper 1975) and for predicates of perception (cf. Graffi 1980 for the distinction in extensional vs. intentional contexts).

Attention to contextual features is essential to descriptive adequacy where interrogative or relative *Kw* clauses depending on semifactive assertive predicates are concerned. Evidence for the contextual dependence of *Kw* clauses with semifactive predicates can be found in those Indoeuropean languages where this semantic distinction is correlated to a formal distinction. In languages such as Latin and Oscan-Umbrian, in which the theme in *-i-* is reserved for the indefinite-interrogative, while that in *-o-* functions as relative (cf. in Latin interrogative pronouns *quis/quid* and relative pronouns *qui/quae/quod*, in Oscan *pis/pid* and *pui/pai/pud*), the grammatical theory seems to take into account such contextual variations. In Latin, for instance, where the distinction between interrogative and relative pronouns is grammaticalized, the contrast in a verb of communication (*dicere*) between the indirect interrogative and the relative clause is well illustrated in the two parallel passages by Horatio (cited in Traina Bertotti 1965: 63):

(33) a. Vergilius, post hunc Varius dixere quid essem. (Orazio Sat. I, 6, 55)
"Vergilius, and after him Varrius told (them) who they thought I was."
b. Quod eram, narro. (Orazio Sat. I, 6, 60)
"I expose who I really was."

In (33) there is a clear contrast between the indirect interrogative (*quid essem*) and the relative (*quod eram*) in the two different contexts of direct and indirect discourse. In Latin, moreover, the distinctions between indirect interrogative and other types of hypothetical or relative subordinates are grammaticalized not only as far as the pronominal series is concerned, but also the conjunctions that introduce alternative interrogatives (like *an*, *num*, *nonne*). Thus, the contextual distinctions of *verba sentiendi*, *dicendi*, etc. (cf. the structures *nescio quid+ subjunctive*, but *scio quod + indicative*, and in a parallel way *nescio an*, but not **scio an*) are well-known to Latin grammarians and are also dealt with in scholastic grammar. Those cases of presumed "formal confusion" that, according to some, could also characterize Latin (Posner 1985: 183) are explained instead by the fact that the interrogative intepretation does not, in appropriate contexts, exclude the relative one.

(34) a. Dic quid rogem. (example in Posner 1985: 183)
"Tell [+imp.] me what I will ask/could ask"
b. Dic quod rogo. (example in Posner 1985: 183)
"Tell [+imp.] me what I ask."

The presence of an illocutionary force device of non-assertivity, like the imperative *dic* in (34) does not necessarily require an interrogative construction (cf. above example (32)).

In Italian the semantic distinctions between interrogative and independent relative clauses do not find a morphosyntactic correlate having an immediate characterization (if distinctions exist, these require a much subtler syntactic analysis, cf. § 4. ff.). This fact, together with the scarce attention that is given to variations of contextual meaning, may perhaps explain the lack of consistency in the interpretation of interrogative and

independent relative structures, which is quite apparent from the review of the literature on the topic.

However, diachronic observations may offer some other further reasons for this lack of consistency in their interpretation. In addition to a well-known evolution of relative pronouns from an indefinite/interrogative theme, there is a tendency to develop independent relatives from the interrogatives instead of from the relatives. In Romance languages, for instance, developments of the interrogative pronouns *quis/quid* and of the relative ones *qui/quae/quod* are reorganized into systems that are, in detail, slightly different from one another, but in which the morphological contrast between interrogative and relative is somewhat diminished (for a survey on Italian dialects, see Rohlfs 1968 II: 191-201). Nevertheless, in those Romance languages in which the phonetic results of this reorganization allow a distinction between the interrogative pronominal series and the relative one [compare in Romanian *ce* (<*quid*) and *că* (<*quod*), in Friulean *ce* (<*quid*) and *cu* (<*quod*)], it may be observed that the independent relative pronoun was developed from an interrogative theme, rather than from a relative one (Posner 1984: 182). This fact seems surprising, insofar as it apparently conflicts with a rather widespread tendency toward a creative extension from the interrogative-indefinite area to the relative one found in many Indo-European languages. [24]

The morphological affinity revealed by the tendency to develop independent relatives from the interrogatives instead of from the relatives indicates that there is a semantic affinity as well (for a discussion of some semantic properties of these two pronominal series cf. § 5).

4. *Selection, subcategorization and some implications in syntax.*

Kw clauses depending on semifactive assertive predicates may belong to different semantic types: in conjunction with certain features in the main clause, interrogative, and in the other cases, by exclusion, independent relative (on the position until now held that Type II *Kw* non-interrogative subordinates are independent relative, see § 5.):

For instance, *Kw* clauses depending on *dire* ("tell"), respectively, in negative contexts like (35a) and in positive contexts like (35b), belong to different semantic types: the former, interrogative, and the latter, independent relative:

[24] According to a thesis finding general consensus, the evolution of the indefinite pronoun into relative concerns Hittite, the Germanic languages, the Balto-Slavic languages and Late Greek (Hahn 1933, Ramat 1987:133; cf. also Szemerényi 1985: 244 ff). The problem of this triadic relationship among indefinite, interrogative and relative pronouns is often discussed in the literature. This affinity in morphological realization, not limited to Indo-European language alone (it exists, for example, in Japanese), must depend on the grammaticalization of some common semantic properties. In any case, diachronic developments must be distinguished from their effective organization within the linguistic system: for example *che* ("that") and *chi* ("who") are both developments of latin *quid*, but the former is usually described as a complementizer, like other conjunctions, while the latter maintains a pronominal characterization.

(35) a. Non mi ha mai detto chi ha telefonato. (*indirect interrogative*)
"He never told me who telephoned"
b. Mi ha detto chi ha telefonato. (*independent relative*)
"He told me who telephoned"

The fact that the same predicate can be constructed with different types of complements, i.e. interrogative or relative, does not in itself constitute any problem. It is agreed, in the literature, that the same predicate can present different sentential complements.

For instance, among Type II predicates, *dire* ("tell"), besides its use with indirect interrogative and an independent relative, as in (35a) and (35b), can also be in constructions with a complement of the form *che+indicative* as in (35c), interpreted as an assertion, or *che+subjunctive*, as in (35d), interpreted as a request for action:

(35) c. (Non) mi ha mai detto che hai telefonato.
"He (never) told me that you telephone [+indic.] (telephoned)."
d. (Non) mi ha mai detto che telefonassi.
"He (never) told me that I telephone [+subj.] (had to telephone)."

Among Type I predicates, *domandare* ("ask") distinguishes between a request for information (interrogative) and a request for action (*che+subjunctive*):

(34) a. (Non) gli domandò quando partisse con Luigi.
"He didn't ask him when he leave [+subj.] (left) with Luigi."
b. (Non) gli domandò che partisse con Luigi.
"He didn't ask him that he leave [+subj.] (to leave) with Luigi."

The restrictions characterizing the occurrence of interrogatives depending on semifactive assertive predicates may be described formally. In transformational generative grammar the restrictions between a lexical category X (verb, noun, adjective) [25] and a complement of X are traditionally expressed with *selection* and *subcategorization*. Both impose conditions of well-formedness at different levels of representation: for example, in the case of the restrictions between types of subordinates and the predicates on which they depend, i.e., between a lexical category X and a complement of X having a sentence as its complement, selection, which operates at the level of

[25] The similarities in the structure between N, A, and V received formal treatment in the so-called X-bar theory (cf. Chomsky 1985: § 3.5.2.1).

[26] The basic structure of S' is

S' —> COMP S

with a complementizer (COMP) and a propositional content, this latter being of category S, which can be a sentence with a finite verb or an infinitival construction. The properties of COMP are rather complex and the rules expanding COMP may or may not be applied (on the optionality of the rules expanding COMP cf. Bresnan 1970). COMP roughly consists of two positions, one for the interrogative or relative phrase, the other for the complementizer, *se* ("if"), *che* ("that"), etc. The left-hand position of the COMP expansion serves as a target for the WH movement (on the derivation of the interrogative WH-phrase in COMP by application of movement rule, see note 27).

The indirect interrogatives are characterized by the presence in COMP of an introducer (*se* in the alternative interrogatives, and the interrogative phrase (+WH) in the *x*-interrogatives). On COMP as the head of S see Chomsky (1986).

semantic representation, expresses restrictions between predicates and the semantic type of their complements, specifying if they take sentential complements and which ones (propositions (P), Question (Q), Exclamation (E), etc.), while subcategorization, which concerns the syntactic level, expresses restrictions between predicates and the syntactic category of their complements (NP, PP, S' [26]).

The semantic characterization of indirect interrogatives discussed so far is expressed by the selection that specifies the restrictions on the types of sentence complements imposed by the predicate, i.e. whether the predicate can select [_Q]. For example, *affermare* ("assert") takes only [_P] and [-Q] (cf. example (11) given above), while *domandare* ("ask"), which is a Type I predicate, selects more than one complement and can take both [_Q] and[_O] (Order) [cf. examples (34)]:

Affermare ("assert") [_P]

Domandare ("ask") $\left[-\left\{ \begin{matrix} Q \\ O \end{matrix} \right\} \right]$

In this framework, the contextual restrictions to which the *Kw* subordinates depending on Type II predicate are sensible do not present any descriptive problems. A Type II predicate, *dire* ("tell"), besides [_P] and [_O], also selects [_Q], but only in marked contexts [cf. examples (32)]. In the case of other unmarked contexts the description of the *Kw* subordinates as independent relatives would seem appropriate by exclusion.

Dire ("tell") $\left[-\left\{ \begin{matrix} P \\ O \\ Q\ [+\ \text{context}] \end{matrix} \right\} \right]$

Nevertheless, although in the course of this article the argumentation has developed on the basis of a semantic characterization, it should be noted that in general, in the literature on complement restrictions, it has been held that such relations must instead be stated based on the syntactic structure; in other words, the distribution of the type of sentential complement is a function of its syntactic form (Bresnan 1972, Chomsky 1973, Chomsky & Lasnik 1977, Grimshaw 1979). A confirmation of this approach is also offered in the literature dealing with the distinction between interrogatives and independent relatives, both of which can be described within the general notion of the sentence complement (Bresnan 1972; Chomsky & Lasnik 1977). Since the 70's (cf. Bresnan 1970) there has been agreement on the fact

that indirect interrogatives are a type of subordinate syntactically characterized as S', analogously to other completives, such as declarative, exclamative, etc., while the independent relatives, since they can also appear in the subcategorized position for NP, but not for S', have a structure of the type (NP S') or (NP S) and are identical therefore to that of the full relative, with a lexical head. Among the numerous arguments to provide evidence for the existence of two separate structures, one, the interrogative, which is sentential, and the other, the independent relative, which is nominal, some concern precisely subcategorization; for example, the nominal character of the independent relatives is confirmed by the fact that they can be constructed with predicates like *punire* ("punish") in (2) or *riprendere* ("take back") in (37) that do not admit sentential complements:

(37) Mi sono ripreso quanto ti avevo dato
"I took back what I had given (to) you."

Systematic comparisons of the diverse syntactic configuration of the independent relatives and interrogatives have come above all from the second half of the 70's, when both of these structures were seen as a possible realization of the same transformational rule (Move α) that moves the WH pronoun into initial position: [27] the study of "island restrictions" [28] has brought systematic confirmation of their diverse characterization (see § 4. and ff.).

However, although in the discussion the two levels of selection and subcategorization have been kept separate, in the history of generative grammar the tendency to make them correspond in an isomorphic way has

[27] In Italian direct *x*-interrogatives, in canonical forms (Fava 1987), and indirect *x*-interrogatives have the WH phrase (+WH) to the front of the sentence. It can be described as a language characterized by WH movement at the *syntactic level*. The interrogatives are structures derived by application of the WH movement to the initial position (COMP) of some clause. For example, a sentence like *Mi domando che storie ha raccontato* (*"I ask myself what stories he told."*) can be described as deriving from a p-structure

mi domando [$_S$[COMP]$_{COMP}$[ha raccontato che storie a Mario]$_S$]

The whole sentential complement, including the interrogative phrase, has an S-structure of the type:

mi domando [$_S$[che storie]$_{COMP}$[cher storie ha raccontato *t* a Mario]]

On WH movement see below. (In general it is thought that the movement of a WH-phrase always leaves a trace, definable as a syntactic category, which has been voided of phonological content and internal structure, and which retains only an index that is identical to the index of the material which was moved outside the position of the trace. Actually it is not completely clear if the traces are really without internal structure (cf. Longobardi 1978, 1980).

[28] "Islands" are structural configurations in which every element is exempt from the application of movement rules, i.e., they are structures that do not allow extractions by applications of movement rules. Based on the first research on islands, dating back to the early 60's, there has been an attempt to formulate some general conditions from which the properties expressed in the island catalogue could be derived, thus providing a system of principles which provides a unified explicative theory. Concerning the WH movement mentioned above, not necessarily all the relative clauses or interrogative clauses in Italian are derived by its applications (Chomsky 1977, Rizzi 1982). On the contrary, it is precisely the island properties that characterize various types of structures that are diagnostic of movement. Forms of "Italiano popolare" such as *L'uomo che gli ho scritto una lettera è partito* (*"the man that I wrote a letter to has left"*), are not describable as derived by movement rule applications, since they would violate island restrictions (cf. Giancalone Ramat 1982: 291).

prevailed with few exceptions. [29] Their correspondence is explicitly established in *Government and Binding* (Chomsky 1981), where a very restrictive thesis is developed involving a certain view of the interaction among subcategorization, *thematic role assignment* (θ-role assignment [30]), and the *projection principle*, which has the effect of radically restricting the range of variations in constructions:

> Representations at each syntactic level (i.e., L.F., and D- and S- structure) are projected from the lexicon, in that they observe the subcategorization properties of lexical items" (Chomsky 1981: 29)

In this first proposal it is subcategorization that is privileged, since in the formulation of the *projection principle* it is required that this principle be satisfied at all structure levels. More recently, articulation of the theory has led to the privileging of selection over subcategorization; once it is established that a certain predicate selects a semantic category C, then categorical specification becomes redundant (Chomsky, 1985: 86, 87, 105):

> "If a verb (or other head) s-selects a semantic category C, then it c-selects a syntactic category that is the canonical structural realization of C (Chomsky 1985: 87).

In the case of the *Kw* subordinates depending on Type II predicates, due to the correspondence between rules of selection and subcategorization, it would have to be sustained that the two semantic types of subordinates, one

[29] Grimshaw (1979: 279 ff.) observes that in a perspective in which the relationship between predicates and complements is met at the syntactic level:

(i) complements of the same syntactic form will be selected by the same predicates; and

(ii) complements of different syntactic forms may be selected by different (but not necessarily disjoint) sets of predicates.

Instead, in a perspective in which the relationship between predicates and complements is established at the semantic level:

(i) complements of the same semantic type will be selected by the same predicates; and

(ii) complements of different semantic types may be selected by distinct (but not necessarily disjoint) sets of predicates.

If an isomorphism between two levels is assumed (if semantic form and syntactic type happen to match one-to-one), then it is sufficient that one of the two criteria be satisfied and the two theories are indistinguishable. Grimshaw, nevertheless, gave arguments aimed at showing how there are cases where semantic interpretation does not influence syntactic form (for example, interrogative and exclamative subordinate clauses, both subcategorized for WH, are selected for different predicates) and therefore combinatorial properties of predicates and their complements must be explained in terms of two *independent* sets of co-occurence restrictions. In Grimshaw's proposal, in particular, a grammar should possess the notion of a semantic frame (Grimshaw 1979: 284, 287). With the *projection principle* the most restrictive possibility is automatically opted for. Note that Grimshaw's proposal does not respect two basic conditions of adequacy of a descriptive typology, and precisely that,

a) the single classes must be mutually excluded

and that

b) each object of the set to be classified must belong to one and only one of the classes, i.e., the division into classes must exhaustive (cf. Ramat 1984: 28ff.).

[30] The basic principle of the *θ-theory* is that semantic properties assigned by the head are *thematic roles* or *θ-roles*; their conditions of θ-assignment constitutes the *θ-criterion* (Chomsky 1985:93, 184). This basic principle of the *θ-theory* expresses the intuitive idea that to each argument its θ role is assigned precisely in a θ-position, , and that each assignable θ-role must be assigned to an argument. In a first formulation is it affirmed that "each argument bears the one and only one θ-role, and each θ role is assigned to the one and only one argument" (Chomsky 1981: 36).

interrogative, (*Kw*/Q), and the other, by exclusion, independent relative, (*Kw*/R), belong to two different syntactic configurations, in the first, case S' and in the second (NP S').

Dire ("tell") + *Kw* < ____Q>, [____ S']
< ____R> [____ NP S']

An accurate characterization of the subordinates is therefore indispensable in order to achieve at least descriptive adequacy, since a confusion between interrogatives and relatives results in a confusion between two very different syntactic structures, one S', and the other, analogous to the full relative, (NP S'). An imprecision in their classification thus would raise serious descriptive problems, since the two types of subordinates have different syntactic configurations. In the following section (§ 4. 1.), some syntactic aspects that would derived from the acceptance of these semantic distinctions concerning *Kw* subordinates are verified.

4.1 *The analysis of data in syntax: interrogative and relative complements and subjacency.*

In this section, some implications of the semantic distinctions considered to this point concerning *Kw* subordinates for a syntactic analysis are evaluated, since they seem to conflict with a series of syntactic generalizations which largely refer to Rizzi's (1982, 1984) and to Cinque's (1980, 1981, 1988) analyses of interrogative and relative pronouns. These analyses find reciprocal confirmation and have been largely discussed and incorporated into the literature interested in the syntactic variations between different languages in a framework centered prevalently on the universal and restrictive character of grammar. [31]

Although the evidence for syntactic distinctions between interrogative and relative complements has also been debated by traditional grammarians, the contrast between these two types of subordinates, – the interrogatives, which are sentential, and the relatives, which are nominal – has found a very interesting area to examine in the analysis of island phenomena. The study of the restrictions on the applications of the movement rule to these two differing configurations (interrogative and relative) has proved to be an important line of investigation for effective generalizations on their nature. Thus an appropriate characterization of the *Kw* subordinate as either interrogative or relative is indispensable when trying to give a unified explanation

[31] Given the constant retranslation, by continouns corrections and reconstructions, of the generative framework into an increasingly more articulate and complex system, this paper will be concerned only with certain crucial points in the history of generative grammar, which have never been placed in doubt but which remain valid and have thus been incorporated, with more and more elaborate formulations, into the successive literature. Along general lines, this literature has moved in the direction of a restrictive theory of grammar, where the study of the restrictions is seen as research into general principles governing the application of the rules and which can be attributed to *universal grammar*.

of island phenomena within the framework of a very restrictive theory, in which subtle differences in the possibility of "extraction" of a pronoun are reinterpreted on the basis of abstract and general principles. Initially, the analyses of the principles that determine the application of the transformational rule "move α" were based on a hypothesis of "maximum simplicity", i.e., that this rule had, in interrogative and relative constructions, identical characteristics to other "types" of movement, such as passive, topicalization, etc. It was implicity assumed, therefore, that identical restrictions (successively reinterpreted as *principles*) could be applied to the same rule, whether this regarded NP movement, or clitics movement, or relative (-WH) and interrogative pronouns (+WH), etc. [32] However, an analysis by Rizzi (1978/1980, successively republished in Rizzi 1982) on the structure of interrogatives and relatives revealed the descriptive inadequacy of a solution whereby, for example, NP movement and WH movement (or more precisely, NP-trace and WH-trace) were treated similarly since an accurate examination of some island phenomenon had shown a fundamental difference between *types of empty categories*; for example, while the WH-trace is subject to the *subjacency* condition (reformulated afterwards as *bounding* principle [33]), it is not subject to *A* principle of the *binding* theory, which characterizes the NP-trace. [34] If on one hand, Rizzi's work weakens a thesis of maximal restrictiviy in accepting the possibility that the principles determining the grammar are differentiated and interact, either as conditions on the application of rules, or as conditions on the well-formedness of representations, on the other hand the possibility of variations in different languages is reduced to *parameters* of finite value. [35] In regards to the *bounding principle*, for example, which

[32] In Cinque (1980: 57) for example, the movement of clitics and that of relative pronouns is unitarily considered.

[33] No other principle seems to have stimulated such a widespread dispute as that of *subjacency* (cf. 9.4. in *Linguistic Inquiry* (1978) completely devoted to this question), in that it constitutes an example of a general unifying principle that, besides incorporating a number of generalizations regarding islands and providing explanations for a wide range of facts, is put into relationship with more general principles of "mental computation" (see Chomsky 1986: 30 for a revised definition of *subjacency*). This principle concerns only movement rules (Chomsky 1981, 1983: 41; 1986: 41). It is still an open question, however, whether *subjacency* is a condition on movement or on the derived syntactic representation, i.e., whether it concerns movement or representation (Chomsky 1986: 93 note 25).

[34] A first formulation of the *binding theory* (Chomsky 1981: 188; cf. 1985: 164) affirms that:

A. A [+anaphoric] NP must be bound in its governing category.
B. A [+pronominal] NP must be free in its governing category.
C. A [+anaph., -pronom.] NP must be free.

Rizzi's (1982) argument that, while the NP trace obeys principle A, the WH-trace is subject to principle C, is held to be one of the greatest results of linguistic theory in the 70's (also in Wasow (1972) and Chomsky (1976) the thesis that the traces are subject to principle C (or better to the strong cross over') has been discussed).

[35] Universal grammar is a highly structured and restrictive system with some open parameters, so as to explain the variety of languages. The parameters predicted by the base theory must allow different choices; for example, languages can have both syntactic movement (Italian) and movement in Logical Form (Japanese) and this difference constitutes one of the parameters of *move* α (Chomsky 1986: 48, 51). The possibilities of variation restricted to parameters constitute a step toward a theory of descriptively adequate Universal Grammar, which has a significant extension of explicative power. In this framework the problem of the determination of the variation among languages becomes the problem of the determination of the limits of Universal Grammar.

essentially specifies the conditions under which 'α, where 'α' is an arbitrary category, can be moved and which in its first formulation (Chomsky 1977) stated that

no rule can move an item from position y to x, in the structure

$$x \ldots [\alpha \ldots [\beta \ldots y$$

where α and β are bounding nodes" (cf. Chomsky 1977: 139),

it is assumed that the *bounding* nodes, until that time considered to be NP and S (cf. Chomsky 1977), are not constant in all languages. In Italian, for example, they are NP and S', while in other languages, like English, they are effectively NP and S. Thus, minimally varying bounding nodes account for some syntactic differences in different languages: the possibility of relativizing a phrase that is part of an interrogative characterizes languages like Italian where S' is the bounding node, but it is excluded in languages like English where it is S. Consider, for istance, (38) and (39):

(38) Tuo fratello, a cui mi domando che storie abbiano raccontato, era molto preoccupato.
"Your brother, (to) whom I ask myself which stories they have told, was very worried."

(39) * Your brother, (to) whom I ask myself which stories they have told, was very worried.

In (38) the relative pronoun *a cui* logically refers to an element of the interrogative subordinate *che storie abbiano raccontato a* ... ("which stories they have told to..."). In English the same structure, with the relativization of a phrase that is part of an interrogative, is impossible, as in (39) (see Rizzi 1984 [36]).

In this parameterized framework the contrast between interrogative and relative clauses is crucial in defining a notion of *subjacency*: an argument in favor of the appropriateness of this analysis lies, according to Rizzi, precisely in the contrast between the interrogative and relative clauses, either "full", with a lexical head, or independent, with a zero *significans*. [37] While in Italian a movement from interrogative clause, as in (38), is possible, since in these cases only one node (S') is crossed, it is not possible in Italian, or obviously in English, to relativize a NP contained in a relative clause, whether it be a "full" relative, or an "independent" one, as in (40)

(40) * Mario, a cui ho punito chi ha telefonato.
"Mario, to whom I punished who made a phone call."

[36] The relativized phrase in *t* position must cross two occurrences of S'. It can not go to COMP of S'1, for a series of stipulations not pertinent here, (since both positions of COMP are already filled, the repetition of movement, cycle to cycle, is impeded), but must move directly into COMP in S'2 (cf. Rizzi 1984).

[37] The only relevant difference between the full relative and the independent one, which both have the same structure (NP S'), is, in Rizzi's analysis, the presence, in the case of the full relative, or the absence, in the case of the independent clause, of lexical material in the NP head of the relatives in P-structure representation. This proposal is not the only possible solution for a syntactic representation of independent relative clauses (whose status is controversial, cf. § 5.).

since this movement from a relative clause involves the crossing of two bounding nodes, NP and S'. To illustrate this contrast between independent relatives and interrogatives clauses, Rizzi (1982: 61) proposes example (40) and (41) respectively:

(41) Mario a cui so chi ha telefonato.
"Mario (to) whom I know who made a phone call."

The contrast is therefore explained by the structural difference existing between a relative clause and an interrogative, the derivation of which, as proposed by Rizzi, predicts a movement, respectively of the type,

Mario $[_{S'\,2}$ COMP ho punito $[_{NP}\ \Delta\ [_{S'\,1}$ COMP chi ha telefonato a cui]]]
Mario $[_{S'\,2}$ COMP ho punito $[_{NP}$ chi $[_{S'\,1}$ COMP ha telefonato a cui]]]
$x[_{NP} \qquad {}_{S'}[y$

Mario $[_{S'\,2}$ COMP so $[_{S'\,1}$ COMP chi ha telefonato a cui]]
Mario $[_{S'\,2}$ COMP so $[_{S'\,1}\ [_{COMP}$ chi] ha telefonato a cui]]
$x[_{S} \qquad {}_{S'}[y$

Now, while the stipulations on the *subjacency* condition are really appropriate in the analysis of the contrast between (38), an indirect interrogative, and (40), an independent relative clause, they are inappropriate for exactly that class of semifactive assertive predicates considered in (41), since, according to the distinction outlined above, the *Kw* clause in (41) is not an interrogative. In (41), in fact, the movement is from a relative and not from an interrogative clause, as would instead occur, let's say in (42) or in (42)':

(42) Mario a cui non so chi ha telefonato.
"Mario (to) whom I don't know who made a phone call.

(42)' Mario a cui saprò chi ha telefonato.
"Mario (to) whom I will know who made a phone call.

However, (41) and (42) are two distinct constructions and have a different characterization at the semantic level, one *Kw*/Q and the other *Kw*/R. Once the correspondence between selection and subcategorization is accepted, the two constructions should also have different syntactic structures, one S' and the other (NP S'), from which different predictions in regards to *subjacency* would have to descend, and they cannot be assimilated. Instead the two classes of subordinates, *Kw*/Q and *Kw*/R, depending on *sapere* ("know"), or on other epistemic predicates, like *capire*, ("understand"), reveal an absence of structural contrast insofar as the *bounding principle* is concerned: while in general the independent relative clauses effectively seem to respect subjacency, *Kw* independent relatives depending on some epistemic verbs violate it since movement of the pronoun is allowed not only for the interrogative but also for the relative clause.

On the other hand, syntactic arguments are not lacking in favour of a unitary treatment of the *Kw* subordinates depending on *sapere* as uniquely

interrogative, and they find confirmations in Cinque's analysis on relatives. One of the most convincing arguments is that of gaps in the paradigm of independent relative and interrogative pronouns; not included in the domain of independent relative pronouns are *che cosa* ("what"), *quale* ("which"), *perché* ("why") (Cinque 1988: 294, 296ff. and the table reproduced there):

(43) *Disprezzo che cosa ha fatto.
"I despise what he did"

(44) *Mangio quale mi hanno offerto.
"I eat which they offered me."

Epistemic verbs like *sapere* ("know") do allow, even in positive, declarative, non future contexts, constructions with *che cosa* ("what"), as in (3), and *quale* ("which") as in (45). [38]

(45) (Non) so quale mi hanno offerto.
"I (do not) know which (one) they offered me."

The presence in a subordinate of interrogative pronominal forms which are excluded from relative use seems, therefore, to constitute a confirmation of its interrogative value. However, the extension of this distributional criterion to *kw* subordinates depending on other Type II predicates, e.g. those of perception (like *vedere* "see"), reveals that both *che cosa* ("what") and *quale* ("which") are allowed, even in the absence of contextual markers. Therefore, according to Cinque, these *Kw* subordinates should be treated unequivocally as interrogative.

(46) Ho visto che cosa è successo a chi mi ha rubato il portafoglio.
"I saw what happened to (the one) who stole my wallet."

(47) Ho visto quale ha preso.
"I saw which (one) he took."

According to this analysis, the possibility of interchanging all the interrogative pronominal forms which are excluded from a relative constitutes an argument in favour of their interrogative value. On the other hand, this criterion conflicts with Cinque's own gramatical intuitions, according to which a subordinate in a declarative context depending on a verb of perception, as in (7), is held to be ambiguous between a relative or an interrogative reading

(7) Ho visto chi mi ha rubato il portafoglio.
"I saw who stole my wallet."

If Cinque's syntactic analysis is accepted, it follows that while (7) is ambiguous between a relative and interrogative construction, (46) and (47) would have to be univocally interrogative, which, besides intuitively being not very plausible, even for Cinque, is also false according to the semantic and pragmatic analysis proposed above.

[38] Cf. Larson (1987) on the character of *why* as a conjunction and not as a pronoun.

The contradiction in the proposed data [39] makes it necessary to reconsider the analysis of the *Kw* subordinates depending on Type II predicates in relation to the structure both of the independent relatives and of interrogatives, suspending for the moment every other consideration on the *subjacency* condition.

5. *Towards a typology of independent relative pronouns in Italian.*

A description conflating non-interrogative *Kw* subordinates depending on Type II predicates with interrogatives, besides being inadequate at a semantic and pragmatic level, is not justified even for a syntactic analysis because the criteria for such an analysis seem rather uncertain. A first confirmation that it is opportune to verify the properties of the non-interrogative *Kw* clauses derives from the observation of their distributional characteristics: independent relatives presenting the absence or partial absence of gaps in the paradigm, insofar as they allow a construction with *che cosa* ("what"), and, with idiosyncratic behavior, also *quale*, ("which"), are not restricted only to Type II predicates (classe *c-f*), but may depend on other classes of predicates. Two other areas may be outlined (again, the lists are not exhaustive).

A first area includes a series of predicates whose *Kw* subordinates, analogously to those depending on Type II predicates, receive uncertain and contradictory evaluations, oscillating between an interrogative and relative interpretation, such as:

g) nonfactive strong assertive predicates of decision, like *specificare* ("specify"), *essere d'accordo* ("agree on"), *controllare* ("control"), etc. (Cf. Karttunen's class *d*);

h) nonfactive weak assertive predicates of conjecture like *fare un'ipotesi* ("guess", "bet on", "hypothesize"), *stimare* ("estimate"), (cf. Karttunen's class *e*);

i) nonfactive strong assertive opinion predicates like *essere certo* ("be certain about"), *aver un'idea* ("have an idea about"), *essere convinto* ("be convinced of"), etc. (cf. Karttunen's class *f*);

j) nonfactive assertive predicates of relevance, like *importare* ("matter"), *essere rilevante* ("be relevant"), *essere importante* ("be important"), *curarsi* ("care about"), *essere significativo* ("be significant"), etc. (cf. Karttunen's class *h*);

[39] The non-interrogative *Kw* subordinate clauses depending on Type II predicates [epistemic like *sapere* ("know"), of perception like *vedere* ("see"), etc.] disregard the behavior of independent relative clauses, not only with respect to a different characterization of the paradigm, but also with respect to the impossibility of having infinitival forms (cf. Cinque 1988: 452, 481ff.). The independent relative clauses do not permit infinitival constructions; cf. **Disprezzo che cosa fare* ("I dispise what to do"), **Mangio quanto offrire* ("I eat how much to offer"). *Kw* independent relatives, analogous to the indirect interrogative, do allow them; cf. *(Non) gli ho consigliato che cosa fare* ["I (did not) advise(d) him what to do"], *Si preoccupava di dove andare* ("He worried about where to go").

k) predicates of dependency like *dipendere* ("depend on"), *essere relato a*, ("be related to"), *avere influenza su*, ("have an influence on"), etc. (cf. Karttunen's class *i*).

These predicates, differently from Type II predicates, lack the systematic relationship with the contextual features relevant for Type II, in the sense that as regards the property of *indeterminacy*, which is required for an interrogative reading, they *may* permit a definite interpretation of the pronoun also in the presence of some contextual features relevant for Type II (§ 1.). [40]

A second area includes a series of fairly heterogeneous predicates that can be grouped together negatively, in the sense that the feature they have in common is that it is not so usual that they receive an interrogative classification in linguistic literature (they are not considered to s-select interrogatives).

l) locutionary like *parlare* ("speak"), *ripetere* ("repeat"), *scrivere* ("write"), etc.;

m) weak assertive nonfactive epistemic predicates indicating knowledge like *pensare* ("think"), *credere* ("believe"), *immaginare* ("imagine"), *prevedere* ("foresee"), etc.;

n) exercitives like *consigliare* ("advise"), *insegnare* ("teach"), *spiegare* ("explain"), *dimostrare* ("demonstrate"), *avvertire* ("advise"), *proporre* ("propose"), etc.;

o) commissives like *conformarsi* ("conform to"), *adeguare* ("adapt"), *accettare* ("accept"), *approvare* ("approve"), *individuare* ("specify", "point out"), *identificare* ("identify", *scegliere* ("choose"), *confermare* ("confirm"), etc.;

p) perlocutionary like *persuadere* ("persuade"), *convincere* ("convince"), etc.; and also, perhaps, with some limitations

q) behavitives like *preoccuparsi* ("worry"), *piacere* ("please"), *pentirsi* ("repent"), *fidarsi* ("trust"), *apprezzare* ("appreciate"), etc. (cf. Austin 1975).

The absence or partial absence of gaps in the paradigm characterizes the *Kw* clauses depending on predicates of the classes *l*)-*q*):

(48) Le ho consigliato quale scegliere.
"I advised her which to choose."

(49) Mi sono pentito di che cosa le avevo fatto scegliere.
"I was sorry about what I made her choose."

For a satisfactory enough descriptive linguistic generalization it could seems appropriate, at least *in a first hypothesis*, to unify these series of non-

[40] They allow a definite interprtation of the pronoun also in the presence of negation as in (i) and (ii) or the presence of modal and temporal features as in (iii).
(i) (Non) era importante che cosa doveva fare, e precisamente...
"It was (not) important what he had to do, and precisely..."
(ii) (Non) si curava di che cosa doveva fare, e precisamente...
"He (did not) cared what he had to do, and precisely... "
(iii) Specificava/ specificherà sempre quale scegliere, e precisamente...
"He always specified/will specify which to choose, and precisely..."

interrogative subordinates (depending on classes *c*-*q*) in a single type and to analyze them as marked independet relatives, disregarding some aspects of the "normal" distributional characterization.

5.1. *Some semantic properties of marked independent relatives.*

The appropriateness of distinguishing a series of marked clauses within the typology of independent relatives, first confirmed on a distributional basis, receives more evidence based on semantic considerations. The non-interrogative *Kw* subordinates depending on the classes of predicates (*c*)-(*f*) (Type II) and (*g*)-(*q*) present a series of peculiar features that differentiate them from the unmarked independet relatives on one hand and from the indirect interrogatives on the other:

1) (*c*)-(*q*) predicates s-select sentential complements (generally P, or O, or Q) and therefore c-select [_S'], as well as [_NP] or [_PP]. The predicates on which unmarked independent relative clauses depend, on the other hand, may in many cases s-select only nominal complements. For instance, the predicates *punire* and *riprendere* of the unmarked independent relative clauses (2) and (37) are not allowed to be in constructions with sentential complements and therefore c-select only NP.

2) The *Kw* pronoun of subordinates depending on classes (*c*)-(*q*) presents a series of affinities in interpretation regarding both the unmarked independent relatives and the indirect interrogatives. The test of expansion with the parenthetical *e precisamente...* (already proposed for the interrogatives, cf. § 3.1) reveals a parallelism between the unmarked and the marked independent relatives, both allowing a definite interpretation and, therefore, expansion with a definite NP. Compare (50) and the examples discussed earlier (2') and (22ii):

(50) Gli ha consigliato quale scegliere, e precisamente quello rosso.
(classe *n*)
"He advised him which to choose, and precisely the red one".

Morover, they differ from indirect interrogatives, which uniformly receive an indeterminate interpretation. Compare, (1'), (6'), (7') and (22i):

(1)' Gli chiesero chi aveva telefonato, * e precisamente Gigi.
"They asked him who had telephoned,* and precisely Gigi."
(6)' Non so che cosa hai detto, * e precisamente "amore".
"I don't know what you said, * and precisely 'love'."
(7)' Non ho visto chi mi ha rubato il portafoglio, * e precisamente Gigi.
"I didn't see who stole my wallet, * and precisely Gigi."

Furthermore, the tests of disjunction and/or conjunction of NPs reveal that while the interrogatives can be expanded in disjunctive parentheticals, but not in conjunctions, as in (23) and (24) above, the marked independent relatives allow both these possibilities, as in (51):

(51) a. Gli ho consigliato con chi vivere, Maria e Gianna.
"I advised with whom to live, Mary and Joan."

b. Gli ho consigliato con chi vivere, se Maria o Gianna.
"I advised with whom to live, whether Mary or Joan."

Unlike interrogatives, marked relatives do not require disjunctive apposition, but allow it. In this they differ from the unmarked independent relative clauses, as in (52), which allow disjunction.

(52) a. Ha punito chi ha telefonato, Maria e Gianna.
"He punished (the one) who telephoned, Mary and Joan."
b. *Ha punito chi ha telefonato, se Maria o Gianna.
"He punished (the one) who telephoned, whether Mary or Joan."

Although the semantic characterization of marked independent relatives is partially in common with interrogatives, once *indeterminacy* is assumed to be an essential feature of the latter, they may no longer be identified with each other. While the interrogative pronouns do not have a fixed reference and presuppose that the reference has not been established, the interpretation of *kw* independent relatives seems equally quantified, but in a determined way, by singling out, in the class of designated "objects" within a defined set, a definite *x*. They seem to "particularize and refer to a choice among a definite number" (Jespersen 1927, III: 68 [41]). The quantified interpretation seems to characterize not only the interrogatives, but also, with different properties, the *Kw* independent relatives.

3) Marked independent relative clauses differ from the unmarked, by making systematic exceptions to the restrictions on the double role played by independent pronouns. [42] Differently from the unmarked independent relatives, the *kw* pronoun can have a role of the prepositional complement of the *kw* subordinate clause, even if it cannot be a complement (of the same type) for the main clause.

(53) Gli ho detto con chi saliva. (class *c*)
"I told him whom he went upstairs with."
(54) Gli ho ripetuto con chi andare. (class *l*)
"I repeated to him who to go with."
(55) Ho immaginato subito con chi avrebbe danzato. (class *m*)
"I imagined immediately who he would dance with."
(56) Gli ho consigliato con che cosa prenderli. (class *n*)
"I advised him what to take them with."

[41] The problem of this relationship between indefinite, interrogative and relative pronouns is discussed rather frequently in the literature. According to some proposal, the evolution of the indefinite pronoun into the relative pronoun semantically coincides with the passage from existential quantification to set quantification, with the presupposition of existence and of uni(ci)ty (Orlandini 1983: 232).

[42] In Italian, the independent relative pronoun can freely have the role of the subject, object, or any other type of complement for the main clause, while it can play only the role of subject or object for the subordinate relative clause. There is, nevertheless, a systematic exception to the limitation just noted: the independent pronoun can be a propositional complement of the relative subordinate clause
1) if it can at the same time have the role of a complement (of the same type) for the main clause, and
2) if the subject of the two clauses is the same,
or, with less natural results that the preceding case, condition (1) still holding true, and in place of (2),
3) that the verbs of the main clause and of the subordinate clause are identical (Cinque 1988: 485ff.).

In (53)-(56) the relative pronoun is constructed with a case that belongs to the predicate of the subordinate clause rather than to that of the main clause. Note, moreover, that the predicates on which these subordinates depend c-select NP and S', but not PP:

(53)' ?Gli ho detto con Gigi.
"I told him with Gigi."
(54)' ?Gli ho ripetuto con Gigi.
"I repeated to him with Gigi."
(55)' ?Ho immaginato subito con Gigi.
"I immediately imagined with Gigi."
(56)' ?Gli ho consigliato con Gigi.
"I advised him with Gigi."

This peculiar characterization of some of these predicates is well know in grammatical tradition, and authors such as Jespersen (1927, III: 48) or Grevisse (1955: 875-876), noting how the relative pronoun is constructed with a case that belongs to the predicate of the subordinate clause, have sustained its sentential nature.

The considerations offered in 1)-3) on the properties of these non-interrogative *kw* clauses depending on *c-q* classes, defined both with respect to the independent relatives on one hand and to the indirect interrogatives on the other, offer enough arguments, I believe, to justify their analysis as marked independent relative clauses.

6. *Types of independent relative clauses and variations in the "matching parameter".*

The distinction of at least two different classes of independent relatives, those unmarked, and those depending on *c-q* classes, marked, [43] just sketched above can receive some light from the debate on the formal description of independent relatives. In this debate it is assumed that the structure of independent relatives is of the type

$(\text{NP } (\text{COMP S}))_{\text{NP}}$

while the position occupied by the relative pronoun within this configuration is rather controversial. More precisely, the research has developed within two alternative analyses: the *head proposal* and the *Comp proposal*.

According to the *head proposal* (largely defended in Bresnan & Grimshaw 1978; cf. also Hirschbühler 1976), the WH-phrase is the head and it occupies the antecedent position, followed by S or S'. For this reason these constructions are called "headed" free-relatives, where *head* is used as the equivalent of antecedent. In this case the sentences already proposed in (3) and (4) (cf. §. 0.) would have a structure of the type

[43] Such characterization concerns at least two types of independent relative clauses, but it is possible that more accurate treatment would impose a slightly different and still more complex typology.

So_{NP} [$_{NP}$ [che cosa]$_{S'}$ [hai detto]]

In the *Comp proposal*, the WH-phrase is in COMP position and the antecedent is empty; in such an analysis relatives are "headless" because the WH-phrase is in Comp and the antecedent is empty. According to Groos & Van Riemsdijk (1981), who repropose an analysis previously sketched in Kuroda (1968) and also in Hirschbühler (1976), the independent relative clauses would have a structure of the type

So_{NP} [$_{NP}$ [e]$_{S'}$ [$_{COMP}$ che cosa]$_{S}$ [hai detto]]]

Many arguments have been adopted supporting one or the other hypothesis, by discussing different parameters characterizing independent relative clauses (case distinctions pertaining to the WH-phrase, presence or absence of infinitival relatives, distinctions tied to the different characteristics stemming from the double role of the independent pronouns, etc.). Particular relevance in justifying the choice of one or the other analysis can be attributed to the double role restrictions (the *matching* phenomenon).

An independent relative clause is *matching* (Grimshaw 1977) if the WH-phrase which introduces the independent relative clause conforms in category (and in case, if the language has case distinctions) to the requirements of the element governing the construction. Languages may vary in that some respect the *matching* requirement. English, Dutch, and German, for example, are frequently cited as instances of *matching* languages, while Gothic, Russian, Finnic and Classical Greek are *non-matching*. Compare examples (57)-(58) and (59)-(60):

(57) *Ken jij met wie zij flirts? (proposed in Groos and van Riemsdijk 1981)
"Know you (do you know) the boy with who(m) she flirts?"

(58) *Ich nehme, wer (nom.) einen guten Eindruck macht. (proposed in Groos & van Riemsdijk 1981)
"I take who makes a good impression."

(59) Ushafjands ana þammei lag. (proposed in Harbert 1983)
"Picking up (that) on which he laid."

(60) On iščet s kem poechat'. (proposed in Harbert 1983)
"He seeks with whom to go."

(57) and (58) are ill-formed constructions, form Dutch and German respectively. In (57) the WH-phrase (*met wie*) which is the initial constituent of the relative is a PP, while the verb of the main clause (*kennen*) is subcategorized for an NP, and therefore the WH-phrase is not of the same category of the constituent that immediately dominates the sentence. In (58) the relative clause is introduced by a pronoun (*wer*) in the nominative, while the verb that governs the construction requires the accusative. [44] Instead, (59) and (60)

[44] In German it is impossible to construct an independent relative when the verb of the relative clause and that of the main clause require different cases, independently of the fact that the WH-word has the case required by the predicate of the main clause (*wen*) (cf. example below) or by the predicate of the relative clause (*wer*), as in example (97).
Ich nehme, wen [+acc.] einen guten Eindruck macht.

are grammatical sentences, respectively from Gothic and Russian, even if there is not identity of category (*ana þammei*) and case (*kem*) in the double role played the by independent pronoun. In (59) the WH prepositional phrase *ana þammei* which introduces the relative clause, has a case and category different from that required by the verb *ushafjan*. In (60) the WH-phrase *kem*, which introduces the relative, is in the instrumental case, as required by the verb of the relative clause, while the verb *iskat'* in the main clause would require the accusative.

It is mostly in relation to this *matching vs non-matching* parameter that the two alternative analyses, *head proposal* and *Comp proposal*, are debated. The former is located within a matching typology and, to prove that the WH word is the head of such a structure, it is observed that the WH-phrase *matches* with the category of the relative. [45] Conversely, it seems appropriate to hold that the *non-matching* independent relative clauses are in COMP, although it is often emphasized that the contrary is not true, i.e. that the *Comp analysis* is necessarily connected with *non-matching* (cf. Hirschbühler & Rivero 1983a, 1983b; Harbert 1983). Precisely on the basis of this parameter some have tried to single out some typological correlations existing between types of relative clauses and other syntactic characteristics, such as the *null-subject parameter*, [46] or the characterization of case languages, even if the proposed solutions are not always satisfactory. [47]

[45] If the WH-phrase is the antecedent, the matching effect falls under the X-bar theory (cf. note 25), because the head of the phrase must belong to the same category as the phrase that governs it. According to Bresnan and Grimshaw (1978) English systematically shows a matching effect between the category of the independent relative clause and that of the WH-phrase that introduces it.

[46] Those languages that, like Italian, present a series of characteristics such as the followings are called *Pro-drop*:

i) the possibility of having a phonetically null subject;
Parlano di te. ("They) are talking about you.")
ii) the possibility of having the subject inversion:
Le loro amiche hanno telefonato. ("Their friends called.")
Hanno telefonato le loro amiche.
3) violation of the filter of the trace of *che* ("that"):
Chi credi che verrà?
"Who do you think will come?"

These and other characteristics of Italian are derived from a single more abstract property concerning governing properties of verbal inflection, assuming that languages can vary in reference to such properties. In this framework *Pro-drop* languages differentiate from *non-Pro-drop* languages because in the former (like Italian) INFL (*inflection*) can properly govern the subject position, while in the latter (like English) the subject position is not properly governed (that is, no lexical or co-indexed category governs the subject) (Rizzi 1982: 118; cf. also Taraldsen 1978 on INFL as responsible for *Pro-Drop*). In other words Pro-Drop is a minimal binary difference in the languages from which a series of properties, among which precisely (i)-(iii) follow. An inverse correlation has been noted between matching and the null subject parameter that seems to be quite systematically present in various languages.

[47] Harbert (1983), Hirschbühler & Rivero (1982, 1983a, 1983b), Suñer (1984a, 1984b). Cf., for example, Harbert (1983: 267) on the marginality of the data in Bresnan & Grimshaw (1978), or Suñer (1984a: 377 note 10), on the data in Hirschbühler & Rivero (1982). Moreover, even more relevant is the pertinence of the data: interrogatives and relatives are often confused. For example, observing the greater acceptability in negative contexts of independent relative clauses depending on Type II predicates, which instead have to be considered interrogative clauses, the role that the negation operator would have in independent relative clauses is discussed (Suñer 378: 372).

The different properties discussed above in relation to the attribution of case to independent relatives in Italian, as sketched in §. 5.1, allow a distinction to be made between two diverse types, both *non-matching*, in complementary distribution. [43]

a) The unmarked independent relatives, *non-matching*, whose WH-pronoun may freely be the subject, object or any other type of complement for the main clause, while, for the relative subordinate clause, it may be only as the subject or object.

b) The marked independent relatives, *non-matching*, depending on (*c*)-(*q*) predicates, whose WH-pronoun may have the role of propositional complement of the relative clause, even if it may not be a prepositional complement for the main clause; the relative pronoun my be constructed with a case that belongs to the predicate of the subordinate clause rather than of the main clause. In other words, the WH-phrase does not seem to satisfy the requirements of subcategorization and selection of the main verb.

Although a typology of two series of independent relatives, both *non-matching*, has never been the object of a thorough anlysis, since there is a tendency, in the literature, to emphasize the contrast between *matching* and *non-matching* properties, disregarding any differentiation within them, the opportuneness of such a distinction is also supported by the necessity of dealing with these same phenomena in many other typologically different languages, like Classical Greek and Gothic, [48] Finnic [49] and Old English. [50]

To explain this asymmetry of *non-matching* requirements it seems useful to resort to some kind of distinction within the *Comp proposal*, in particular, referring to that research which has tried to define the parameter of *matching*

Finally, the proposed interlinguistic generalizations seem to elude an accurate evaluation; for example Middle High German, Spanish and Catalan, which are Pro-drop languages, also present matching requirements.

[48] On Greek and Gothic, Harbert (1983). The phenomena "of attraction of the relative" are well-know to grammarians: see, among others, Meillet and Vendreys (1977, 5 ed, § 928) for Greek and Latin. Compare one of the examples quoted in Harbert 1983, respectively for Greek and for Gothic:

Eidénai tẽn dunamin eph'hous aṅ iōsin.

"To discover the strength against wh-pl-acc (of those) against whom) they are to proceed.

þan-ie frijos siuks ist.

"(The one) whom you love is sick.

[49] Some data of Finnic are discussed in Bresnan & Grimshaw (1978: 373ff). For example in the utterance:

Valitsen mistä sinä pidät.

"I choose what-Elative you like."

the relative pronoun *mistä* ("what" is in elative cause required by *pitää* ("like") while *valita* ("choose") would require either the partitive or the elative case.

[50] The same phenomenon is also in Old English (cf. Allen 1980 and Hirschbühler & Rivero 1983: 511ff.):

And to swa hwilcere leode swa we cumaþ, we cunnon ðaere gereord.

"And whatever people we come to, we know their language."

Hwilcere is dative, while *cunnon* ("know") requires the accusative.

[51] There are several types of empty categories, each of which is subject to different conditions in its distribution. Some distinctions between the phonetically non-realized types of NP are in relation to the two modules discussed above, *case theory* and *thematic position*. COMP is one of the *non-argument* positions (a *non-argument* position is structurally inaccessible to the assignment of θ roles).

and of *non-matching* relating it to the different properties of the empty categories which could characterize the NP head of the relative clause. [51] In this approach, the different *non-matching* requirements in types *a* and *b* and, in particular, their diverse characterization with respect to the assignment of the thematic role and of case, may be explained on the basis of the interaction in *a* and *b* of different principles linked to different *empty* categories in the NP head of the relative. In particular, to explain the *non-matching* effect characteristic of marked *kw* subordinates (*b*), an account must be given of the appropriate assignement of case in S', but not in V. In other words, in a configuration of the type.

$$V\ [_{NP}\ [_{S'}\ [_{COMP}]\ [_{S}\ ]]]$$

the *non-macthing* relative pronoun of the type *b* satisfies the requirements, in category and case, of the predicate in S', but not in that of V. Now, since the complement choice is determined by the *projection principle* (Chomsky 1986: 4) and the positions required by the lexical items are represented at each level of representation, the behaviour of the empty elements is parallel to that of lexical elements, and therefore the positions in which empty elements can appear must be specified. It follows, that, in this case, the *empty category* that characterizes the NP Head of the relative is not accessible to the predicate of the main clause, since this does satisfy the properties of subcategorization and of assignment of the thematic position which, due to the *projection principle*, ought to be satisfied. In the typology of *empty categories*, a potential candidate to be the head of the relative clause is PRO, since it requires being non-governed. The description of the WH pronoun in COMP position, on the other hand, does non arise problem. [52] In fact, the appropriate assignment of case in S' does not violate the θ criterion. The NP in COMP presents only one θ position, which is assigned by the verb in S' (due to the chain formed by the WH-nominal phrase and its trace) and it is case-marked in the position occupied by the trace (the WH trace, remember, derives from movement in COMP, which is intrinsically a non-argument position). A thorough analysis is needed to specify which generalization is appropriate in

[52] Problems arise in the *Comp-hypothesis* in type *a* non-matching independent relatives. For the matching effect, COMP is accessible to the predicate of the main clause, since it can satisfy the subcategorization properties. In order to explain the *matching* requirements, it is necessary to assume that it can be assigned through configurations of the form:

$$V\ [_{NP}\ [_{S'}\ [_{COMP}\ [_{X'}\ ..WH..]\ [_{S}]]]$$

The requirements of V can be satisfied only in reference to X', which however, does not originate in COMP, but is moved there, by application of *move* α only in S-structure.

[53] Note that such co-indexing must also explain some restrictions relative to moods of the subordinate. While in the declarative and interrogative sentential complements, the distinctions between indicative and subjunctive is correlated with some features of the verb of the matrix-clause and with the complementizer type, in the relative clauses with lexical head the distinction between indicative and subjunctive is correlated to features present in the head of the relative clause: in particular with the features ±definite, or ±specific. In the first case, therefore, these inflectional distinctions are accessible to the verb of the matrix sentence, while in the second case, INFL must be accessible to the head of the relative clause.

determining the level, or levels, at which the empty category is co-indexed with the WH-pronoun. [53] In fact, the interlinguistic differentiations seem rather complex, since in Italian the requirements of *non-matching* are distinguished to the semantic class of the predicate governing the relative, while in other languages such as Gothic and Greek it concerns a much wider series of predicates and seems to reflect a structural rather than a phonological difference (cf. Harbert 1983).

Additional studies will be able to strengthen and precisely define this earliest characterization, but in any case, there are enough arguments, I believe, to maintain the initial hypothesis, that non-interrogative *kw* subordinates depending on predicates *c-f* and *g-q* are marked independent relatives.

6.1. *Selection, subcategorization and subjacency: some reconsiderations.*

The opportuneness of treating the non-interrogative *kw* subordinates depending on semifactive assertive predicates as (marked) independent relatives, however, also lies within the theory as a whole. If, on one hand, this treatment could offer a satisfactory descriptive linguistic generalization, unifying a series of subordinates into a single syntactic and semantic type, the treatment of which has so far been dispersed in a fragmentation of types, [54] on the other hand, a more complex evaluation of the equilibrium that the various solutions involve is required. The crucial point to solve in the formal description of non-interrogative *kw* clauses, and which could justify their analysis as independent relatives, is still how to explain the lack of a generalization of the *subjacency principle*, with the parametric choice of S or S' as the bounding category, as a principle of universal grammar. Two classes of subordinates – interrogative and relative – depending on *sapere* ("know"), or on some other epistemic predicate, have revealed an absence of a structural contrast regarding this principle, since WH movement is allowed for the relative as well as for the interrogative. The violation of subjacency concerns a very restricted series of predicates, since in Italian both the unmarked and even many marked independent relative clauses present rather clear characteristics of insularity:

(61) *Mario, con cui si è visto chi ti aveva sorpassato con il rosso...
"Mario with whom it was seen whom had passed you on a red light..."

(62) *Mario, a cui mi hanno riferito chi aveva telefonato...
"Mario, to whom they referred to me who had made a phone call..."

A possible solution could be to treat the restricted series of predicates concerned with violation of insularity as exceptionally marked in regard to the *bounding principle*. [55]

[54] For a solution of this type, cf. Hirschbühler & Rivero 1983b; see the solution proposed by Harbert for the subordinate clauses depending on a communication verb (*say*) (cf. Harbert 1983: 242, 251 examples (8) and (25)).

[55] The theory of markedness is quite often used to explain syntactic irregularities which, for instance, may discend from lexical properties (Chomsky 1979).

Another possible option consists in proposing that the non-interrogative *kw* subordinates which violate subjacency actually have an S' and not an (NP S') NP structure. Evidence is provided by further, secondary stipulations. A confirmation of this hypothesis may be provided by the peculiar semantic properties relative to the double role of the independent pronouns. The fact that the case of the pronoun can be determined, in some instances, only by the predicate of the subordinate clause, while it does not satisfy the selection/subcategorization requirements of the main clause predicate, could be considered as an argument for the fundamental S' character of these *kw* subordinates.

Nevertheless, this solution also raises some problems.

In the first place, to explain certain island properties a restricted series of predicates is separated from a fairly wide one presenting a homogeneous syntactic and semantic characterization.

In the second place, the same structural type, S', is associated with two different semantic types, one interrogative, and the other "marked relative". In other words, two "different" s-selections are linked to the same c-selection (S'). Even assuming that in both types of *kw* subordinates, interrogative and non-interrogative, the WH-pronoun can be treated like a quantifier, it has the property of *indeterminacy* in the first of *determinacy* in the second (§. 5. *b*). The fact that the same syntactic structure (S') would correspond to two different s-selections (interrogative and non-interrogative) weakens the overall hypothesis of an isomorphism of the levels required by the *projection principle*. Moreover, once it is established that the selection of the +WH pronoun is in logical form (Chomsky 1986: 27), it is necessary to explain how two different s-selections correspond to different properties of the interrogative/relative pronoun, which also determine some morphosyntactic features characterizing the INFL node and in particular, the restrictions on the subjunctive mood (see above §. 2).

A solution to the problem requires a wider analysis of the characteristics of insularity of *kw* subordinates.

7. *Conclusions.*

It is known that the treatment of data is delicate and difficult, involving decisions which do not always find the consensus of scholars. Less discussed perhaps because it is obscured by the complexity of linguistic arguments, is the problem of the pertinence of the data proposed to the facts analyzed. For instance, an area in linguistic literature in which the linguists' intuitions lack consistency concerns the distinctions between interrogative clauses and independent relatives in those languages of Indo-European derivation where there is an identity of morphological realization between interrogative and independent relative pronouns (*kw* clauses). Although the two homophonous constructions are acknowledged as syntactically and semantically different, in reviewing the linguistic literature on the topic a discordance in their

interpretation, oscillating between interrogative and relative, has been encountered mainly in the evaluation of *kw* complements depending on semifactive assertive families of predicates. Such subordinates are interpreted sometimes as relatives and sometimes as interrogatives, depending on whether the former or the latter is being discussed.

One purpose of this paper is to emphasize the importance, in giving an adequate description of certain linguistic phenomena, of evaluating the data in a perspective including more than one level of representation. Upsetting a common argumentative line, since in general the analysis on the different types of complementation – interrogative, relative, or other – is more often established on the basis of their syntactic structure, I have examined first some aspects of the characterization of interrogatives were examined, and then, on the base of the distinctions outlined, verified some syntactic predictions.

In the first part of this paper, a systematic analysis of a property essential to an interrogative interpretation, *indeterminacy*, in sentence and discourse, revealed that the classification as *interrogative* of the *kw* subordinate depending on assertive semifactive predicates is appropriate only in conjunction with certain features (negation, non assertive acts, temporal and modal indicators of future). The presence of such features in the main clause *allows* an interrogative interpretation of *kw* subordinates, while their absence *excludes* it. In order to evaluate the *kw* clauses depending on semifactive assertive predicates properly as interrogative or relative, it is essential to take into account the context sensitivity of semifactive assertive predicates. Although their effect on the predicate is predictable on the basis of the intrinsic properties of all these predicate families, it is essential to pay attention to these features if an appropriate characterization of the *kw* subordinates is to be achieved. The confusion in the interpretation of the two structures, interrogative and relative, can be accounted for in part by the scarce attention that is given in much linguistic analysis to precisely those features that permit the appropriate interpretation. (Note, by the way, that the context sensitivity of these predicates is well known in those languages, such as Latin, where interrogative and relative pronouns have a different morphological characterization).

The second part of this paper evaluates the systematic differences in the semantic characterization of subordinates depending on semifactive assertive predicates. In the framework of one of the most restrictive theories of grammar, where the problem of the variation between languages becomes the problem of determining the boundaries of the Universal Grammar, an accurate characterization of such *kw* subordinates as interrogative or relative is essential to achieve descriptive adequacy, since they have very different syntactic configurations. The interrogatives have S' (analogous to other sentence complements, such as declaratives, exclamatives, etc.), and the relatives, instead, have a structure of the type NP S' or NP S, which is identical, therefore, to that of the full relatives having a lexical head.

Moreover, the verification of the thesis presented here may become particularly interesting in the light of recent works, based on the generative framework of *Governement and Binding* which hypothesize that many aspects of syntactic representation are "deducible" from the semantic properties of the lexical items taken together with certain very general syntactic rules (the rule *move* α) and a restricted series of principles.

In examining some of the most well known syntactic predictions on the distinction between interrogative and independent relative clauses, which find reciprocal confirmation and which have been widely discussed in the generative literature, it appears that they are based on a description assimilating the non-interrogative clauses depending on semifactive assertive predicates to interrogatives. Surprisingly, these analyses seem justified, since these interrogative *kw* clauses seem to share more properties with interrogatives than with independent relatives. However, considering the properties of independent relatives at more than one level of grammatical description (morphosyntactic distribution and semantic characteristics), it is revealed that the non interrogative *kw* clauses depending on semifactive assertive predicates present a series of peculiar characteristics, both on a syntactic and on a semantic level, which link them both to the interrogative and to independent relatives. Moreover, a description which assimilates the non-interrogative *kw* clauses to the interrogatives is revealed inadequate not only on a semantic and pragmatic level, but also on a syntactic one. A better solution could be to consider the non interrogative *kw* clauses depending on semifactive assertive predicates as a type of marked independent relatives.

It is a widespread opinion that grammatical theory needs, methodologically, to be able to deal with diverse components of grammar, maintaining a precise distinction of levels. On the other hand, there is only partial knowledge of such components, of the rules of each of these, of the representations these rules operate on, of the representations that they produce, and of the interconnections allowed among these components. Thus, in linguistic practice it is usual to analyze properties at a particular level: semantic, syntactic, or pragmatic. In this paper I have tried to propose how this separateness, acceptable in principle, may no longer be maintained when verifying and evaluating hypothesis with empirical data. Instead an appropriate semantic and syntactic characterization, verified systematically in a variety of different pragmatic contexts, is indispensable. Only when an adeguate description of these data is given may they be expressed as a precise formal problem.

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