CHAPTER 13

Length of the extra-information phrase as a predictor of word order

A cross-language comparison

Ricardo Otheguy
Graduate Center, City University of New York

Betsy Rodríguez-Bachiller
Kean University

Eulalia Canals
Graduate Center, City University of New York

1. Introduction

The theoretical statements and analytical practices of the late William Diver and of the Columbia School in general can be interpreted as embodying the proposition that syntactic observations can be accounted for without postulating a syntactic component (Diver 1995; Huffman 2001). While it is recognized that one can observe certain words appearing in certain orders and displaying certain restrictions of co-occurrence, these observations do not require the postulation of syntactic constructs in the underlying system, which consists exclusively of signals and meanings. There are thus in the analyses of the Columbia School (henceforth CS) no rules of order, no base phrase markers, no rules providing for subsequent alterations of base orders, and in general, no mechanisms to specify what goes with what and in what order. And unlike in other functional schools, in CS practice so far, there are also no constructions. How then, does this a-syntactic system account for alternations in syntactic orders? How does it explain, for example, that adverbial phrases, such as in modest and vernacular forms can appear either before or after direct object NPs, as shown in (1a) and (1b)? (The initials after the examples remit to the Corpus list given before the Reference list at the end of the chapter.)

(1) a. The society of Grand Isle preserves relics of courtly society... RIN x.12
b. The society of Grand Isle preserves relics of courtly society in modest and vernacular forms . . . (modified from RIN x.12)

This chapter is an attempt to provide a CS account for items like (1a) and (1b), to make cross-linguistic predictions based on the account, and to thus illustrate how an explanation of syntactic phenomena might be provided in the radically austere vision of linguistic competence put forth by Diver.

2. Syntactic orders explained under the Columbia School

To our knowledge, syntactic orderings in the CS view have only been explained, and can only be produced, by two elements, as outlined here.

Determinants of order in language:

a. The ordering or position of formatives can itself constitute a signal.

b. General cognitive-iconic principles can determine, or incline users toward, certain orderings and groupings.

For an example of (a), order or positional signals, there is the well-known case of the English system of Degree of Control, where placing a word inferred to be a Participant before a word inferred to be an Event (i.e., an occurrence) signals that the participant is a High Controller, whereas placing it after the Event signals that it is a Low Controller. (We avoid the more familiar formulation, that pre-verbal NPs in English are generally subjects and post-verbal ones are generally objects, to remind the reader that, in keeping with CS tenets, the system of Degree of Control is intended as a notional, not a syntactic, construct.) The English system of Degree of Control is outlined here.

Example of a positional signal:

In English, the positioning of:

Participant – (Event) – Participant

signals:

Higher Controller (C1) – (Event) – Lower Controller (C2)

Example (1), repeated here as (2), provides an example of the English system of Degree of Control:

(2) a. The society of Grand Isle (C1) preserves (E) in modest and vernacular forms relics of courtly society (C2) . . . RIN x.12

b. The society of Grand Isle (C1) preserves (E) relics of courtly society (C2) in modest and vernacular forms . . . (modified from RIN x.12)

In (2), the relative ordering of the two Participants, the society of Grand Isle and relics of courtly society, is not specified by a phrase marker; the positional signal of the system of Degree of Control explains why the author didn’t write them in the
opposite order. And the same is true for the ordering of these two Participants with respect to preserves. (In our discussion from now on, we will ignore the first Participant, in this case *The society of Grand Isle*, and concentrate on the relation between the Event (E) word and the second Participant (henceforth, P), in this case, between preserves and relics of courtly society.)

For an example of the second CS type of explanation for syntactic order, general cognitive-iconic principles, let us take the principle outlined as follows:

*Example of a cognitive-iconic principle:*
Group together signals whose meanings form cognitive units: keep together what goes together.

An example of this principle at work appears in the same Grand Isle example, repeated below as (3). (We use the letter E to refer to the Event word, the traditional verb; the letter X to refer to the extra information phrase, the traditional adverbial phrase; and the letter P to refer to the second Participant.)

Order E X P

\[
\begin{align*}
E &= \text{Event} \\
X &= \text{extra information about the Event} \\
P &= \text{the second Participant} \\
\end{align*}
\]

(3) The society of Grand Isle preserves \(E\) in modest and vernacular forms \(X\) relics of courtly society \(P\) ... RIN x.12

Notice the location of the phrase in modest and vernacular forms, which provides extra information \(X\) about the Event preserves. In the CS view, the relative ordering of these elements does not require specification through a phrase marker either. The author wrote preserves and in modest and vernacular forms in this order because it makes processing sense to place the extra information phrase where we find it. The most natural place for Extra information about an Event is as near as possible to the Event. Although in principle this functional consideration would be compatible with placement either directly before or directly after the Event, placement directly before the Event has the disadvantage of separating the Event from the first Participant. Therefore, all else being equal, placement directly after the Event is preferable.

3. *Competition between signals and cognitive principles*

One useful way to support the reality of positional signals and cognitive principles of the sort just illustrated is to study these two types of constructs in situations of competition, that is, in situations where the signal calls for one ordering and the principle calls for another. We study this competition from a cross-linguistic perspective, comparing the situation just outlined for English with that of languages where, by hypothesis, there is no positional signal equivalent to that of the English
system of Degree of Control. In such languages, as for example Spanish, the ordering of Events, Participants and extra information (or, in more familiar terms, the ordering of verb, object NP, and adverbial phrase) is, by hypothesis, governed by general cognitive principles alone. Thus, in such languages, unlike in English, the two principles do not compete. These cross-linguistic differences yield testable predictions that can provide empirical support for the rule-less analysis of syntactic alternations, especially in our comparative data from translations.

Competition in English between the system of Degree of Control and the cognitive principle of keeping together what goes together is unavoidable. Quite obviously, it is better for the system of Degree of Control to have the second Participant right after the Event, as outlined below, making the positional signal maximally transparent:

Preferred ordering for enhancing the transparency of the positional signal of Degree of Control: \( E P X \).

But just as obviously, such placement competes with the interest of the grouping principle, which calls for the Extra information to also be placed right after the Event, as outlined here:

Preferred ordering for ease of processing the eXtra information about the Event: \( E XP \).

In our example about Grand Isle in (2a), the eXtra-information phrase in modest and vernacular forms is in a natural place for processing it together with preserves, but in a disadvantageous place for the positional signal, which would have been more transparent as in (2b). The problem is outlined as follows:

Natural and unnatural placement of \( X \):

- In the order \( E X P \):
  - \( X \) is in its natural place, \( E X \), preserving grouping of \( X \) with \( E \).
  - But \( X \) is interrupting the \( E P \) positional signal of Degree of Control.

- In the order \( E P X \):
  - \( X \) is not in its natural place, breaking grouping.
  - But \( X \) is not interrupting the \( E P \) positional signal of Degree of Control.

Given that in the CS view language systems have only one level of representation, reflecting the one temporal dimension that language users work with, and given that this temporal dimension has to do most of the jobs that the lexicon and the grammatical morphology do not do, competition for a certain slot of the type outlined above is to be expected, and its existence makes sense within a CS approach. The competing claims of two positional principles, and the way they arise in English but, as we shall see, do not arise in other languages, serves as the basis for the predictions in this study.

In studying the positional signal of Degree of Control in English and the second
Participant's need to be next to the verb, and its competition with the extra information phrase that is also best placed in the same slot, we are setting aside three other functional principles that have been brought forth in the literature as motivators of word order and that are highly compatible with the CS approach. We know from the research by Arnold, Wasow, Losongco and Ginstrom (2000) and others that speakers appear to be striving to put short or light elements before long or heavy ones, and elements containing old or known information before those containing new information. And we know from the work of Hawkins (1994) that the traditional 'constituent' appears to be a relevant unit (that is, speakers group signals into meaningful chunks) and that these constituents are ordered in such a way as to facilitate the quick apprehension of the messages intended by utterances. These three principles are almost certainly interacting with the two discussed here (the use of position as a signal, the use of position to keep together what goes together). All of them will eventually have to be taken into account if the CS approach is to succeed in explaining syntactic phenomena without resort to formal syntactic constructs, but such an accounting falls outside the scope of this study.

4. Predictions regarding competition between signals and principles

Our first prediction, as outlined below, is that speakers of English will place the eXtra information about the Event in its natural place right after the Event (producing the order E X P) only when this eXtra information phrase is relatively short, so as not to interfere too much with the E P positional signal. A longer eXtra information phrase placed after the Event should tend to interfere with the E P positional signal. Thus the natural position should be avoided for longer Xs, such Xs being placed instead in an unnatural position, after the Participant (producing the order E P X).

Prediction One:

In cases of E X P:
• X will tend to be shorter.

In cases of E P X:
X will tend to be longer.

An example of shorter X in its natural position is the one in (2a). An example of longer X placed in its unnatural position, to enhance the transparency of the positional E P signal of Degree of Control, is presented in (4):

(4) E P X
Yet neither does Chopin punish (E) her protagonist (P) with a terrible death, as Flaubert did his Madame Bovary, in the novel to which The Awakening has always been compared (X). RIN vii.25

Given the length of the X here, the signal of the system of Degree of Control would
be placed at too great a risk if the X were kept next to punish, as in (5):

(5) \( E X P \)

Yet neither does Chopin punish (E) with a terrible death, as Flaubert did his Madame Bovary, in the novel to which The Awakening has always been compared (X) her protagonist (P). (modified from RIN vii.25)

In the data we report on here, our prediction is supported. But we have also learned that things are more complicated than we thought, for the length of the X also interacts with the length of the second Participant. For the speaker to favor the system of Degree of Control, that is, for the X to be in its unnatural position behind the P, the P itself cannot be too long, or otherwise the association between the E and the X will itself be lost due to excessive distance. So the generalization is actually about the length of both the Extra information and the length of the Participant, as follows:

Generalization One:

In cases of \( E X P \):
- X will tend to be shorter.
- P will tend to be longer.

In cases of \( E P X \):
- X will tend to be longer.
- P will tend to be shorter.

5. Statistical predictions for English

Counts were made on two English texts, one essay and one fiction (RIN and CPF-E, see details under Corpus list before the References below). Our first count was of how many instances we found in our texts of an X that is longer than a P in each of the two types of orders. Table 1(E) confirms our prediction. In the columns on the left, we see that, when the X is in its unnatural position, not interrupting the positional signal of the system of Degree of Control (E P X), the X is longer than the P in

<table>
<thead>
<tr>
<th></th>
<th>( E P X )</th>
<th>( E X P )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X not interrupting</td>
<td>X interrupting</td>
</tr>
<tr>
<td>( X &gt; P )</td>
<td>111</td>
<td>90</td>
</tr>
<tr>
<td>( X \leq P )</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>123</td>
<td>100</td>
</tr>
</tbody>
</table>

*Note: Texts: RIN, CPF-E*
Table 2(E). Average length of X and P in words

<table>
<thead>
<tr>
<th></th>
<th>E P X</th>
<th>EXP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X not interrupting</td>
<td>X interrupting</td>
</tr>
<tr>
<td>X</td>
<td>6.1</td>
<td>2.4</td>
</tr>
<tr>
<td>P</td>
<td>2.0</td>
<td>4.4</td>
</tr>
<tr>
<td>X diff</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>P diff</td>
<td>2.4</td>
<td></td>
</tr>
</tbody>
</table>

Note: Texts: RIN, CPF-E

90% of cases. When, in the column on the right, the X is in its natural position next to the Event word but interrupting the positional signal (E X P), it is longer than the P in only 16% of the cases studied.

Our second count, perhaps the most compelling, is of the average length, measured in words, of the X and the P in the two orderings. Table 2(E) shows the situation clearly. In the column on the left, where the X is not interrupting, the X is longer and the P is shorter. On the right side, where the X is interrupting, the X is shorter and the P is longer. We repeated this count using three English fiction texts, one English original and two translations from Spanish and Catalan (SFZ, GTP, RPD-E). (See Table 2.1(E).) Some readers may question the legitimacy of using translations from Spanish and Catalan as data for English, especially since the contrast between English and Spanish is the major focus of our chapter, but we have observed that the pressures of the system of Degree of Control in English are quite robust, despite the possibility of English translations being influenced by Spanish originals and thus being perhaps not as natural as texts originally produced in English.

Table 2.1(E). Average length of X and P in words

<table>
<thead>
<tr>
<th></th>
<th>E P X</th>
<th>EXP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X not interrupting</td>
<td>X interrupting</td>
</tr>
<tr>
<td>X</td>
<td>3.2</td>
<td>2.2</td>
</tr>
<tr>
<td>P</td>
<td>2.4</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Note: Texts: SFZ, GTP, RPD-E

The pattern in these three texts remains the same. In all cases, the predictions are met, as the interrupting Xs are consistently shorter than the non-interrupting ones; and similarly the Ps with non-interrupting Xs are shorter than the Ps with interrupting ones.

A third way of showing the same effect is to compare the ratio of X to P in the two kinds of orderings. Table 3(E) shows the results. When the X is not interrupting, it is on average 2.6 times longer than the P. When it is interrupting, the ratio, as expected, is less than one. This difference can also be expressed as the distance from one, which is the ratio of two equal quantities. The ratio of the length of Xs to Ps in
Table 3(E).  English. Ratio of length of X to length of P, in total words

<table>
<thead>
<tr>
<th></th>
<th>E P X</th>
<th>E X P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X not interrupting</td>
<td>X interrupting</td>
</tr>
<tr>
<td>Ratio X / P</td>
<td>651 / 255</td>
<td>51 / 96</td>
</tr>
<tr>
<td>R</td>
<td>2.55</td>
<td>.53</td>
</tr>
<tr>
<td>R diff</td>
<td>2.02</td>
<td></td>
</tr>
</tbody>
</table>

Note: Texts: RIN, CPF-E

the EPX ordering is 1.55 (greater than one), whereas in EXP order the ratio is 0.47 (less than one).
These results suggest that users of English, at least the authors of our texts, are mindful of the cognitive principle, but are restrained at the same time by the need to keep the transparency of the word-order signal of Degree of Control.

6. Statistical predictions for Spanish

It follows from our analysis that in a language where lower Control is not signaled by position after the Event (where it is signaled, for example, by accusative morphology, or just not signaled at all), the cognitive principle would have free rein in that it would not be competing with a signal of Degree of Control. Under such circumstances, one would expect that phrases giving extra information would appear right after the Event in the preponderance of cases.

There is in Spanish a system of Degree of Control, but it does not involve the ordering of lexical items as in English. Alongside instances where the Spanish order in two-participant events is similar to that of English (in traditional terms, NP V NP), it is not uncommon to find cases of V NP NP, where the Event word is followed by the participants.

(6) La voluntad de trascender le impidió a Martí detenerse en la especulación, y como en él se produjo la extraordinaria síntesis de una gran inteligencia para el análisis abstracto y para concretar fórmulas de comportamiento, tienen (E) sus ideas (P1) un mérito singular (P2). RMP-S 22.5

...have (E) his ideas (P1) a merit singular (P2)

'Martí's overriding desire to affect reality kept him away from pure speculative thought: he constantly strove to reduce abstract thought to concrete formulae of conduct, and his ability to do so was singular.' RMP-E 23.7

In this example we first get the Event ('tienen, 'have'), then the inferred high Controller ('sus ideas, 'his ideas'), then the inferred low Controller ('un mérito singular, 'a
singular merit). In Spanish, no signal appears to be limiting the freedom of speakers to place Participants in different positions.

Our prediction should be, then, that the effects we found in English in the counts reported above should not be found in Spanish. We try to make this point using different terms in the two languages for the phrases with extra information placed between the Event and the Participant. In Spanish, we say these Xs are intervening, but not interrupting, as they are in English. Our prediction should be that it will be possible to find Xs in this intervening position in Spanish even when they are quite long. And the interaction with the length of the P that we saw in English should also not be present in Spanish.

We made the same count in Spanish texts as we did in English (we do not offer a comparison with English Table 2.1(E.).)

**Table 1(S).** Occurrences of X longer or shorter than P

<table>
<thead>
<tr>
<th></th>
<th>E P X</th>
<th>E X P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X not intervening</td>
<td>X intervening</td>
</tr>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>X &gt; P</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>X ≤ P</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>14</td>
</tr>
</tbody>
</table>

*Note: Text: RMP-S*

**Table 2(S).** Average length of X and P in words

<table>
<thead>
<tr>
<th></th>
<th>E P X</th>
<th>E X P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X not intervening</td>
<td>X intervening</td>
</tr>
<tr>
<td>X</td>
<td>6.3</td>
<td>3.6</td>
</tr>
<tr>
<td>P</td>
<td>2.6</td>
<td>5.8</td>
</tr>
<tr>
<td>X diff</td>
<td></td>
<td>2.7</td>
</tr>
<tr>
<td>P diff</td>
<td></td>
<td>3.2</td>
</tr>
</tbody>
</table>

*Note: Texts: RIN, CPF-E*

**Table 3(S).** Spanish. Ratio of length of X to length of P, in total words

<table>
<thead>
<tr>
<th></th>
<th>E P X</th>
<th>E X P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X not intervening</td>
<td>X intervening</td>
</tr>
<tr>
<td>Ratio X/P</td>
<td></td>
<td>Ratio X/P</td>
</tr>
<tr>
<td>N</td>
<td>114 / 48</td>
<td>51 / 82</td>
</tr>
<tr>
<td>R</td>
<td>2.38</td>
<td>.62</td>
</tr>
<tr>
<td>R diff</td>
<td>1.76</td>
<td></td>
</tr>
</tbody>
</table>

*Note: Text: RMP-S*
The tables do not show a straightforward confirmation of our expectations. First off, we notice that we have less data for Spanish, and this may be part of the problem. But that aside, notice that we get similar effects in Spanish to those we saw in English, contrary to our prediction. As in English in Table 1(E), in Spanish in Table 1(S) we notice that Xs that are longer than Ps appear mostly in situations where the X is not between the Event and the Participant. For Tables 2(E) and 2(S), note that we get similar results, the intervening Xs of Spanish, like the interrupting Xs of English, are shorter than the non-intervening ones, and the length of the Participant also works as in English. Finally in Tables 3(E) and 3(S), notice that the ratios of X to P in the two orders in Spanish follow the same pattern as in English.

But now notice something else in these three tables. The effects go in the same direction, but they are not of the same magnitude. Spanish is, so to speak, a more tolerant version of English. Look at the right hand column of each pair of tables. In Tables 1(E) and 1(S), where English permits only 16% of Xs longer than Ps, Spanish allows 21%. In Tables 2(E) and 2(S), where the average interrupting English X is only 2.4 words in length, the average Spanish X is 3.6 words long. Again in Tables 2(E) and 2(S), note the two lines at the bottom of the tables showing differences between the Xs and the Ps. The differences in English are larger. In Spanish, the differences are still there, but they are smaller. The same can be said of Tables 3(E) and 3(S). Notice the last two lines at the bottom. The ratios behave similarly in the two columns in both languages, but the differences are bigger in English.

Clearly, we have to gather more Spanish data. But if these data hold up with a larger N, we are seeing something interesting. Users of Spanish are intolerant of long Extra information between Event and low Participant. But they are not quite as intolerant as users of English. The need to keep the Event and the Participant together seems to be operative also in Spanish. A long intervening X is avoided by users of Spanish, because they too want to have some transparency in the connection between Event and Participant, even if there is no positional signal. But the avoidance of long intervening Xs is not as great as the avoidance of long interrupting Xs by users of English.

7. Further statistical predictions

Now that we have discussed the comparisons where the difference between English and Spanish seems to be only a matter of degree, let us go over comparative results where the contrast is greater. We made a prediction regarding the disposition by speakers of these two languages to use these kinds of Xs in the first place. Since Xs after Event words are only intervening, not interrupting, in Spanish, speakers of Spanish should be happy to have them. Since they are interrupting in English, speakers of English should be wary of them. And this is exactly what we find.

Consider first Table 4. This table asks the question whether both languages are equally willing to add Extra information to their Events. The answer, as expected, is
yes. Table 4 tabulates all cases of an Event with a signaled or inferred lower Controller, and shows both languages to be the same. In both languages, 56% of all Events with a lower Controller have Extra information. But look now at Table 5.

Here we see something revealing. Only eight percent of all English Xs appear in between Event and Participant. But 44% of Spanish Xs are in that position. Table 5 shows very clearly that speakers of Spanish are much more willing to have intervening Xs than speakers of English are willing to have interrupting ones. Spanish, as we saw in Tables 1, 2 and 3, differs in subtle ways from English in how it handles the Xs placed in their natural position. But it differs from English in dramatic ways in the decision of whether to have those Xs in the first place. So we have perhaps our second generalization:

**Generalization Two:**
In a language where a cognitive principle is in competition with a grammatical signal, it will operate less strongly than in a language where the principle faces no competition.

English phrases with eXtra information act, so to speak, like capitalists who say they love competition but in fact concentrate their investment in areas where they have a monopoly. These phrases simply avoid entering the market, yielding the spot after the Event, most of the time, to the lower Controller. In contrast, Spanish phrases, facing no competition, occupy this natural spot on a regular basis.

### Table 4. Presence vs. absence of X

<table>
<thead>
<tr>
<th></th>
<th>English</th>
<th></th>
<th>Spanish</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>X is absent</td>
<td>148</td>
<td>44</td>
<td>25</td>
<td>44</td>
</tr>
<tr>
<td>X is present</td>
<td>190</td>
<td>56</td>
<td>32</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>338</td>
<td>100</td>
<td>57</td>
<td>100</td>
</tr>
</tbody>
</table>

*Note: Texts: RIN, CPF-E, RMP-S*
8. Support for the analysis from the behavior of translators

To test further the results in Table 5, we made a qualitative study of translators who render Spanish texts into English, to see what it is that reluctant English users of interrupting Xs do when faced with the texts of willing Spanish users of Xs which are simply intervening.

In some cases, the English translator will keep the intervening Spanish X, turning it into an interrupting English one, as in (7).

(7) Creía Martí que “cada ser humano lleva (E) en sí (X) un hombre ideal (P), lo mismo que cada trozo de mármol contiene en bruto una estatua tan bella como la que el griego Praxiteles hizo del dios Apolo”. RMP-S 20.26
He believed that every human being has (E) within him (X) an ideal man (P), just as every piece of marble contains in a rough state a statue as beautiful as the one that Praxiteles the Greek made of the god Apollo. RMP-E 23.1

Here the Spanish Extra information, en sí, can be turned into the kind of short, two-word X that makes English speakers willing to interrupt. So the translator is faithful to the original. But this is not what usually happens. More often, the translator takes the intervening Spanish X and, in constructing the English version, moves it out of the way, as in (8).

(8) a. Durante sus años en Estados Unidos, mientras escribía para los periódicos de la Argentina, Venezuela y México, Martí analizó (E) con notable acierto (X) la vida norteamericana (P). RMP-S 18.24
During the years he spent in the United States, Martí analyzed (E) American society (P) with clarity and insight (X) as a correspondent for the most influential newspapers of Argentina, Venezuela and Mexico. RMP-E 19.26

b. . . . y la bala desbarató el armario del cuarto, atravesó la pared de la sala, pasó con un estruendo de guerra por el comedor de la casa vecina y convirtió (E) en polvo de yeso (X) a un santo de tamaño natural en el altar mayor de la iglesia, al otro extremo de la plaza (P).
GCM 10.9
. . . and the bullet wrecked the cupboard in the room, went through the living room wall, passed through the dining room of the house next door with the thunder of war, and turned (E) a life-size saint on the main altar of the church on the opposite side of the square (P) to plaster dust (X). GCD 4.

Notice here that con notable acierto and to plaster dust are intervening, but that the translators were not willing to write the interrupting versions shown in (9).
(9)  a. During the years he spent in the United States, Martí analyzed (E) with clarity and insight (X) American society (P) as a correspondent for the most influential newspapers of Argentina, Venezuela and Mexico.

b. ... and the bullet wrecked the cupboard in the room, went through the living room wall, passed through the dining room of the house next door with the thunder of war, and turned (E) to plaster dust (X) a life-size saint on the main altar of the church on the opposite side of the square (P).

Sometimes the reluctance to interrupt applies even to a two-word X. And the solution is not always to move the X behind the Participant, but to put it in front of the Event, where it does not interrupt either, as in (10).

(10) Martí censuró (E) con severidad (X) el materialismo, los prejuicios, la soberbia expansionista, la corrupción política (P); y con entusiasmo aplaudió el amor a la libertad, la tolerancia, el espíritu igualitario y la práctica de la democracia. RMP-S 20.4

Martí roundly (X) censured (E) materialism, prejudice, expansionist arrogance, and political corruption, (P) and enthusiastically applauded love of liberty, tolerance, egalitarianism, and the practice of democracy. RMP-E 21.7

Cf.

Martí censured with severity materialism.

Martí censured roundly materialism.

Notice that the translator avoids the interrupting solution for the translation of con severidad. He makes a lexical adjustment and places the X before the Event. The distaste for an interrupting X is so great for this user of positional signals of Degree of Control, that in (11) he engages in the oldest trick in the translator’s bag: don’t translate.

(11) Martí nació en La Habana en 1853, y a los diecisiete años fue deportado por su oposición al régimen español. Después de denunciar (E) ante el mundo (X) los horrores del presidio político (P) en Cuba, y de concluir sus estudios en la Universidad de Zaragoza, se estableció en México, dando inicio a su brillante carrera de escritor. RMP-S 18.8

Martí was born in Havana in 1853. At seventeen he was exiled to Spain for his opposition to colonial rule. There he published a pamphlet exposing (E) the horrors of political imprisonment (P) in Cuba, which he himself had experienced. Upon graduating from the University of Saragossa, he established himself in Mexico, where he began his literary career. RMP-E 19.8

Cf: After denouncing before the world the horrors of political imprisonment in Cuba...
Table 6.1. Treatment by translator of all Xs, interrupting or intervening (E X P)

<table>
<thead>
<tr>
<th>Spanish to English translation</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faithful translation</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Changed translation</td>
<td>11</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: Texts: CPF-E, S; RMP-S, E

The original Spanish of (11) says that he denounced before the world the horrors of political imprisonment. The translator has gone through several contortions to get most of the other information in. But this particular X, which would now be three words long in English, was seemingly too much for his need to keep the positional signal transparent, maintaining the connection between the Event exposing and the Participant the horrors of political imprisonment. The Italians say, Traduttore, Tradiitore. What we are showing are some of the reasons why translators are turned by the grammar into such notorious traitors.

This penchant in the translator to move the intervening Spanish X out to some place where it will not end up as an interrupting English X is quite general. Consider Table 6.1. Of the 14 intervening Xs that the translator found in our Spanish text, only three survived as interrupting Xs in English. The other eleven, 79% of the total, were either moved or dropped altogether. Since a comparison group is needed, we have started to make sure that translators going the other way are not doing the same thing, and they are not. The five examples we have checked of interrupting Xs in an English original stay the same in Spanish, as shown in Table 6.2.

9. Conclusion

In conclusion, the distribution of Xs and Ps in English is exactly as one would expect it to be in a language where both the eXtra information and the lower Participant are preferably placed next to the Event. When we then compare English with a language where, by hypothesis, this problem does not exist, we get results that fit very well with our understanding of the situation. Users of Spanish fill their texts

Table 6.2. Treatment by translator of all Xs, interrupting or intervening (E X P)

<table>
<thead>
<tr>
<th>English to Spanish translation</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faithful translation</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>Changed translation</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: Texts: CPF-E, S; RMP-S, E
with intervening eXtra information. Users of English use such Xs sparingly. When translators are faced with these intervening Spanish Xs, they usually move them or drop them altogether.

Charles Darwin said that we must pay special attention to those of our predictions that produce results that contradict our thinking or that we do not fully understand. Write them down right away, he said, for otherwise you will forget them. In that spirit, we should not long dwell on what we think may be confirming results in Tables 1E, 2E, and 3E, where users of English handle the length of Xs and Ps as predicted, nor on Table 4, where we show the relative reluctance of English speakers to use interrupting Xs as predicted. Moreover, we should not pay too much attention to the confirmation of our suspicions about the treacherous ways of translators. Instead, we should remember, and continue to try to understand better, the parallel tables in 1 through 3, where we still do not completely understand what is going on. We offer our speculation about the possibility (which would have to be explored in a further study) that there may be a cognitive ranking of notional elements such that an inferred Participant outranks extra information from the point of view of grouping with the Event, all else (such as length considerations) being equal.

Still, our study points the way to the possibilities for the kind of syntactic analysis that becomes necessary given the reluctance of CS scholars to accept the traditional syntactic component and the notion of syntactic rules. If one accepts the argument that these constructs are aprioristic and unjustified, one then becomes responsible for explaining how the syntactic observations that these constructs typically cover (order, selection, etc.) are to be explained. We suggest that positional signals and general cognitive principles of the sort discussed here may do the job, especially if we also bear in mind compatible efforts along similar lines by linguists and psycholinguists like Arnold et al., Hawkins, and the many sources they discuss. The present study suggests that positional signals and cognitive grouping principles may be quite real, as they produce solid predictions for a language that appears to operate with both as well as reliable comparative predictions when a language that has only one is brought into the analysis.

**Corpus**


Notes

1. By “length” we mean the number of words in the respective “constituent.”

2. Counting the number of words is an approximate way to count complexity of a constituent in terms of processing. If a constituent is relatively “flat” (in traditional terms), i.e., not including embedded clauses or the like, then it may be easier to process, hence not as intrusive as one that requires more attention, such as the X in example (4). By and large, more complex constituents will also be longer, thus counting the number of words is an indirect measure of complexity.

3. Instances of both Participants occurring together after the Event are rare. For our counts, we included only Extra information following the Event or the second Participant.

References


Čognitive and Communicative Approaches to Linguistic Analysis

Edited by

Ellen Contini-Morava
University of Virginia

Robert S. Kirsner
University of California, Los Angeles

Betsy Rodríguez-Bachiller
Kean University

John Benjamins Publishing Company
Amsterdam/Philadelphia
Studies in Functional and Structural Linguistics (SFSL)

Taking the broadest and most general definitions of the terms functional and structural, this series aims to present linguistic and interdisciplinary research that relates language structure — at any level of analysis from phonology to discourse — to broader functional considerations, whether cognitive, communicative, pragmatic or sociocultural. Preference will be given to studies that focus on data from actual discourse, whether speech, writing or other nonvocal medium.

The series was formerly known as Linguistic & Literary Studies in Eastern Europe (LLSEE).

Founding Editor
John Odmark

Honorary Editors
Eva Hajićová
Charles University

Petr Sgall
Charles University

General Editors
Yishai Tobin
Ben-Gurion University of the Negev

Ellen Contini-Morava
University of Virginia

Editorial Board
Alexandra Y. Aikhenvald
La Trobe University

Jim Miller
University of Auckland

Joan Bybee
University of New Mexico

Marianne Mithun
University of California, at Santa Barbara

Nicholas Evans
University of Melbourne

Lawrence J. Raphael
Emeritus CUNY

Victor A. Friedman
University of Chicago

Olga Mišeska Tomić
Leiden University

Anatoly Liberman
University of Minnesota

Olga T. Yokoyama
UCLA

James A. Matisoff
University of California, Berkeley

Volume 51

Cognitive and Communicative Approaches to Linguistic Analysis
Edited by Ellen Contini-Morava, Robert S. Kirsner and Betsy Rodríguez-Bachiller