

A CROSSLINGUISTIC FUNCTIONAL CONSTRAINT ON  
*BELIEVE*-TYPE RAISING IN ENGLISH AND SELECTED  
OTHER EUROPEAN LANGUAGES

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*1. The facts to be accounted for, and a functionally motivated explanatory hypothesis*

For the purposes of the present paper, the term '*believe*-type raising'<sup>1</sup> is used as a descriptive label of convenience to refer to fused<sup>2</sup> infinitival constructions found after verbs of saying and thinking in a number of Germanic and Romance languages. For an illustration of the construction and some of its typical uses, consider the following examples from English, French, and German:

- (1a) I believe John to be intelligent.
- (1b) John, who(m) I believe to be intelligent, ...
- (1c) Who(m) do you believe to be intelligent?
  
- (2a) \*Je crois Jean être intelligent.
- (2b) Jean, que je crois être intelligent, ...
- (2c) Qui crois-je être intelligent?  
Qui est-ce que je crois être intelligent?
  
- (3a) \*Ich glaube Hans klug zu sein.<sup>3</sup>

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<sup>1</sup> Since, apart from the Latin-inspired misnomer '*accusativus cum infinitivo*,' traditional grammar does not provide a generally accepted name for the English construction in question, I borrow this term from Postal 1974. I will, however, use it without presupposing the existence of any syntactically formalisable '*raising*'-rules relating, say, 'I believe that she is honest' to 'I believe her to be honest.'

<sup>2</sup> Matthews (1981: 185) defines a fused construction 'as any in which a single element is a complement of both a controlling and a dependent predicator.'

<sup>3</sup> There is a rather far-fetched interpretation - irrelevant in the present connection - on which (3a) is regarded as acceptable by some speakers. If 'Hans' were considered a dative rather than an accusative object ('glaube ihm' instead of 'glaube ihn'), the sentence could be glossed as 'I believe John when he says that I am/ he is intelligent,' with the logical subject of the infinitival verb remaining unexpressed and being specified in context. In spelling, this non-raising interpretation of the example would require the insertion of a comma after the dative object 'Hans'.

- (3b) ??Hans, den ich klug zu sein glaube, ...  
 (3c) ??Wen glaube ich klug zu sein?

Such made-up study examples suggest a clear-cut grammaticality contrast along the following lines. In English the construction is grammatical irrespective of the syntactic environment it occurs in, while in French it passes muster only if the binding element of the fused construction has been fronted, as in the relative and interrogative clauses illustrated.<sup>4</sup> In German raising of the type studied here is ungrammatical throughout-although examples (3b) and (3c) do not go against acceptability norms to the same extent as the declarative clause (3a), an important fact which I shall return to below.

For analysts working in the Government-and-Binding model of formal syntax examples such as (1) to (3) reflect arbitrarily different settings of parameters within Universal Grammar. Kayne, for example, relates the contrast between (1a) and (2a) to the phenomenon of 'preposition stranding' - widespread in English but absent in French - and argues that it is likewise due to the fact that 'in French, P[reposition] and V[erb] do not govern the same way; but in English they do. (That is, in English, P can govern structurally, as well)' (1981: 364; see also Chomsky 1981: 295). My aim in the following remarks, however, is to show that

- (a) the grammaticality contrasts in question are not as clear-cut as examples (1) to (3) make them out to be, so that there is not really a need to assume fundamental structural differences between the three languages, and  
 (b) the facts encountered in all languages, however different they may appear at first glance, reflect a common functional principle which might provisionally be formulated as follows:

When in variation with finite complement clauses, *believe*-type raising constitutes the structurally, stylistically and semantically 'marked' option. A reversal of markedness occurs in syntactic environments requiring the extraction of subjects from embedded clauses, because such extraction tends to be ungrammatical or highly constrained in finite complement clauses. Raising is predicted to be more frequent or acceptable in those environments in which it serves as a convenient substitute for the finite complement clause, while the reverse distribution-raising being more frequent or acceptable in declarative clauses - is dysfunctional and therefore unlikely to be attested.

In order to illustrate the functional factors at work in the distribution of raising structures, it is helpful to compare the English example (1) with its possible finite variants:

- (4a) I believe John to be intelligent.  
 I believe that John is intelligent.  
 (4b) John, who(m) I believe to be intelligent, ...

<sup>4</sup> Other types of fronting of the binding element similarly seem to produce results which are at least marginally acceptable. Compare: '? On le croit être intelligent.' Cf. also Pütz 1975: 56.

- John, who(m) I believe (\*that) is intelligent, ...<sup>5</sup>  
 John, of whom I believe that he is intelligent, ...  
 (4c) Who(m) do you believe to be intelligent?  
 Who(m) do you believe (\*that) is intelligent?

As can be seen, fusion through raising does not lead to structural simplification in (4a). If anything the absence of a clearly marked clause boundary in the fused infinitival construction makes it more difficult to add material to either the matrix or the embedded clause, while the presence of an infinitive verb phrase makes difficult all but the most general marking for tense, aspect and - in particular - mood in the embedded clause (try, for instance, converting into a raising structure an example such as: 'I have always believed that in schools throughout the country the responsibility for ethical studies may have been in the hands of ill-trained amateurs.'). In the declarative syntactic environment illustrated by (4a) *believe*-type raising therefore represents the marked structural option *vis à vis* the *that*-clause. To list only a few syntactic, stylistic, and semantic reflections of the marked status of the construction: it is fully acceptable only if the embedded predication is stative (cf. 'I believe him to be honest/ \* to walk to work'); it is typically found in formal written prose styles; and it narrows down semantic interpretations in a way which Borkin characterises as follows: 'Syntactic disintegration of an embedded underlying clause parallels a semantic movement from an empirically oriented or discourse given proposition toward a matter personal experience, individual perception, or a conventionally determined state of affairs' (1973: 44). This means that, to use an illustrative example, fusion is much more likely to occur in a value judgment such as 'I believe him to be a reliable worker and an honest man' than in the non-controversial truism '? I believe the square root of one-hundred and twenty-one to be eleven.'

The situation is completely different in (4b) and (4c). If in the finite variants the complementiser *that* is retained, the result is ungrammaticality, and if it is dropped, the result is a serial sequence of two finite verbs one of which is syntactically subordinated to the other - a structure which is not otherwise very common in English and which might prove difficult for listeners or readers to process, particularly with matrix verbs which are not as easy to use parenthetically as *believe*. But even without going into such specifics, it will have to be admitted that an example such as (4b), with three layers of embedding and three sharply marked clause boundaries in the first five words, is more complex than any of its nonfinite paraphrases. The fused infinitival construction, which lacks an overt clause boundary, makes it possible for speakers to do away with one level of embedding (in surface-syntactic if not necessarily in logico-semantic terms) and to replace the serial sequence of two finite verbs with the sequence 'matrix verb + embedded infinitive,' which has the advantage of being a fairly good iconic representation of the hierarchical relationship obtaining between the two verb phrases.

<sup>5</sup> 'John, whom I believe is intelligent, ...' is a wide-spread contamination scorned by some purists but extensively discussed and documented by Jespersen (1924:117, 349-51).

The fact that of the four logically possible combinations - (1) raising grammatical in relatives/ interrogatives and in declaratives, (2) raising grammatical in relatives/ interrogatives but not in declaratives, (3) raising grammatical in neither environment and, finally, (4) raising grammatical in declaratives but not in relatives/ interrogatives - only the first three are actually attested in the languages studied is good *prima facie* evidence for the effectiveness of the functional factors illustrated, because constellation (4) is in fact the only one in which raising would be ruled out in the very environments in which it can be shown to serve a purpose. Closer inspection of the data in the languages under review, however, reveals additional and much more specific evidence which, in my view, makes it possible to propose a coherent 'functional' account for the distribution of *believe*-type raising which is superior, or at least an indispensable complement, to the various 'formalist' ones proposed by analysts working in autonomous-syntax frameworks. Insofar as it touches on theoretical and methodological issues, the present paper should therefore be seen as an empirical case study contributing to a growing body of work in an emerging functional paradigm in syntactic research the theoretical underpinnings of which are discussed in work such as Givón (1979, 1984); Haiman (1985), Langacker (1987), or Taylor (1989).<sup>6</sup>

## 2. Statistical evidence for the functional principle - the case of English

Although, in theory, *believe*-type raising is possible in all sorts of syntactic environments in English, the analysis of authentic language soon shows that the construction is common only in those functional niches predicted by the principle outlined above. Out of a total of 42 tokens attested in the corpus of the Survey of English Usage (University College London), seventeen (i.e. 40,5%) were found in relative clauses of the type illustrated in (4b), which - considering the general frequency of relative as opposed to declarative clauses - is highly significant clustering. Elicitation tests complementing my analysis of the corpus also support the functional principle. Asked to complete the following two sentences in any way they wished:

- (5) Why are you passing on information which you know \_\_\_\_\_ incorrect?  
 (6) This is something which I know many people \_\_\_\_\_ anxious about.

18 of 25 British undergraduates supplied the form 'to be' in (5), where the

<sup>6</sup> In view of the recent proliferation of several mutually not always compatible 'functional' approaches to syntax, a word of clarification is in order here. The foremost feature of a 'functional' syntax as understood here is that formal and structural facts in languages are traced back to semantic, pragmatic and textual explanatory parameters - with the important corollary that syntactic categories, ceasing to be linguistic primes, are allowed to be fuzzy, only partially ordered and 'prototypical' rather than 'categorical' in nature. While the space available here does not allow an exhaustive treatment of the issue, it should nevertheless be borne in mind that the 'functional-relational' model of grammar proposed by writers such as Postal, Johnson and Perlmutter or 'lexical-functional grammar' in the vein of Bresnan and Horn derive their names from a more narrowly technical understanding of the word *function* and would be classed with 'formalist' approaches here.

relative element was the difficult-to-extract subject of the embedded clause, but only two did so in (6), where "only" the object needed to be extracted. As already mentioned in the discussion of (4b) above, a parallel motivation for the use of the infinitival construction in (5) may have been the desire to avoid the serial sequence of two hierarchically ordered finite verbs ('know is'/'know must be' etc.). The functional principle was reflected not only in participants' active production but also in their judgment of relevant structures.

Presented with:

- (7a) The country's population, which McGregor estimated was 36 million in 1964, has doubled since.  
 (7b) The country's population, which McGregor estimated to be 36 million in 1964, has doubled since.<sup>7</sup>

and:

- (8a) The government hesitated to introduce legislation on an issue which it knew to be highly controversial.  
 (8b) The government hesitated to introduce legislation on an issue which it knew was highly controversial.

the preference for the infinitive was more impressive in example (8) - 18 of 25 - than in (7) - 14 of 25, but in view of the highly marked status of *believe*-type raising even a slight preference for this construction is significant.<sup>8</sup> The synchronic evidence obtained from corpus-analysis and elicitation jibes surprisingly well with the diachronic findings in Warner, who shows that the functional niches favoured by the construction today were important points of entry when *believe*-type raising began to spread into the language in late Middle English (1982: 144-5).

Above and beyond such undoubtedly interesting statistical evidence, the functional principle has been firmly grammaticalised in some instances even in English. Raising is ungrammatical or marginal with *say* and *allege* in (active) declarative clauses, but acceptability immediately increases once such constructions are transposed into functional niches:

- (9a) They alleged/ said that the man was corrupt.  
 (9b) They? alleged/\* said the man to be corrupt.  
 (9c) The man whom they alleged/? said to be corrupt...

<sup>7</sup> This example was modelled on the following passage from the corpus:

A further distinctive characteristic of the modern Soviet city is the density, which Saushlin estimated to be 50,000 per square kilometer in central Moscow in 1964. This contrasts greatly with the approximate density of 9000 per square kilometer in London. Increasing use of tower blocks is further augmenting the density. Fox estimated that population density in central Odessa was 1 000,000 per square kilometer. (text W.6.3b.5, emphases mine)

Note that, as predicted, the *that*-clause occurs in the declarative environment while the fused infinitival construction is used in the relative clause.

<sup>8</sup> Further information on the analysis of the corpus and the design of the complementary elicitation experiments may be found Mair 1990.

These and many similar cases are extensively discussed in Postal (1974: 305-308). Also compare the following authentic example from the corpus of the Survey of English Usage, which is not easily transformed into a declarative clause:

- (10a) -- we/may not be able to do#. /very much# - a/bout the things#  
we/see to be wrong# with the/church#-- (text S.12.2a.10)<sup>9</sup>  
(10b) ? We see a number of things to be wrong with the church

The following interesting experiment in ungrammaticality - originally presented in Van der Auwera (1984: 178) - might also be of interest here:

- (11a) ? The man who you assure me to be Ann's lover...  
(11b) \* You assure me this man to be Ann's lover.

Neither of these two sentences is acceptable English but it is nevertheless obvious that one can get away with more in the functional niche in (11a).

Passives of the type 'The man was said/alleged to be corrupt' are also good and generally more frequent in authentic texts than the corresponding actives where these are available (see Mair 1990: 177-191 for relevant corpus-data) - a fact which also seems to call for a functional explanation. After all, the finite-clause paraphrases of such structures ('It was believed/thought/said/alleged/etc. that the man was corrupt') are longer than the fused infinitival constructions and also present the sentence-information in a different order. Such textual and communicative considerations certainly help to explain the frequency of this type in actual data, but it is not clear whether they should also be used to account for its very existence. After all, it is not found in languages like French, where it would no doubt be a similarly useful stylistic device.<sup>10</sup>

### 3. Marginal acceptability of believe-type raising in functional niches - the case of German

With regard to the construction at issue, German can be said to be the converse of English. Fused *zu*-infinitival constructions after verbs of saying and thinking are not provided for in the grammar but very occasionally attested in precisely those syntactic environments predicted by the functional principle. In Behaghel's standard work of reference, for example, *believe*-type raising after verbs of saying and thinking is said to be 'häufig bei Lessing, besonders in Relativsätzen' (1924: 329), and three of the four citations Behaghel gives from the 19th and 20th centuries also occur in functional niches:

<sup>9</sup> The example is given in a simplified version of the original prosodic transcription. '/' and '#' indicate the onsets and closes respectively of tone-groups, and the hyphens stand for pauses of varying length.

<sup>10</sup> I would like to thank an anonymous reader-reviewer for pointing out the limits of the functional approach to syntactic structure at this point in the argument. The most convincing explanation for the presence of such constructions in modern English - an account based on a refined notion of syntactic analogy - is put forward in Quirk 1965.

- (12) ... wenn ich euch dasitzen und frieren weiß ...  
[when I you sit there and freeze know]  
... die Städte, die er brennen fürchtete ...  
[the cities that he burn feared]

... am Rhein-Marnekanal, wo Schiller auch auf der heimlichen Reise nach Mannheim gewesen zu sein, keine berechtigte Annahme vorhanden ist ...  
[on the Rhine-Marne canal, where Schiller also on the secret trip to Mannheim been to have no justified assumption there is]  
... was ihr Wasser zu sein meint ...  
[what you water to be mean]

Only in the first of these examples is it possible to replace the infinitival construction with a finite object clause without complicating the sentence; in all others there is a price to pay for grammatical correctness:

- (13) ... wenn ich weiß, daß ihr dasitzt und friert ...  
... die Städte von denen er fürchtete, daß sie brennen würden ...<sup>11</sup>  
... am Rhein-Marnekanal, wo keine berechtigte Annahme vorhanden ist, daß Schiller auch auf der Heimlichen Reise nach Mannheim gewesen ist ...  
... was ihr meint, daß Wasser ist ...

It will be noted that both the infinitive with *zu* and the bare infinitive are used in the above examples. The latter construction seems to be an extension of the analogous fused construction found with perception verbs and is restricted to dynamic infinitival verb phrases. It is, thus, only indirectly relevant to the present discussion. The *zu*-infinitive, by contrast, is required if the infinitival verb phrase is stative or perfective, which - in effect - means that the two structures are in complementary distribution:

- (14) \*... wenn ich euch dazusitzen und zu frieren weiß ...  
\*... was ihr Wasser sein meint ...

The other available literature on marginal raising constructions in Modern German (Bech 1955: 145-6; Pütz 1975; Boon 1980: 237) does not introduce additional aspects relevant to the present discussion but merely supplies further evidence supporting the above argument.

In addition to the impossibility of extracting the subject from a *that*-clause, another factor motivating the choice of the raising construction in English was said to be the speakers' desire to avoid a serial sequence of two hierarchically ordered finite verbs. In German, where the verb in dependent clauses normally appears in final position, such serial sequences hardly ever arise,<sup>12</sup> so that the

<sup>11</sup> A more direct finite paraphrase of this example - 'die Städte, die er fürchtete, daß brennen würden ...' - requires the extraction of the subject from a tensed object clause and is acceptable to some speakers of German only.

<sup>12</sup> Compare, for example, 'die Frau, die - wie glaube - arbeitet' with 'die Frau, die - wie ich glaube

latter factor may be safely disregarded here. But it seems that 'illicit' raising is resorted to even when constituents other than the subject would have to be extracted from finite complement clauses. Compare, for instance, a recent example culled from a newspaper, which evidently escaped the proofreading editor's attention:

- (15) Dann war, ein geraumes Stück vor der Pause, ein Tief erreicht, von dem man sich den 'Theatermacher' nur schwer zu erholen erwartete, doch Bernhard schaffte es und führte ihn brillant in die Offenheit des Schlusses. (*Tiroler Tageszeitung*, 19. Aug 1985, p. 7, emphasis mine)  
 [Then was ...a low point reached, from which one the 'Theatermacher (=title of the play reviewed)' only hard to recover expected...]

Here it is not the logical subject of the infinitival clause ('der "Theatermacher"') which has been fronted but its prepositional object ('von dem Tief'). Not surprisingly, the corresponding declarative clause is a crass violation of the grammatical norm:

- (16) \*Man erwartete den 'Theatermacher' sich nur schwer von diesem Tief zu erholen.  
 [One expected the 'Theatermacher' only hard from this low point to recover]

The main reason why example (15) is tolerated is the clumsiness of the supposedly 'correct' alternatives:

- (17a) ... ein Tief, von dem man erwartete, daß sich der 'Theatermacher' nur schwer erholen würde, ...  
 (17b) ... ein Tief, von dem man erwartete, daß sich der 'Theatermacher' nur schwer von ihm erholen würde, ...  
 (18a) ... ein Tief, von dem sich - wie man erwartete - der 'Theatermacher' nur schwer erholen würde, ...  
 (18b) ... ein Tief, von dem sich - so erwartete man - der 'Theatermacher' nur schwer erholen würde, ...

Unlike the fused construction with its blurred clause boundary the sentence fragments in (17) are obviously three-layered: a finite object clause is embedded into a relative clause which in turn modifies its head noun in the main clause, and complicating matters further, the relative element is a fronted constituent of the object clause. In example (17) it is not clear whether the head noun of the relative clause ('Tief') should be represented in the relative clause itself by a pronominal copy - a relativisation strategy totally alien to standard German but conducive to understanding in the present instance (cf. (17b)) - or not (cf. (17a)). As

- in der Fabrik/schon den ganzen Tag im Garten/etc. arbeitet' [the women who (as) I believe in the factory/already the whole day in the garden/etc. works].

for the parenthetical clauses in (18), it is not always easy to find a contextually appropriate position for the necessary intonational break, and some verbs are more difficult to use in parenthetical clauses than others. In view of the high price to pay for grammatical correctness, it is understandable that a writer should choose the easy way out and spontaneously produce the fused infinitival construction illustrated in the original quotation. This is made easier by the fact that there is a set of perfectly regular infinitival constructions which, if embedded into a relative clause, resembles the *ad hoc* - formation quite closely in surface structure (cf., e.g., 'der Mann, von dem man in diesen Tagen mehr zu erfahren hoffte' [the man about whom one in these days more to learn hoped]).

Owing to the marginal status of the German construction in all syntactic environments, it is difficult to further support the present argument through elicitation experiments, corpus analysis or the systematic study of the diachronic evidence. But there is some evidence from Scandinavian languages worth mentioning in the present connection. Ureland (1973: 15-19) claims that *believe*-type raising (with bare infinitives) is acceptable in Swedish in declarative clauses only if the element raised into the matrix clause is a reflexive pronoun<sup>13</sup> but goes on to argue that if the construction is used in relative clauses of the type studied here this constraint ceases to be operative. Consider, for instance, Ureland's examples with the matrix verb *säga* / to say:

- (19a) Palme sade sig göra en resa till USA som privatperson.  
 [P. said himself make a journey to the USA as a private person]  
 (19b) Mannen som Peter sade vara sjuk hette Gustav.  
 [The man whom Peter said be sick was called Gustav.]  
 \*Peter sade mannen vara sjuk.

As in the cases discussed so far, it is probably not wrong to link the increased acceptability of the fused infinitival construction to its use in a syntactic environment requiring the extraction of a subject from a complement clause.

Informant judgments on analogous examples in other Scandinavian languages (e.g. Danish\* *Peter sagde manden at være syg* vs. *den mand som Peter sagde at være syg*) show an increase in acceptability in the direction predicted, although the question of whether the relative clauses is as unproblematical as Ureland claims for Swedish, or whether indeed other Swedish informants would agree with Ureland's judgment of his examples, is a matter meriting further investigation.

<sup>13</sup> Again, the case for a functional explanation of the structures in question is being put to the test here, as the above-mentioned anonymous reviewer has pointed out. Is the fact that only reflexive objects are found an arbitrary constraint of Swedish syntax, or are we dealing with another instance of the grammaticalisation of a crosslinguistically observable statistical tendency with a possible functional motivation? This possibility is not as remote as it seems at first sight because corpus data for some matrix verbs suggest that there is a preference for reflexives after raising verbs in English, as well

#### 4. Towards the grammaticalisation of a functional principle in the Romance languages

Examples such as (2) above suggest that the functional principle shown to affect the distribution of *believe*-type raising in English and German has been fully grammaticalised in French. The fused infinitival construction is grammatical where it is useful, and ungrammatical where it can easily be replaced by a finite object clause. Closer inspection of the available literature (for French itself, cf. in particular Harmer 1979: 149-50, Kayne 1981) shows that the Romance languages have indeed moved furthest toward the grammaticalisation of the functional principle but that areas of uncertainty and divided usage remain. In the abstract, for example, the Italian evidence matches the French:

- (20a)\* Anna crede Giovanni essere stato lì.  
 [=Anna crede che Giovanni sia stato lì/Anna believes that Giovanni has been here]  
 (20b) Chi crede Anna essere stato lì?  
 (20c) E' Giovanni che Anna crede essere stato lì.

Skytte's (1978) corpus-based study of the 'costrutto dotto di accusativo con l'infinito' allows us to assess to what extent a fairly clear grammaticality contrast at the level of competence or Saussurean *langue* is implemented in performance or *parole*. Not unexpectedly, Skytte finds the relative-clause examples to be the 'verisone più popolare' of an otherwise very formal construction and explains its use as a result of a desire 'di evitare accumulazione di proposizioni subordinate, l'una inserita nell'altra e in molti casi ripetizione della congiunzione *che*' (1978: 302).<sup>14</sup> Of her citations in declarative clauses she notes that 'verb-object-infinitive' sequences are much rarer than 'verb-infinitive-object' ones, which is reminiscent of the English data, where one motivating factor behind the use of raising also was the iconicity factor (i.e. the 'verb-infinitive' sequence being a good iconic representation in syntax of the hierarchical relationship obtaining between the two verb phrases).<sup>15</sup>

The linguistic literature for Spanish is contradictory. Some data discussed in Subirats-Rüggeberg (1987: 26-7) would seem to suggest that raising in declarative clauses is possible in this language.<sup>16</sup> By contrast, Boon claims that *believe*-type raising typically found in the written language and that its use is subject to functional constraints:

Im Spanischen wird der 'accusativus cum infinitivo' namentlich nach den 'verba

<sup>14</sup> "... to avoid the piling up of subordinate clauses, one inserted into the other, and in many cases the repetition of the conjunction ..."

<sup>15</sup> For an explicit comparison of *believe*-type raising in English and Italian see Graffi 1981, esp. pp. 103 and 110.

<sup>16</sup> However, the sentences in question were rejected outright by a small group of native speakers consulted informally.

sentiendi et declarandi' in der Schriftsprache häufig gebraucht, um Anhäufung von durch *que* eingeleiteten Nebensätzen zu vermeiden. (1980: 232) ("... raising after verbs of mental perception and saying is commonly used in the written language to avoid the piling up of subordinate clauses introduced with *que* ...")

This can be read as a very general endorsement of the functional principle argued for here, although it is not clear precisely what type of subordinate clause(s) Boon has in mind. More specific support comes from a recent reference grammar: 'in written language, an infinitive may appear with non-co-referential subjects with verbs of saying and believing in relative clauses, presumably as a way of avoiding two *ques*' (Butt/Benjamin 1988: 252). In sum, one can say that while the Spanish data certainly cannot be construed as counter-evidence more systematic elicitation experiments and corpus-based studies are needed to clarify the picture.<sup>17</sup>

The scant literature on *believe*-type raising in Romanian (Joseph 1983: 171, Cornilescu 1984, esp.p. 340) does not allow any definitive conclusions, but consultation with native-speaking informants reveals a handful of fairly safe cases of the functional principle at work:

- (21a)\* Cred (pe) Ion a fi cel mai destept.  
 [=Cred, ca Ion e cel mai destept. /I believe that John is the cleverest (one).]  
 (21c) Ion, pe care-l cred (a fi) cel mai destept, ...  
 [John, whom I believe to be the cleverest (one), ...]

*Cred* in the above examples could be replaced with *stiu*, *presupun*, *banuiesc* (=know, presuppose, suspect), though not with verbs of saying and thinking such as *ma gindesc* and *ma indoiesc* which are reflexive.<sup>18</sup>

The one major Romance language in which the grammaticalisation of the functional principle does not seem to have proceeded very far is Portuguese, where, on the one hand, there is the inflected 'personal infinitive' (*infinito pessoal*) - a constructional option not shared by any of the languages discussed so far (cf. example (22) below) - and where, on the other hand, *believe*-type raising is still widely used in declarative clauses, at least in certain styles (cf. examples (23a) and (23b) below). It is possible to construe sentences which native-speaking informants will judge like the corresponding structures in the other Romance languages (cf., e.g. example (24), but whether such cases are really representative of the grammatical norm of modern Portuguese in this area is another matter:

- (22) ele diz sermos pobres  
 [he says we are poor]

<sup>17</sup> Skydsgaard's massive corpus-based study on the infinitive in Spanish contains a few authentic examples with, among other verbs, *considerar* and *demonstrar*, in which it is indeed the relative clause which seems to favour the use of raising.

<sup>18</sup> The examples are due to Carmen Ardelean and Zoia Manolescu, Bucharest.

- (23a) ele declarou ser este livro de Pedro  
[he declared be this book of Peter]  
ele confessou ser ela sua mulher  
[he has confessed be her his wife]<sup>19</sup>
- (23b) O Pedro crê que a Maria é inteligente.  
[The Peter believes that the Maria is intelligent]  
O Pedro crê ser a Maria inteligente.  
[The Peter believes be the Maria intelligent]  
Quem é que o Pedro crê ser inteligente?  
[Who is that the Peter believes be intelligent?]  
Quem é que o Pedro crê que é inteligente?  
[Who is that the Peter believes that is intelligent?]  
A Maria que o Pedro crê ser inteligente, ...  
[The Maria, who the Peter believes be intelligent]  
A Maria, que o Pedro crê que é inteligente, ...  
[The Maria who the Peter believes that is intelligent]
- (24) \* O Pedro pensa ser a Maria inteligente.<sup>20</sup>  
[=O Pedro pensa que a Maria é inteligente./  
The Peter thinks that the Maria is intelligent]  
Quem é que o Pedro pensa ser inteligente?  
A Maria, que o Pedro pensa ser inteligente, ...

### 5. Conclusion

*Believe*-type raising constructions in three Germanic (English, German, Swedish) and five Romance languages (French, Italian, Spanish, Romanian, Portuguese) have been shown to be sensitive to a crosslinguistic functional constraint. Although marginal patterns of complementation in all languages under consideration, such raising constructions tend to cluster in syntactic environments in which they produce precisely definable kinds of structural simplification with the degree of implementation of this functional principle ranging from statistical preference (English) to near-complete grammaticalisation (French). A functional approach of the type proposed here cannot explain all the facts to be accounted for in the description of *believe*-type raising structures, but it complements other accounts in areas in which they are deficient. Both diachronic-typological and formalist explanations run into difficulties when it comes to explaining the surprising parallels between languages that are only distantly related historically.

Hawkins (1986: 75-85), for example, argues that the loss of inflectional endings

<sup>19</sup> Examples (22) and (23a) are from Dunn (1928: 480, 497).

<sup>20</sup> Note that “\* O Pedro crê a Maria ser inteligente” - an iconically ill-motivated ordering occasionally attested in the Italian data surveyed above - is ungrammatical in Portuguese. This is another instance of a functionally motivated statistical preference in one language congealing into a firm grammatical rule in another one.

in late Old English set in motion a drift that has resulted in a looser match between surface syntax and logical structure in English than in German and thus created a favourable environment for the spread of raising of all types. Since present-day Romance languages are also of the analytical type, this argument could be extended to cover most of the facts presented above (though, of course, not the contrasts apparent among the analytical languages themselves). However, the sharply different status of raising in synthetic languages shows that the link between syntactic type and the presence or absence of raising is untenable. In Russian, for example, raising is non-existent even after perception verbs (see Brecht 1974), so far supporting Hawkins' view, while in Latin and Greek it is almost as common as in - prototypically analytical - English.<sup>21</sup>

Generativist and related accounts, on the other hand, normally present arguments based on a small selection of invented data and therefore fail to do justice to the many instances of uncertain and divided usage, to informants' contradictory judgments on context-free examples,<sup>22</sup> to the soft edges grammatical categories within a single language and between the grammars compared. The recourse to functional and discourse-based explanatory parameters in the description of grammatical facts is necessary in such a situation because it allows a more adequate treatment of such problematical areas, and - most importantly - also helps to explain why certain logically possible grammatical orderings are not attested.

It is finally, worth recalling that there is probably a crosslinguistically valid hierarchy of matrix verbs allowing raising, with verbs of perception at the top, followed by verbs of causation and volition, and verbs of saying and thinking at the bottom. Nonfinite verb forms naturally combine with matrix verbs of the first-named three classes because a perceived event takes place simultaneously with the act of perception, and caused and wished-for events follow causation or volition, so that the elaborate tense and aspect marking of a finite verb is redundant. Furthermore the ambiguous status of the noun phrase following the matrix verb - object in the higher clause or subject in the lower - often reflects indeterminate relations in the real world. In perception, for example it is frequently not clear whether the focus is on an event in its totality, or on the agent performing an action. Similarly, many causative verbs can be represented as semantically two-place or three-place predicates (e.g. *protests forced a tax-cut* vs. *protests forced the government to cut taxes*), and so on. For verbs of saying and thinking, on the other hand, raising must be expected to be rare, because as far as tense, aspect and

<sup>21</sup> That, in view of the inconclusive nature of the factual evidence, Hawkins' argument can be turned around quite easily is, incidentally, shown by Ureland (1973: 299-300), who considers the loss of inflection to be the reason for the *disappearance* of *believe*-type raising in the Romance languages rather than the precondition for its spread, as Hawkins does.

<sup>22</sup> Among the many factors influencing informants' judgments that have not been considered in detail in the present paper are the nature of the matrix-clause subject (indefinite pronoun or lexical NP), the presence or absence of a nominative/accusative distinction in the relative pronoun, the easy availability of alternative patterns of complex transitive complementation for certain matrix verbs, or the importance of Latin as a stylistic and grammatical model during the development of written standards in the European vernaculars.

mood in the subordinate clause are concerned little can be predicted from the main clause, and the subject of the subordinate clause is not very likely to be reanalysed as a constituent of the main clause in cognitive and semantic terms. If for the data dealt with here informant judgments have frequently been so inconsistent, and the data themselves so unorderly, this may be due to fact that we have been dealing with phenomena at the very bottom of a natural implicational scale.

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