

To and the construction of endpoints

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Abstract: In this paper, a monosemic utterer-centred approach to the analysis of English prepositions is advocated. More accurately, three different uses of the English preposition *to*, in which this marker participates in the construction of an endpoint, for instance, a result or a consequence, are examined. The hypothesis defended here is that *to* is the trace of an operation of location between two terms. I will try to highlight the properties of those terms so as to grasp the nature of the operation of location marked by *to*. To do so, the tools developed in the theoretical setting of the Theory of Enunciative Operations will be referred to.

Key words: semantics, English language, prepositions, utterer-centred approach, *telos*

It is well accepted that the preposition *to* generally introduces an element which can be considered as an endpoint. This can be observed in the three utterances below:

- (1) A young mum was brutally knifed **to death** just moments after taking her five year-old daughter to school yesterday.
- (2) The purveyor also attempted to reason with the King but **to no avail**.
- (3) **To my surprise**, some of the customers greeted the barman in Gaelic.²

Indeed, it is possible to paraphrase (1) to (3) by (4) to (6), in which the fact that the prepositional phrase denotes a result or a consequence is made explicit:

- (4) A young mum was brutally knifed just moments after taking her five year-old daughter to school yesterday. **This resulted in her death.**

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² All the utterances analysed in this paper are authentic. Most of them can be found in the British National Corpus.

- (5) The purveyor also attempted to reason with the King, but **it gave no result.**
- (6) Some of the customers greeted the barman in Gaelic, **which surprised me.**

Though the uses of *to* illustrated in (1) to (3) all lead to the construction of a result or a consequence, it is rather obvious that these uses are very different, on both semantic and syntactic levels. Indeed, (1) implies that the referent of *a young mum* undergoes a change of state during the process denoted by the subject-predicate relation. *Death* thus refers to the state of this referent once the relation has been validated. In (2), *no avail* can be understood as the result of, or more accurately, the absence of a satisfying result to the validation of the predicative relation. In this case, there is no implication that any participant of the relation has undergone a change of state. Rather, what is suggested is that the referent of *the purveyor* missed his goal, which was to convince the referent of *the King* to change his mind. Eventually, in (3) the event denoted by the subject-predicate relation seems to cause the person referred to by the possessive *my* to undergo a psychological reaction: *surprise*. So, in (3), like in (1), someone undergoes a change of state, but this is not necessarily a participant of the subject-predicate relation.

Interestingly enough, only utterance (1) is traditionally analysed as a resultative construction. This is due to the fact that resultative phrases can only be predicated of direct objects of transitive verbs or of the sole argument of unaccusative verbs, which is, in fact, a deep object (see Levin & Rappaport-Hovav 1995), following the DOR (Direct Object Restriction) (see Simpson 1983). Only utterance (1) matches this definition, since there is no change of state in (2), and in (3), the entity that undergoes a change of state is not an argument of the subject-predicate relation.

Obviously, there are semantic differences between the utterances above. Syntactic disparities are also observed. In (1), *to death* is traditionally analysed as an object-related adjunct denoting a result. In (2), *to no avail* is a sentence adjunct, and one can notice that it can often be separated from the predicative relation by the conjunct *but*. In (3), *To my surprise* is considered by Quirk *et al.* 1985 as a disjunct which expresses reaction to a stimulus. On a syntactic level, the prepositional phrase is part of the subject-predicate relation only in resultative sentences (illustrated in (1)).

This paper consists in an attempt to demonstrate that in spite of these considerable differences, the functioning of *to* remains the same – or, more accurately, that there is no variation in the operation conveyed by this marker – and that the disparities pointed out here are the result of the interactions of this marker with the

semantic properties of the context, and with the syntactic position of the prepositional phrase. The approach advocated here will thus consist in the observation of the contexts in which these three uses of *to* appear, in an attempt to explain how these elements interact with the prepositional marker in the construction of the meaning of the utterance.

1. Theoretical setting

The reader will have understood at this point that this paper advocates a monosemic analysis of *to*. However, this preposition is not to be regarded as having a meaning in the traditional sense. Rather, it will be analysed as the trace of abstract cognitive operations that will be described below.

This paper is set in the theoretical framework elaborated by Culioni: the 'Theory of Enunciative Operations' which is an utterer-centred approach, developed in France since the end of the 1960's. Culioni defines language as an uttering activity involving the production and interpretation of abstract forms. According to his theory, there is no isolated term, each term being located in relation to another term, which is itself located in relation to a third one, and so on, until the original location is reached. This absolute origin of locating operations is known as the situation of utterance. It involves two coordinates: the enunciator (S_0), that is to say the uttering subject, and the time of uttering (T_0). The situation of utterance is generally referred to as Sit_0 ($S_0; T_0$). This implies that an utterance can only be interpreted insofar as it is endorsed by an enunciator (S_0) in a specific context (T_0).

Another concept that is central to the Theory of Enunciative Operations is that of notion: "A notion is a complex system of representation organizing physico-cultural properties of a cognitive nature. The notion exists before words enter into categories; it is a generator of lexical units."³

As a consequence, speakers do not have direct access to notions. Neither do linguists. Nonetheless, notions can be encountered in speech in the form of occurrences, which can be defined as exemplars of notions, as explained below:

An occurrence may then be considered as an enunciative event that carries out two forms of delimitation on the notion: a **quantitative delimitation** involving its spatio-temporal location, that is to say its existence, and a **qualitative delimitation** which is related to its properties, its nature. The occurrences associated with a notion constitute a **class of occurrences** that correspond to the extension

³ Chuquet, J., Gilbert, E. and Chuquet, H. (eds), *English definitions of key terms in the Theory of Enunciative Operations*, (R. Flintham and H. Chuquet, English Translation), available online: http://www.sil.org/linguistics/glossary_fe/defs/TOEEN.asp.

of that notion. (*English definitions of key terms in the Theory of Enunciative Operations*)

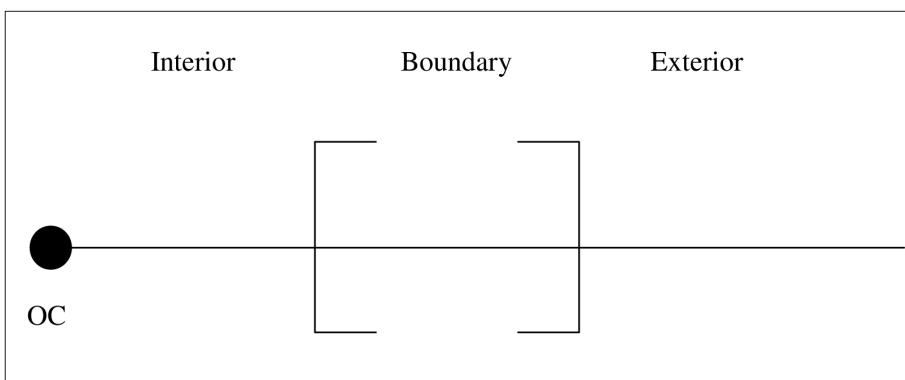
These occurrences are the terms that are located in relation to one another. Therefore, if an occurrence X is located in relation to an occurrence Y, the relation between the located element (which corresponds to Langacker's TR) and the locator (which corresponds to Langacker's LM) can involve their quantitative delimitations, their qualitative delimitations, or both:

- **Qnt (X) \subseteq Qnt (Y) and/or Qlt (X) \subseteq Qlt (Y);** which reads the quantitative and/or qualitative delimitation(s) of X is located in relation to the quantitative and/or qualitative delimitation(s) of Y.

The hypothesis developed in this paper is that prepositions are themselves locating operators. The schematic form presented above is thus equivalent to:

- **Qnt (X) prep(TO) Qnt (Y) and/or Qlt (X) prep(TO) Qlt (Y)**

The nature of the locating operation marked by *to* must then be defined. In the theoretical framework of the Theory of Enunciative Operations, there are three distinct locating operations, which are **identification**, **differentiation** and **disconnection**. These three operations originate in the topological representation of a notion, in the form of a notional domain:



- (1) it [the notional domain] has an **interior**, induced by a process of identification (any x_i is identified to any x_j) so that there is no divide in the area, no first point, no last point: it is open. This open area is **centred**, for it contains an organizing centre (prototype) [...]
- (2) it has an *exterior*. If interior values are informally glossed as 'truly p', 'truly representative of p' (the use of the gloss should be accounted for, but this will be deliberately left out), exterior

values can be described as ‘truly *non-p*’, ‘totally different from *p*’ ‘having no common property, not even the slightest with *p*’.

(3) if we are compelled (or if we choose) to discern an occurrence x_m from an occurrence x_n of a notion *p*, i.e. if the two occurrences are inhomogeneous and evince altered quality states of a certain property *p*, then we set up a divide so that we get, on the one side, an open area (whether it be the interior or the exterior) and, on the other side, a **boundary area** induced as follows. Let us close the interior by setting up quality occurrences verging on *non-p*, but still belonging to the *p-area* (the gloss would roughly run as ‘*p* to some extent, whatever this may be, however slight, provided it is kept on this of *p*’). Let us now close the exterior: ‘*non-p* to some extent, whatever this may be, however slight, provided it is kept on this side on *non-p*’. In other words, we get, on the one hand, ‘not truly *p*’, on the other hand, ‘not truly *non-p*’. (Culioli 1990: 70)

As for the process of construction of an occurrence of a notion *p*, it is described as follows by Culioli:

Starting from a notion (**P**), characterized as mass (hence its symbolization by “**being-P**”, in an attempt to reflect the strictly qualitative, predicative character of notions), one then fragments the notion through an abstract operation of individuation, in order to construct occurrences of that notion when producing or interpreting utterances (translation from *English definitions of key terms in the Theory of Enunciative Operations*)

“This operation is threefold:

- it allows transition from an undividable quality to a fragmented one;
- it allows the construction of average occurrences;
- it allows the construction of differentiated occurrences [...].

Therefore, from a notion (QLT), one can fragment (QNT) the notion, but through the process, they must insert qualitative differences. (our translation)⁴

⁴ « Partant d'une notion, P pour fixer les idées, qui a la propriété d'être insécable (c'est pour cela qu'on la désigne souvent par la notation « être-P », qui cherche à capter ce caractère prédictif et strictement qualitatif des notions), on va, par une opération abstraite d'individuation, fragmenter la notion, de sorte qu'on puisse construire des occurrences de cette notion dans la production / reconnaissance d'énoncés (opérations d'extraction, puis de fléchage). Or, cette opération de fragmentation est triple :

- elle nous permet de passer d'une Qualité insécable à une Qualité fragmentée;
- elle permet de construire des occurrences quelconques ;
- elle permet de construire des occurrences différenciées [...].

On voit que, partis d'une notion (QLT), nous avons fragmenté (QNT), mais, ce faisant, nous avons été contraints d'introduire des distinctions qualitatives (QLT) ». (Culioli 1999: 82-83)

The qualitative differences mentioned in this quotation will be noted Qlt to avoid confusion with undividable quality (QLT). The construction of an occurrence from the notion can then be represented: $QLT \rightarrow QNT \rightarrow Qlt$.

If the process is not interrupted before it has reached its endpoint, then the occurrence is quantitatively and qualitatively stabilized, insofar as it has acquired existence (QNT) as well as individual properties (Qlt).

2. Hypotheses

Previous analyses in utterer-centred approaches describe *to* when used as a particle, as the trace of an operation of prospective validation⁵. They are not in contradiction with studies in cognitive linguistics as well as in formal semantics. Indeed, Tyler and Evans propose the proto-scene for *to*:

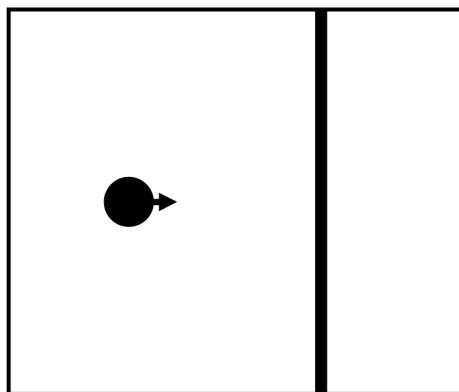


Figure 6.3.: The proto-scene for *to*

The linguistic behaviour exhibited by *to* and *for* discussed above, suggests that *to* and *for* both designate TRs oriented with respect to LMs, but the status of the TR and LM associated with the respective particles is distinct. A consequence of these differences in status of the TRs and LMs is a difference in the functional elements associated with each particle.

We propose that in the proto-scene for *to*, *to* denotes a spatial relation in which an oriented TR is directed toward a highlighted LM. Within this spatial configuration, the highlighted status of the LM makes it readily interpretable as a **primary target or goal**. Hence, the functional element associated with *to* is the LM as goal. Figure 6.3. represents the proto-scene for *to*. The shaded sphere

⁵ In Bouscaren, J., Chuquet, J. et Danon-Boileau, L. (1988 : 48), Souesme, J. C. (1992: 331) or Khalifa, J. C. (1999: 54).

represents the TR. The arrow represents the orientation. The vertical line represents the LM. Note that the LM is in bold, indicating that the LM is profiled. The functional element associated with the proto-scene is that the LM constitutes the primary goal. (Tyler & Evans 2003: 148)

Tyler and Evans, whose work is set in the framework of cognitive linguistics, analyse the term following *to* – the LM – as a “primary goal”, which implies that this term is a *telos*, an endpoint that is likely to be reached.

As for formal semantics, Zwarts (2005) states that telic prepositions, such as *to*, transfer this “property to the verbal domain”, which implies that verbs followed by a *to-PP* (Prepositional Phrase) acquire boundedness.

This study, though consistent with those works, differs insofar as it relies on concepts that are not based on the primarity of space. Therefore, I will not resort to spatial notions to describe the functioning of *to*, nor will I use the concept of metaphor as a tool for the analysis of the marker, as I will not assume that its non-spatial senses are derived from its spatial sense. All the uses of the marker are thus considered even and they equally deserve exhaustive analysis.

In the framework within which I choose to set the present work, *to* can be considered as the trace of an operation of disconnection between the two occurrences it links, but this disconnection undergoes a process of gradual elimination. In other words, *to* establishes a relation of disconnection between X and Y, but with a strong tension towards identification.

I will thus consider that the functioning of *to* is stable, and that the differences that appear between the various uses of the marker are related to the syntactic and semantic properties of the elements of the context. I choose here to focus on three uses in which *to* introduces an endpoint, for this will enable the highlighting of the mechanisms that lead to the construction of close, yet different, types of relationships between the terms connected by the marker.

3. The resultative sense

Resultative constructions have been thoroughly analysed within the fields of Generative and Construction Grammars. Levin and Rappaport-Hovav 2004 provide a study as well as an extensive overview of the analyses of the phenomenon. In this paper, the authors highlight the notion of event-complexity focusing on its semantic characteristics. They examine different types of English resultatives (involving bare results, as well as prepositional results), providing evidence for common semantic properties. As this study does not aim

at examining all types of resultative constructions in contemporary English, but to provide a comprehensive analysis of the marker *to*, I will focus only on *to*-resultatives.

Interestingly enough, the terms connected by *to* seem to have particular properties, beginning with the fact that, in the majority of the utterances examined, Y is a compact occurrence:

- (7) Just as they planned, the couple set upon the unfortunate woman the following day, and beat her **to Ø death** before pushing her body into the shallow pool.
- (8) Those that do escape, or are released by compassionate fishing captains and crew, are often caught again, and the same dolphins may often be chased **to Ø exhaustion** and encircled with tuna nets many times each fishing season.
- (9) For example, the thousands of men whom He fed **to Ø satiety** with a basketful of bread and fish were so eager to proclaim Him King that He had to hide Himself from them.

The compact behaviour⁶ of an occurrence can be described as being only qualitative, insofar as the notion denoted by Y can only be apprehended *via* its embodiment within a support, which appears explicitly in the paraphrases (10) to (12) below. This is what corresponds to the QLT operation of construction of the occurrence:

- (10) Just as they planned, the couple set upon the unfortunate woman the following day, and beat her **until she died** before pushing her body into the shallow pool.
- (11) [...] the same dolphins may often be chased **until they are exhausted** and encircled with tuna nets many times each fishing season.
- (12) [...] the thousands of men whom He fed **until they were satiated** with a basketful of bread and fish [...]

Indeed, (10) to (12) make it obvious that once the subject-predicate relation is validated, X, the object in utterances (7) to (9), acquires the property denoted by Y, which means that the validation of the occurrences of *beat*, *chase* et *feed* in (7) to (9) also implies the realisation of the relations *<the unfortunate woman – be dead>*, *<the dolphins – be exhausted>* and *<the men – be satiated>*.

A similar comment applies to utterances in which the occurrence Y has a discrete (countable) behaviour:

⁶ Occurrences can also behave in a discrete or in a dense way. When they behave in a dense way, they can be described as being mostly quantitative (QLT → QNT), when they behave in a discrete way, they can be described as having a quantitative and a qualitative delimitation (QLT → QNT → Qlt). I will go back to these notions later.

(13) Mash the avocado **to a pulp** and stir in the oils.

(14) Mother, I asked you to take him to a cricket match, not to start hacking the poor chap's rosebushes **to pieces**.

In utterance (13), the referent of *the avocado* acquires the properties denoted by *a pulp*. In (14), the referent of *the poor chap's rosebushes* actually changes shapes to become *pieces*. In (7) to (14), X becomes Y with the validation of the subject-predicate relation.

As a consequence, it appears that X has two qualitative delimitations in these utterances:

- a first qualitative delimitation, an initial state (Qlt_1) in which X does not have the property denoted by Y (*she is alive, the dolphins are not exhausted, the men are not satiated*);
- a second delimitation, a final state (Qlt_2), in which they have acquired the property denoted by Y (*she is dead; the dolphins are exhausted; the men are satiated*).

This can be expressed as follows: $Qlt_1(X) \omega Qlt_2(Y)$ ⁷; $Qlt_2(X) = Qlt_1(Y)$. Here, X corresponds to the direct object of the verb in an active context and to its subject in a passive context. Y is the noun phrase that is introduced by the preposition *to*.

In these utterances, X becomes Y, or acquires the properties denoted by Y. Both processes stabilize the subject-predicate relation. Indeed, the verbs *beat*, *chase* and *feed* in (7) to (9) would have an activity interpretation (see Vendler 1957) if not for the presence of the prepositional phrases *to death/to exhaustion/to satiety*. The same is true of *mash* and *hack* in (13) and (14):

(15) Just as they planned, the couple set upon the unfortunate woman the following day, and **beat her for hours** before pushing her body into the shallow pool.

(16) Those that do escape, or are released by compassionate fishing captains and crew, are often caught again, and the same dolphins may often be **chased for days** and encircled with tuna nets many times each fishing season.⁸

With the *to*-phrase, in (7) to (9), the verbs acquire an accomplishment reading. This implies that they have a *telos*, an endpoint which is constructed by the presence of the preposition-phrase, and which corresponds, in fact to the identification of X and Y performed by the interaction of *to* with the validation of the predicative relation. Therefore, it can be assumed that the prepositional phrase provides

⁷ The ω symbol reads “is disconnected from”.

⁸ Adding a *for*-phrase does not work well in (9), because of the presence of *with a basketful of bread and fish*, which implies that the feeding is over when everything has been eaten.

the verb with a qualitative delimitation: not only does an occurrence of the notion it denotes actually take place, but this occurrence also has an endpoint, it triggers specific consequences.

Two phenomena are consistent with this hypothesis. First, it appears that when adverbs such as *nearly* or *almost* are inserted in the utterance, X does not acquire the property denoted by Y, and as a consequence, the event referred to by the verb seems somehow incomplete. This is visible in (17) and (18):

(17) **The fans nearly beat me to death** and he didn't even see it!

(18) Mr. Pearson, where were you while **this young girl was almost starved to death?**

In (17), the referent of *me* was beaten, but did not die. In (18), the referent of *this young girl* was indeed starved, but, again, this did not result in her death. In both examples, the identification of X and Y, that is to say, the passage of the referent of X from life to death remains purely virtual.

Secondly, the presence of the prepositional phrase can add intensity to the occurrence of the verb. This can be observed in utterances (19) and (20):

(19) A woman tried to flee down an alleyway and they caught her and **beat her to death.**

(20) A woman tried to flee down an alleyway and they caught her and **beat her so badly that she died.**

The paraphrase (20) makes the intensifying quality of the prepositional phrase apparent with the use of the gloss *so badly that*. This remark also applied to (17) and (18), in which, though the identification of X and Y is not realized, it is present as a representation of the violence of the events denoted by the verbs *beat* and *starve*.

However, it has to be taken into account that it is not only the prepositional phrase that provides intensification to the event denoted by the verb, but its interaction with it, and the possible gap between the properties of the process referred to by the verb and the identification of X with Y. Indeed, not all occurrences of *beat* lead to the death of the being that gets beaten. As a consequence, an occurrence of *beat* which actually leads to the death of the referent of its direct object is a particularly violent one.

In fact, in other contexts, in which the identification of X and Y is construed as more standard in relation to the properties of the process the verb refers to, intensity does not arise, as can be observed in (21):

(21) He has been **nursed back to health** by staff at a seal sanctuary in Cornwall.

In (21), the identification of X to Y, that is to say, the fact that the referent of *he* acquires the property *be healthy* via the validation of the subject-predicate relation does not create an intensifying effect, as this identification was undoubtedly the goal aimed at by the agent(s) who initiated the event denoted by the verb *nurse*. In this case, the occurrence of the notion denoted by the verb does not appear as a particularly intense occurrence of this notion, but as a felicitous one, since its result is fitted with the properties associated with the notion. Nonetheless, it is still possible to analyse the prepositional phrase as providing the verb occurrence with a qualitative delimitation, since the result arrived at through the subject-predicate validation receives positive valuation.

Eventually, the hypothesis that the prepositional phrase can be analysed as stabilizing the subject-predicate seems to be corroborated by syntactic analysis. As mentioned above, traditional grammar analyses the prepositional phrase as an object-related adjunct (see Quirk *et al.* 1985), which implies that the entity undergoing the change of state corresponds to an argument of the verb, and which makes such utterances comparable with complex transitives, in which the secondary predication occurs as a result of the validation of the predicative relation. Of the three uses of *to* analysed in this paper, the resultative use is the only one in which the prepositional phrase is constructed as an obligatory argument of the verb.

The analysis of *to*-resultatives corroborates the hypothesis advocated in this paper, that is to say that *to* can be analysed as the trace of an operation of disconnection between X and Y, with a tension towards the identification of those two occurrences. Here, the passage of the qualitative delimitations of X and Y from disconnection to identification occurs through the validation of the subject-predicate relation. Indeed, I have shown that the verb and the prepositional phrase are closely related, on a syntactic as well as on a semantic level.

4. Unsatisfying results

This is somehow different from what happens when Y refers to the absence of result or to an unsatisfying result, in utterances such as (2). Indeed, in those examples, Y is not analysed as an argument of the verb. On the contrary, the prepositional phrase is a sentence adjunct. It is visible in (22) and (23), in which the prepositional phrase is separated from the subject-predicate relation by the conjunct *but* and/or by a comma:

(22) The chariot moves back and forth, he wrote, but to no purpose.
 (23) He told me that he had been asking for them, **to no avail**.

Interestingly enough, Y is always modified by a negative quantifier:

(24) Jesse Jackson and Bill Bradley, New Jersey's influential senator, campaign against him, **to zero effect**.
 (25) Again we had a double bed, and I made one or two tentative sexual advances, **to no effect**.
 (26) Both the Department of Health and the Royal College of General Practitioners have signalled for years that good general practice should not ignore the microchip, but to little effect.

Indeed, this negative quantifier is what triggers the result interpretation. In utterances involving similar terms, but with no negative quantifiers, the prepositional phrase is interpreted as expressing the goal, the purpose with which the subject initiates the event denoted by the verb. This is visible in (27), in which the *effect* mentioned is not interpreted as a result, but as a purpose, which is made explicit in the gloss (28):

(27) The “eminent doctors” had given evidence in the trial **to the effect that it was acceptable to “invoke a regime of starvation and sedation to quickly speed the demise of the handicapped child”**.
 (28) The “eminent doctors” had given evidence in the trial **aiming at showing that it was acceptable to “invoke a regime of starvation and sedation to quickly speed the demise of the handicapped child”**.

This shows that in these utterances, the prepositional phrase seems to be located in relation not to the subject-predicate relation but only to the subject, who initiates the event denoted by the verb with a specific aim, which can be reached or not. Indeed, the presence of a purpose is necessarily correlated with that of a source of subjectivity, to the presence of an animated being who has a particular goal.

I maintain here the hypothesis that *to* can be represented as the trace of operations of disconnection and identification between X and Y. In (27), indeed, there is a gap between the ‘eminent doctors’ and the *effect that it was acceptable* etc., since the validation of the subject-predicate relation *<The “eminent doctors” – give evidence>* does not guarantee that the intended effect will actually be reached.

The same is true of utterances such as (24) to (26), in which the co-utterer understands that the referent of the subject initiated the event denoted by the verb with a particular purpose, but missed their goal. Again the intended result was not reached. In both cases, there is a disconnection between X and Y.

Unlike what happens with resultative constructions, the preposition phrase does not build the endpoint of the event denoted by the verb. Indeed, utterances such as (29) and (30) do not imply that there was no occurrence of *thrash away* or of *call after them* validated:

(29) The mist also shrouded the fish and we thrashed away mightily, **to no avail.**

(30) She called after them **to no purpose.**

Thus, the intended effect is not reached even if the predicative relation is validated. This can be interpreted as evidence supporting the idea that the prepositional phrase does not work jointly with the verb, but is associated with its subject. This is confirmed by the fact that, in the British National Corpus⁹, all utterances involving *to no avail/effect/purpose* take animate subjects.

Again, it is possible to represent the relation marked by *to* thanks to the schematic form I proposed earlier. This time, the identification of X to Y does not occur jointly with the validation of the subject-predicate relation. On the contrary, it is located in relation to the subjectivity of a human being. This human being initiates an event in order to reach a specific purpose, which means that the predicative relation is identified to the goal, insofar as the event it refers to is considered as the means that will allow this goal to be reached. However, only the subject-predicate relation actually comes to existence. What the prepositional phrase denotes refers to an unattained result when it involves a negative quantifier, that is to say, something which has not come into existence, and in utterances such as (28), Y refers to a goal or a purpose, that is to say something which has not (yet) come into existence. Therefore, there is a disconnection between X and Y from the quantitative point of view, since X belongs to the domain of reality, while Y belongs to the domain of virtuality.

This can be schematized as follows: **Qnt (X) ω Qnt (Y); Qlt (X) = Qlt (Y).**

In this case, X is the predicative relation and Y is the noun phrase introduced by *to* and is traditionally analysed as a sentence adjunct. X and Y are disconnected as regards their quantitative delimitations, as X

⁹ <http://corpus.byu.edu/bnc/>

comes into existence, that is to say, it has a quantitative delimitation, whereas Y remains virtual, which means that it has no quantitative delimitation. Nonetheless, they are identified as regards their qualitative delimitations, as X is construed as the means to reach Y.

5. Emotional reaction

Finally, I would like to turn to another use of *to*, in which Y is also considered as the consequence of the event denoted in the subject-predicate relation. This use is illustrated in (31) and (32):

- (31) **To her surprise**, Uncle George's voice hailed her.
- (32) When my Dad died, the four of us realised, **to our horror**, that he hadn't left a will.

In utterances such as (31) and (32), the prepositional phrase is always separated from the subject-predicate relation, by the presence of commas in written texts, and by a pause in oral texts. Y always refers to a human being's temporary mental state. Indeed, in the British National Corpus, the most frequent terms are *surprise*, *horror* and *relief*. Those temporary mental states are all induced by what is denoted by the subject-predicate relation, as can be seen in the gloss between brackets:

- (33) Feeling his valise increasingly heavy, Paul trudged along; and after further enquiry found the door. Any kind of bed, by now, would have been welcome; but **to his relief** the woman who came to the inner closed door was clean, and her house had no odour of bugs (=he was relieved to see that the woman who came to the inner closed door was clean, and that her house had no odour of bugs).
- (34) **To their amazement**, there were also some interesting "side-effects"; many experienced relief from rheumatic pain, deeper sleep and a generally improved mental state. (= they were amazed to realize that there were also some interesting "side-effects"; many experienced relief from rheumatic pain, deeper sleep and a generally improved mental state.)

The majority of Y terms intrinsically convey the idea of a disconnection between the event referred to by the predicative relation and what is considered desirable or what is expected. This can be seen in the definitions below:

Surprise: an unexpected event, or the feeling **caused by something unexpected happening.**¹⁰

¹⁰ Cambridge Advanced Learners' Dictionary.

Horror: a strong feeling of alarm and dismay often mixed with disgust or disapproval. **It is caused by something which you find extremely unpleasant.**¹¹

Relief: a feeling of happiness **that something unpleasant has not happened or has ended.**¹²

These remarks echo the analysis that Leeman proposes for *A ma grande surprise* 'To my utter surprise' in French: « Un événement se produit et déclenche chez quelqu'un un certain état (le complément exprime donc la conséquence) en rompant une attente (le complément implique donc aussi une opposition) » (1987 : 230)¹³.

I have mentioned that the mental states appearing in Y position are always temporary. Indeed, (35) to (37) are authentic and perfectly acceptable, whereas (38) to (40) are somehow problematic¹⁴:

- (35) **To her delightg**, she discovered the perfect wedding present, a set of sheets and matching pillowcases, all edged with lace and stitched with rosebuds.
- (36) **To the joy of the audience**, the Greek miller allowed him to continue his shows, because he was a wise man and understood that, even if the strange projectionist belonged to the wrong church, without him and his movies, the mill would come to a stop again.
- (37) **To my sorrow**, I missed out personally on this one as I had been "grounded" at that period for various reasons.
- (38) * **To her happiness**, she discovered the perfect wedding present, a set of sheets and matching pillowcases, all edged with lace and stitched with rosebuds.
- (39) * **To the happiness of the audience**, the Greek miller allowed him to continue his shows, because he was a wise man and understood that, even if the strange projectionist belonged to the wrong church, without him and his movies, the mill would come to a stop again.
- (40) * **To my sadness**, I missed out personally on this one as I had been "grounded" at that period for various reasons.

¹¹ Collins Cobuild English Language Dictionary.

¹² Cambridge Advanced Learners' Dictionary.

¹³ "Something happens and triggers a particular mental state in someone (the conjunct expresses consequence) by breaking an expectation (thus, the conjunct also implies opposition)" (our translation).

¹⁴ In fact, (38) to (40) become acceptable if the noun is premodified by an adjective:

(i) **To her great happiness** she discovered the perfect wedding present, a set of sheets and matching pillowcases, all edged with lace and stitched with rosebuds.

(ii) **To my great sadness** I missed out personally on this one as I had been "grounded" at that period for various reasons.

Indeed, when comparing (41) to (43) with (44) and (45), it can be noted that only (44) and (45) involve the construction of an inherent property of the referent of *he*, whereas in (41) to (43), the adjective or past-participle refers to a temporary state:

- (41) He is delighted / ? He is a delighted man.
- (42) He is joyful / ? He is a joyful man.
- (43) He is sorrowful / ? He is a sorrowful man.
- (44) He is happy / He is a happy man.
- (45) He is sad / He is a sad man.

As for the properties of the subject-predicate relation in these utterances, it can refer to a dynamic event as well as to a state event, as can be seen in utterances (46) to (48):

- (46) To my amazement, **he covered his face with his hands and burst into tears.**
- (47) To his surprise, **she was trembling.**
- (48) To my pleasure and surprise, **Split is a beautiful place and is a real joy to walk around** (being Croatia's second largest urban centre and a very busy transit area – I hadn't expected it to be so nice).

In (46) and (47), *he covered his face [...] and she was trembling* are dynamic processes, but in (48), *Split is a beautiful place [...] is a state event.*

It is possible to insert a verb such as *see*, *find (out)* or *realize* in this utterance:

- (49) To my pleasure and surprise, I realize that **Split is a beautiful place and is a real joy to walk around** (being Croatia's second largest urban centre and a very busy transit area – I hadn't expected it to be so nice).

Those verbs are, indeed, very frequent in this context:

- (50) Somewhat **to his own surprise**, Harry **found** himself booking a single room, despite the exorbitant tariff, and following the prim receptionist as she led him to the door.
- (51) **To my horror**, I **realized** Quigley was crying.
- (52) **To her dismay**, Shiona **saw** that her aim had been off.
- (53) **To my astonishment**, I **learned** a few weeks later that I had got the post.

The definitions provided by the *Collins Cobuild English Language Dictionary* show that these verbs systematically imply the emergence, for the referent of the possessive in Y, of a new representation for a particular entity:

Find out: 1. If you **find out** something, you learn something that you did not already know, especially by making a deliberate effort to do so.

See: 2.1. When you **see** something 2.1. you become aware of it or recognise it using your eyes.

Realize: 1. If you **realize** a particular fact, you understand or become aware of it, either by thinking about it and connecting together the information you have, or as a result of discovering new information.

Moreover, with this particular use of *to*, many utterances in which there is a negation can also be found. In those utterances, what is actually denied is a presupposition. This is what happens in (54) to (56). The presupposition is made explicit in (57) to (59):

- (54) **To my surprise**, Eleanor was not bowled over by the dinner invitation.
- (55) An American lady from Boston also looked in. **To my surprise**, she had never heard of harvest festivals.
- (56) Her hair was untidy and her face still on fire and she knew she presented a distraught sight. **To her relief**, Mr Landor was not present.
- (57) I expected Eleanor to be bowled over by the dinner invitation.
- (58) I expected the American lady to have heard of harvest festivals.
- (59) She dreaded Mr Landor might be present.

Once again, what can be observed here is close to what happens in French with *A ma grande surprise*:

Therefore, something is presupposed with this conjunct: a certain mental state previous to the event that must be motivated or explained if the example, out of a proper context, is not completely transparent in reference to our usual representation. Thus, the following utterances can be opposed:

À ma grande frayeur, Paul se coupa le doigt.
To my great fear, Paul himself cut the finger.
To my horror/greatest fear, Paul cut his finger.

À ma grande frayeur, Paul ne se coupa pas le doigt.

*To my great fear, Paul (neg.) himself cut (neg.) the finger
To my horror/greatest fear, Paul did not cut his finger.*

In the latter, the sentence implies that it was vital for me that Paul should cut his finger, and the fact that he did not has detrimental consequences, which explains my horror. Similarly,

*À mon grand agacement, Paul avait l'air d'apprécier cette fille.
To my great annoyance, Paul seemed to like that girl.
To my great annoyance, Paul seemed to like that girl.*

suggests that the speaker could be the (jealous) wife, whereas,

*À mon grand agacement, Paul n'avait pas l'air d'apprécier cette fille.
To my great annoyance, Paul seemed not to like that girl.
To my great annoyance, Paul didn't seem to like that girl.*

implies that the speaker could be, for instance, Paul's mother who had arranged a meeting with a girl she wanted Paul to marry, hoping that it would be love at first sight. (Leeman 1987: 231, our translation).¹⁵

Eventually, it can be noted that there are numerous utterances implying a sort of mismatch between the representations of the referent of the possessive and the extralinguistic reality. This is illustrated in (60) to (62):

- (60) **To the delight of the away fans**, an unexpected victim is between the posts and a new song has entered their vocal repertoire.
- (61) In a fresh effort to secure Jimmy Dunne, Chapman arranged to go to Sheffield with his chairman and vice-chairman – in secret, or so he thought. **To his amazement**, the ticket collector at Euston wished him success in his mission, and on the arrival at Sheffield the porter at his hotel pleaded: “I hope you’re not going to take our Dunne away”.

¹⁵ « Quelque chose est donc présupposé, avec ce complément: un certain état psychologique antérieur à l'événement, qui doit être justifié ou expliqué si l'exemple hors contexte n'est pas transparent relativement à notre habituel univers de référence; on opposera ainsi par exemple :

À ma grande frayeur, Paul se coupa le doigt.

et

À ma grande frayeur, Paul ne se coupa pas le doigt.

Dans ce dernier cas, la phrase implique qu'il était vital pour moi que Paul se blessât, et le fait que rien ne lui arrive a des conséquences dommageables, d'où ma frayeur. De la même manière :

À mon grand agacement, Paul avait l'air d'apprécier cette fille.

suppose que ce soit par exemple l'épouse (jalouse) qui parle, tandis que :

À mon grand agacement, Paul n'avait pas l'air d'apprécier cette fille.

implique qu'il s'agisse par exemple de la mère de Paul qui, désirant qu'il épouse une certaine personne, avait arrangé une rencontre durant laquelle elle espérait qu'il se produirait un coup de foudre. » (Leeman 1987: 231).

(62) **To her astonishment**, Rosalind flung her arms about her and hugged and kissed her, which was unusual for Rosalind at any time.

The term *unexpected* is present in utterance (60). In (61), the presence of the subject-predicate relation *or so he thought*, which refers to a representation which is different from what is actually the truth, should be noted. A similar comment applies to *which was unusual for Rosalind at any time* in (62). All those words make the gap between the representation conveyed by the subject-predicate relation and a previous representation rather explicit.

Those phenomena reveal the importance of the subjectivity of the referent of the possessive in the utterance. Indeed, the possessive is co-referent with the subject of the verbs *realize*, *notice*, *find out* etc. in (50) to (53). It is the same referent that presupposes what is denied by the presence of negation in (54) to (56).

Actually, these utterances indicate that there is a change in the mental state of this referent. In many of them, there are elements evoking the mental state of the referent of the possessive before the inclusion in their representation of what is denoted by the predicative relation:

(63) For a wild moment she contemplated locking the door against him, then, pulling herself together, she prepared to face him. **To her astonishment**, he was smiling as he said “No need to look so unwelcoming”.

(64) Germaine Meyer was wearing a sky-blue blouse that summer afternoon and Modigliani was immediately arrested by her colouring, a blend of rose and white, and asked her eagerly if he could paint her. **To his relief**, she agreed, and the following day, Modigliani arrived.

(65) I included it in the painting, although I anticipated a lot of problems because of the great difference in values between the model and the light. **To my amazement**, however, the painting worked.

In utterance (63), the subject-predicate relation *<she – prepare to face him>* gives information as to the mental state of the referent of *she* before the emergence of the event referred to by *he was smiling*. In (64), evidence showing the impatience of the referent of *he* is provided by the adverb *eagerly*. Eventually, in (65), the relation *<I – anticipate a lot of problems>* reveals a certain apprehension from the referent of *my*, apprehension which is echoed by the presence of *however* later in the utterance.

What happens in all the utterances examined in this section is that there is an occurrence of subject-predicate relation referring to a dynamic or to a static event to the right of the prepositional phrase.

This occurrence, and the representation that it conveys, contradicts the representations of the referent of the possessive. As a consequence, the referent of the possessive (who corresponds to the occurrence X) undergoes a change of mental state. Sometimes, their initial mental state can be deduced from the context (expectation, anxiety, impatience, etc.), sometimes, it is explicitly mentioned. As for their final mental state, it is equated with Y. The initial state is $Qlt_1(X)$ and the final state is $Qlt_2(X)$. In Qlt_1 , X is located in a relation of disconnection from Y. In Qlt_2 , X is located in a relation of identification to Y. This change of location correlates with the integration, within the representations of the referent of X, of the event (process or state) denoted by the subject-predicate relation.

Therefore, it is again possible to resort to the representation scheme I have suggested before to represent the functioning of *to* in the utterances examined in this section:

$Qlt_1(X) \omega Qlt(Y); Qlt_2(X) = Qlt(Y)$.

Here, X corresponds to the state of the referent of the possessive, and Y, to the noun phrase introduced by preposition *to*. The shift from $Qlt_1(X)$ to $Qlt_2(X)$ is correlated with the emergence of the event denoted by the predicative relation within the representations of X.

6. Conclusion

In this paper, I have defended a monosemic utterer-centred approach to English prepositions. Throughout the study of three different uses of *to*, I have shown that the approach I advocate is compatible with the inclusion in the analysis of semantic as well as syntactic parameters. I defend the hypothesis that *to* can be represented as the trace of a double operation of location between the terms it links: a relation of disconnection and a relation of identification. Those operations interact with the context in different ways, depending mostly on the properties of the elements X and Y.

Much remains to be done, as this article does not provide an overview of all the uses of *to*, but so far, the way this representation can apply to some other senses, for instance, the directional sense of the marker, is easily figured out.

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