

# Say Hello to Markedness\*

*Gerhard Schaden*

CNRS UMR 7110, Laboratoire de linguistique formelle

In this paper, it will be shown that Bi-directional Optimality Theory (BOT) runs into problems of undergeneration when confronted with a certain class of partial-blocking phenomena.

The empirical problem used to illustrate this is the cross-linguistic variation of one-step past-referring tenses. It will be argued that the well-known ‘present perfect puzzle’ is a sub-problem of it. The solution to the cross-linguistic variation of these tenses involves blocking of the marked tense. The relevant notion of ‘markedness’, while underivable synchronically, is argued to be linked to diachronic learning processes similar to those investigated by Benz (2006).

## 1 Introduction

In recent years, the filtering of the generator’s output has become a topic of interest for students of the semantics-pragmatics interface. Aside from the general perspective of obtaining a simpler way of dealing with LF, one of the main areas of research in this direction have been phenomena where the compositional semantics is underspecified (cf. Reyle, 1993). With underspecification comes almost inevitably a combinatorial explosion of possible readings of a sentence, which has to be controlled somehow. As the semantics-module has already done its work at this time, the filtering device must be part of what is traditionally considered to be pragmatics.

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Some versions of Optimality Theory (OT) provide formalizations (or algorithms) which reproduce the effects of what has been captured by more traditional pragmatic principles, and seem therefore to be good choices for the implementation of such filtering devices. Bi-directional OT (BOT) has been recognized to be the variety of OT that deals most successfully with phenomena of total and partial blocking (cf. Beaver and Lee, 2004). As such, it will be the main topic of interest in this paper, which studies one particular type of blocking, and the challenges BOT faces when dealing with it.

This paper is structured as follows: First, I will present the present perfect puzzle, as stated in Portner (2003). I sketch briefly the standard accounts of it, and the points these standard accounts take for granted.

Then, I will argue that a solution to this problem involves partial blocking, because the present perfect puzzle should be seen as a sub-problem of the cross-linguistic variation of tenses locating an event (or an interval) one step before the moment of utterance, without any intervening moment of reference (I call these tenses ‘one-step past-referring tenses’).

Finally, I will examine the problems arising when standard BOT is applied as a filter for this purpose, and discuss how to overcome these problems.

## **2 The Present Perfect Puzzle**

It is a well known (and well investigated) fact that present perfect tenses across Romance and Germanic languages vary, and recent years have seen a renewed interest in the investigation of the cause of this cross-linguistic variation.

### **2.1 The Problem**

In English or Spanish, present perfects may not be combined with past-denoting localizing temporal adverbials. In other languages, like French or German, such combinations are perfectly acceptable.

- (1)
- a. \*Mary has arrived {yesterday / at five o'clock}.
  - b. \*María ha llegado {ayer / a las cinco}. (Spanish)  
M. has arrived yesterday / at the five.
  - c. Marie est arrivée {hier / à cinq heures}. (French)  
M. is arrived yesterday / at five o'clock.
  - d. Maria ist {gestern / um fünf} angekommen. (German)  
M. is yesterday / at five arrived.

Similarly, dead people (or no longer existing objects) are not felicitous subjects of present perfect sentences in English or Spanish, whereas in French or German, such constructions are perfectly acceptable.

- (2)
- a. #Einstein has visited Princeton.
  - b. #Einstein ha visitado Princeton.  
E. has visited Princeton.
  - c. Einstein a visité Princeton.  
E. has visited Princeton.
  - d. Einstein hat Princeton besucht.  
E. has Princeton visited.

Thus, present perfects vary considerably cross-linguistically. Intriguingly, this kind of variation seems to be restricted to *present* perfects alone. All other perfects (e.g., past perfects, perfects under modals, etc.) do not seem to vary according to the parameters we identified for the present perfect, and behave rather similarly throughout languages.

First, they do not show any incompatibility with temporal adverbials. This is illustrated in (3) only for English, but it holds as well for Spanish.<sup>1</sup>

- (3)
- a. Mary had arrived {yesterday / the day before / at five o'clock}.
  - b. Mary will have arrived {the day before / at five o'clock}.
  - c. Mary might have arrived {yesterday / at five o'clock}.
  - d. Having arrived {yesterday / at five o'clock}, Mary will surely be able to help you.

<sup>1</sup> As is to be expected, French or German non-present perfects do not acquire any restrictions the present perfect did not already have.

Second, they do not show life-time effects, as the examples in (4) demonstrate:

- (4) a. Einstein might have visited Princeton.  
 b. In 1941, Hitler invaded Russia. Napoleon had tried before him, but without success.

(4-a) can be uttered in 2008, even though Einstein has been dead for several decades. For a past perfect, like in (4-b), one would expect a life-time effect to arise with respect to a contextually fixed moment of reference *R* situated somewhere in the past (here: *in 1941*). However, the fact that Napoleon had long been dead in 1941 does not cause the sentence to become unacceptable.

The data in (1)–(4) shows that, if we want to maintain a strictly compositional semantics for perfect tenses (where the present perfect is a combination of a PRESENT and a PERFECT-feature, and a past perfect a combination of a PAST and a PERFECT-feature), the cause for the cross-linguistic variation of the present perfects cannot be directly attributed to a parametric variation of the semantics of the PERFECT-features involved (contra Klein, 1992, 2000).

## 2.2 Proposed Solutions

Having eliminated the PERFECT as a cause, there is one obvious candidate left as root of the present perfect puzzle: the PRESENT feature. And indeed, all current solutions to the present perfect puzzle hold it responsible in some way. There are two different versions of this general idea: a first school of thought (cf., e.g. Pancheva and von Stechow, 2004) attributes the variation directly to a difference in the PRESENT-features in the languages involved. A second tendency (cf., e.g. Portner, 2003; Rothstein, 2006a) blames the PRESENT more indirectly, via its interaction with some other element in the sentence.

We will now have a look at these accounts of the present perfect puzzle, and the reasons that lead ultimately to their rejection.<sup>2</sup>

<sup>2</sup> For want of space, this overview has to be very brief, and cannot do justice to any of the presented solutions. For a more complete presentation, see Schaden (2007, 2008).

### 2.2.1 *Different PRESENT-Features*

Pancheva and von Stechow (2004) assume that English and German have different values for the PRESENT-feature, and that this fact is the crucial ingredient in deriving the present perfect puzzle. The core idea is that the German present is a non-past tense, whereas the English present would be a ‘real’ present tense (cf. also Giorgi and Pianesi, 1997).

However, as Rothstein (2006b) points out, if the semantics of the PRESENT is the source of the variation of the present perfects, two languages having similar present tenses should also have similar present perfect tenses, whatever the exact theoretical motivation of the differences may be. But the Swedish present tense patterns systematically with the German present against the English present, whereas the Swedish present perfect patterns with the English present perfect against the German present perfect.

Based on these facts, Rothstein concludes that the semantics of the PRESENT is not systematically correlated with the behavior of the present perfect, and therefore cannot be the cause of the cross-linguistic variation of the present perfect tenses.

### 2.2.2 *Feature-Clash Accounts of the Present Perfect Puzzle*

The second line of thought derives the infelicity of sentences like (1) in English more indirectly as the result of a feature-clash between the PRESENT-feature and a PAST-feature instantiated on the adverbial.

For Portner (2003), the clashes involved are between presuppositions. However, as shown by Nishiyama and Koenig (2004), the alleged presuppositions aren’t amendable by standard metalinguistic negation.

Rothstein’s own proposal, based on Musan (2002), puts the blame on the syntax, and more precisely, on the way in which syntax allows or puts constraints on the interaction of the PRESENT-feature with the inherent features of past-denoting localizing temporal adverbials like *yesterday*. The basic idea is

the following: in a language like English, the auxiliary c-commands the temporal adverbials and can restrict their distribution (by incompatibility of the present tense of the auxiliary with the ‘past-ness’ of the adverbial). But in a language like German, the auxiliary does not c-command the temporal adverbials, and is not able to restrict their distribution: the ‘pastness’ of the adverbial will not cause any conflict with the ‘present’-component of the tense-feature.

According to Rothstein (2006b: 4), this difference boils down to the fact that in German, the auxiliary and the participle form a constituent, but not in languages like Swedish or English. However, this claim makes wrong predictions for Romance languages (cf. Schaden, 2008).

### 2.2.3 *Elements Common to All Current Analyses of the Present Perfect Puzzle*

Instead of going into the details of the previously presented accounts, I will rather comment upon three elements all current analyses have in common, and discuss what is at stake in maintaining or dismissing them.

First of all, they all assume that the semantics of the PERFECT-feature is *not* involved in the cross-linguistic variation. This may seem counter-intuitive, but such a position has important advantages, and constitutes in my mind important progress. While maintaining a strictly compositional theory of the tense-aspect system, this move allows us to assign one single value for the PERFECT-feature in languages like English or Spanish. And not only this: one may assume one single value for the PERFECT-feature cross-linguistically. The specific constraints of the present perfect can be assumed to arise from elsewhere.

Second, all these theories assume that the present perfect puzzle is rooted somewhere in the semantics or syntax of the languages involved. This means that the puzzle is located in the core-grammar. Such a position comes with a very strong commitment: sentences violating the constraints of the present perfect in English or Spanish must be assumed to be *ungrammatical*. However, as we will see in section 3.1, this is at least questionable.

Last, these theories treat the present perfect puzzle as an isolated phenomenon. I think that this misses an empirical generalization that should be made: there is no way of tying the cross-linguistic variation of the present perfect tenses to the cross-linguistic variation of the simple past tenses (a phenomenon that has not been investigated, as far as I am aware, with respect to its eventual connection to the present perfects).

### 3 Towards the Bigger Picture

In previous work (Schaden, 2007, 2008), I have argued that the present perfect puzzle should be seen in connection with what one may call the ‘simple past puzzle’, and forms a sub-problem of what I call the ‘cross-linguistic variation of one-step past-referring tenses’.

I will review the reasons for this change of perspectives in what follows.

#### 3.1 The Grammaticality Issue

As we have seen in the preceding section, current theories on the present perfect puzzle are committed to the view that sentences like ‘*I have arrived yesterday*’ are ungrammatical. However, while these constraints observed with present perfects in English are indeed very strong tendencies, they do not seem to be inviolable. In some of the (not so recent) literature on present perfects, as well as in corpora, one finds examples of combinations of present perfects with past-denoting temporal adverbials in English:

- (1) a. We *have received* information on F.S. from you *on the 22<sup>nd</sup> of September last*.<sup>3</sup>
- b. Thank you, the point which Mr *has made yesterday*, I think will continue to make.<sup>4</sup>

<sup>3</sup> Example taken from Maurice (1935), cited from McCoard (1978: 129).

<sup>4</sup> Examples (1-b-c) found in the *British National Corpus*. Query: “has \_ yesterday”.

- c. In the event my Lord, erm, that er your Lordship felt that further guidance was required, there are the two routes that I've *indicated* to your Lordship briefly *yesterday*, [...]

It might be argued that those examples come from (substandard) dialects, involving informal speech, and which have developed a diverging grammar from standard (British) English. However, as far as I could check in the BNC, the examples in (1) come from rather formal speech situations.

Moreover, we find the same type of exceptions to the general pattern also in Spanish corpora:

- (2) a. Don Fulano de Tal y Tal *ha muerto ayer*, a las seis de la tarde.<sup>5</sup>  
D. F. d. T. y T. has died yesterday, at the six of the afternoon.
- b. [...] estaba previsto en primer término rendir un muy merecido homenaje a [...] was planned in first place give a very deserved homage to una figura de las letras argentinas que *ha fallecido ayer*, Adolfo one figure of the literature Argentinean that has deceased yesterday, A. Bioy Casares.<sup>6</sup>  
B. C.

I do not think that the examples in (1)–(2) provide us with any proof for an on-going ‘grammaticalization’ of present perfects of English or Spanish. They are too rare for that. However, the mere existence of such examples shows that in some contexts, speakers may find such constructions acceptable. Furthermore, the type of verbs we find in these examples is quite revealing: in all these contexts, the utterances are not only about a past event localized in time by the adverbial. They also carry a strong meaning component of a state resulting from that action and holding at the moment of utterance (to have received ⇒ to be in possession of; to have died ⇒ to be dead). This can be tied to a

<sup>5</sup> L. Rosales, *Cervantes y la libertad*. REAL ACADEMIA ESPAÑOLA: Banco de datos (CORDE) [online]. Corpus diacrónico del español. <http://www.rae.es> [11-09-2007].

<sup>6</sup> Recorded in a meeting of the Argentinean Senate, 1999, REAL ACADEMIA ESPAÑOLA: Banco de datos (CREA) [online]. Corpus de referencia del español actual. <http://www.rae.es> [11-09-2007].



standard descriptive notion commonly associated with perfect tenses, namely *current relevance*.<sup>7</sup>

But before discussing this further, let us focus on another question: is the present perfect puzzle really an isolated problem, or is it part of a bigger puzzle?

### 3.2 What about Competition?

Present perfects ‘live’ in a highly competitive environment: they compete against a simple past tense in all the languages discussed here. Compare (3) to (1) (on p. 74) and (4) to (2) (on p. 75):

- (3)
- a. Mary arrived {yesterday / at five o’clock}.
  - b. María llegó {ayer / a las cinco}. (Spanish)  
M. arrived yesterday / at the five.
  - c. Marie arriva {\*hier / à cinq heures}. (French)<sup>8</sup>  
M. arrived yesterday / at five o’clock.
  - d. Maria kam {gestern / um fünf an}. (German)  
M. arrived yesterday / at five on.
- (4)
- a. Einstein visited Princeton.
  - b. Einstein visitó Princeton. (Spanish)  
E. visited P.
  - c. Einstein visita Princeton. (French)  
E. visited P.
  - d. Einstein besuchte Princeton. (German)  
E. visited P.

Given that there is some room for choice in these contexts, a question emerges:

<sup>7</sup> This notion has been heavily criticized for not being precise enough (cf. Klein, 1992), and I agree with that criticism. I do think however, that *current relevance* still is a valuable notion, in that it allows us to abstract away from some technical issues of perfect semantics (Extended-Now theories vs. Anteriority theories with resulting/perfect state). As such, I will use it extensively in this paper, because my proposal is in principle independent of such technical issues.

<sup>8</sup> In French, the *passé simple* is incompatible with expressions which have a — even weak — link with the deixis (like *yesterday*).

could it be that the determining influence in the variation of present perfect tenses is not the present tense, but rather the simple past tense? Couldn't some uses of the present perfect be simply *blocked* in languages like English and Spanish?

Such a hypothesis comes with a prediction: if competition were a determining factor in the present perfect puzzle — which would turn out then to be an instance of partial blocking —, one would expect there to be restrictions against the use of the simple pasts as well, because under the assumptions presented above, the distributions of the present perfect and the simple past tenses should be interdependent.

So, is there anything like a cross-linguistic variation of simple past tenses mirroring the variation of the present perfects?

### 3.2.1 *Restrictions Against the Use the Simple Past Tense*

Some authors, like Kratzer (1998), have noticed that there are contexts in which a simple past tense could be used in English, but where it would be infelicitous in German. She points out that in a context where speaker and hearer stand in front of the church under discussion, (5-a) is infelicitous, whereas (5-b) is fine:<sup>9</sup>

- (5) a. #Wer baute diese Kirche? Borromini baute diese Kirche.  
       who built this church? B.       built this church.  
       b. Who built this church? Borromini built this church.

Exactly the same opposition can be observed between French and Spanish:

- (6) a. #Qui construisit cette église? Borromini construisit cette église.  
       How built       this church? B.       built       this church.  
       b. ¿Quién construyó esta iglesia? Borromini construyó esta iglesia.  
       Who   built       this church? B.       built       this church.

As far as I am aware, these observations have had few, if any repercussions so

<sup>9</sup> Examples in (5) from Kratzer (1998).

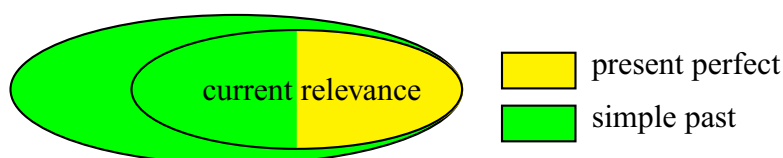
far on the discussion of perfects. Yet, note that it is generally the case that, in French and German, in some situations one cannot use the simple past tense:

- |     |                               |     |                              |
|-----|-------------------------------|-----|------------------------------|
| (7) | [Archimedes in his bath ... ] | (8) | [Kasparov to Deep Blue ... ] |
| a.  | I found it!                   | a.  | I won!                       |
| b.  | ¡Lo encontré!<br>it found     | b.  | ¡Gané!<br>won                |
| c.  | #Ich fand es!<br>I found it   | c.  | #Ich gewann!<br>I won        |
| d.  | #Je le trouvai!<br>I it found | d.  | #Je gagnai!<br>I won         |

In all of these examples, we are not talking simply about a past event of *finding* or *winning*. (8) are just as much about a current state of *possessing* or *being a winner*. From a purely descriptive point of view, one may state the following generalization: when there are some immediate repercussions of the action with the moment of utterance, or if there is some link between the event and the moment of utterance, the simple past is inadequate in German and French. And of course, this idea of ‘immediate repercussions’ can be captured also with a notion we have already come across: *current relevance*.

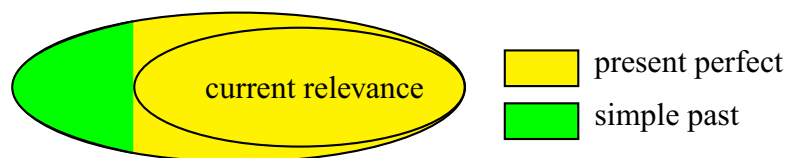
Indeed, the respective distributions of the simple past tenses and the present perfect tenses can be nicely illustrated based on this key notion of the literature on perfects:

- (9) a. English, Spanish:



The simple past is not incompatible with a current relevance reading. The present perfect is restricted to current relevance readings.

- b. French, German:



The simple past is incompatible with current relevance readings. The present perfect doesn't guarantee a current relevance reading.

We can put this in a way that makes the connection with partial blocking clearer: in English and Spanish, you *can* (almost) always use the simple past tense, and sometimes, you *have to* use the simple past tense. In these latter contexts, the present perfect is blocked. In German and French, you *can* (almost) always use the present perfect, and sometimes, you *have to* use the present perfect. In these latter contexts, the simple past is blocked.

### 3.2.2 Filtering with Bi-Directional OT (BOT)?

Blocking is one of the key selling points of BOT (cf. Beaver and Lee, 2004; Benz, 2006). 'Classical' BOT (cf. Blutner, 1999) tries to establish the optimal coupling of form-meaning pairs (i.e., the *grammatical perspective*, as van Deemter (2004) calls it). As I have argued above, however, there are reasons to shy away from hard-wiring the constraints into the core-grammar of the languages involved. However, there are extensions of BOT supposing that a grammar already pre-establishes possible form-meaning pairs, but that there is subsequent optimization to find the *best* pair among the *possible* pairs in a given context (cf. van Deemter, 2004: the *selectional perspective*). This second perspective seems to be a good candidate to deal successfully with our problem: the competition at hand can be analyzed as involving the optimal choice of a tense-form (that is: a form-meaning couple) with respect to some context of use. Alternatively, one might see it in terms of DRT as optimal embedding with respect to a model. This places the application of BOT outside the core-grammar (that is, the relation of the linguistic form with meaning), and at the

interface of grammar with the non-linguistic world (or a model of a world).

As the basic problem can be stated as one of optimal coupling, a priori, BOT in its selectional perspective should have something to say about it. However, as we will see, as it stands, BOT cannot deal with our problem at hand in a satisfying manner, and some additions need to be made.

Before turning to this matter, let me state first what underlying semantics for the simple past and the present perfect tenses I assume.

## 4 Spelling Out the Analysis

In order to be as explicit as possible concerning the forms and meanings the BOT-filter will work on, it is important to make clear my assumptions with respect to the compositional semantics of the tense-aspect system, before detailing the problems (namely an undergeneration-issue) with a standard BOT account.

### 4.1 The Compositional Semantics

I take both the present perfect and the simple past to locate an interval (the interval of assertion, according to Klein (1994)) in the past with respect to the moment of utterance. Thus, in principle, both should be available when it comes to situate an event in the past. However, I assume the present perfect to introduce a *perfect state* at the moment of utterance (cf. Portner, 2003; Nishiyama and Koenig, 2004). The listener must infer the predicate  $Q$  of the perfect state by pragmatic reasoning. This perfect state can be seen as the formal device responsible for the current relevance effect. The relevant semantics can be thus be represented as follows:

- (1) a.  $\llbracket \text{past} \rrbracket = \lambda p \exists i [i \prec n \wedge p(i)]$   
 where  $n$  is the moment of utterance,  $i$  an interval, and  $p$  a variable over propositions. ‘ $\prec$ ’ denotes a relation of strict precedence.

- b.  $\llbracket \text{present} \circ \text{perfect} \rrbracket^{10} = \lambda p \exists i, i', s [n \subseteq i \wedge i' \prec i \wedge Q(s) \wedge i \subseteq \tau(s) \wedge p(i')]$   
 where  $n$  is the moment of utterance,  $Q$  a free variable, and  $s$  is the perfect state

More generally, almost all theories of the perfect I know assume that the perfect contains some relation of anteriority, and some kind of ‘link’ between the event and the contextually fixed moment of reference. I assume that the restrictions of use of the present perfect and simple past tenses are (basically pragmatic) consequences of the presence or absence of the perfect state — and thus, of current relevance —, in a way that will be made clearer below.

## 4.2 Problems with a (naive) application of BOT

I have assumed the same compositional semantics for the present, past and perfect features in all languages under discussion. The cross-linguistic differences pointed out above should therefore come out as a result of different configurations of the filtering device. As I have argued that we face a case of partial blocking, and because BOT has been applied successfully to many cases of partial blocking, tentatively, we will try to establish a BOT filter.

Notice that, under the formulations in (1), the meaning of the PAST is less complex than the meaning of the PRESENT  $\circ$  PERFECT (i.e.,  $\text{PAST} \prec \text{PRESENT} \circ \text{PERFECT}$ ). While it is not always entirely clear how to deal with issues of complexity in the area of meaning,<sup>11</sup> in our case, the problem boils down to entailment (at least under standard assumptions about the way we conceive time), and can be considered to be unproblematic: the more complex a meaning is, the more possible states of the world it excludes.

<sup>10</sup> The form-sense mapping of the perfect, and thus, the question of which morphemes carry the present and perfect meanings is tricky, and has not yet been answered in a satisfactory way. However, recent analyses of the German “Zustandspassiv” (stative passive) by Maienborn (2008), and its resemblance with the analysis of the perfect by Nishiyama and Koenig (2004) suggest that the present component comes from the auxiliary, and that the perfect component is encoded on the participle.

<sup>11</sup> But see Merin (2003) for a discussion, and a proposition to resolve this issue.

When it comes to the complexity of the forms involved, one observes that those forms are nearly identical in all languages at hand: the simple past tense is synthetic, and shorter (in number of words, or syllables) than the analytic present perfect form (i.e., past  $\prec$  present perfect).

The great appeal of BOT comes from the fact that it is able to derive phenomena of partial blocking from these item-internal parameters of complexity. However, in the particular case we are dealing with, taking into account only these token-internal parameters will not allow us to derive the facts. The problem is the following: as BOT is a model of speaker-hearer trade-offs in order to find the optimal form-meaning coupling with respect to a context — and because these trade-offs should arguably be independent of the grammars of particular languages — BOT will only derive one pattern, and not the two patterns we are facing. Thus, BOT faces an undergeneration-issue when dealing with such a kind of partial blocking.

More specifically, under all formulations of BOT I know, one would expect the English pattern to prevail everywhere, as it maximizes the use of the ‘lighter’ simple past, and restricts the more complex present perfect. This tendency to use a marked (i.e., heavier) form to describe a marked situation, and to use an unmarked (i.e., light) form to describe an unmarked situation is reminiscent of Horn’s ‘division of pragmatic labour’ (cf. Horn, 1984: 22).

However, the German and French pattern instantiates exactly the opposite strategy: we obtain a situation where the speaker-hearer strategies associate the marked (i.e., heavier) form with an unmarked situation, and the unmarked form with the marked situation.<sup>12</sup>

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<sup>12</sup> Notice that this fact raises a puzzle for game-theoretical approaches to pragmatics — and as these approaches have been shown to be identical to BOT (cf. Dekker and van Rooy, 2000), also to BOT: A so-called ‘anti-Horn strategy’ (the German pattern) should not be able to invade a population using a ‘Horn-strategy’ (the English pattern). However, diachronically, this is exactly what we observe: the German and French patterns evolve from stages that closely correspond to the current English pattern. According to the literature on grammaticalization (cf. Bybee et al., 1994), this is even a regular and recurring change. The diachronic way of change predicted by a straightforward application of game-theory, that is, from the German

But let us now consider how and whether it is possible to amend BOT to get a grip on this particular case of partial blocking. The issue is the following: we need a means of making the present perfect ‘win’ in German-type languages. The obvious solution in OT would be to rank the constraints. However, this is not a habitual procedure in BOT. Why should the speaker-based constraints outweigh the hearer-based constraints in one language, and why should it be the other way round in another language?

Furthermore, we don’t simply want to promote one form from the position of a ‘loser’ to a ‘winner’. We need partial, not total, blocking, and we want to exploit the competition situation in order to get different interpretations for the two forms. BOT allows for this, but not unidirectional OT (cf. Beaver and Lee, 2004).

The ability to declare (arbitrarily?, but certainly extrinsically) one of the tenses ‘default’ and the other ‘marked’ would resolve all our problems (as we will see in section 4.3), but it comes at a cost: we are stuck with a non-derived notion of markedness, which does not seem to be reducible to any of the uses inventoried by Haspelmath (2006). This is certainly an undesirable situation — which should be eliminated in the end —, but let us first check how the blocking device (BOT + a markedness parameter) could work.

### 4.3 Implementing the Blocking Device

The basic assumption for the implementation of the blocking device is the following: a speaker has to choose from two alternative ways of expressing that the interval of assertion is situated before the moment of utterance. One is marked, the other is the default form. The use of the marked form triggers pragmatic effects, and depending on which form is marked, the pragmatic effects will be different. There are two configurations:

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to the English pattern, however, seems to be extremely rare, or maybe even nonexistent.



(2) a. English, Spanish:

Default form:	Marked form:
Simple past tense	Present perfect
↓	↓
no pragmatic effect	triggers pragmatic reasoning

b. French, German:

Default form:	Marked form:
Present perfect	Simple past tense
↓	↓
no pragmatic effect	triggers pragmatic reasoning

We need to keep in mind that the main difference between a simple past and the present perfect tense is the presence of a perfect state in the latter.

If the simple past is the default form, we have two cases to consider: if a speaker uses a simple past, the event may or may not have any particular consequence at the moment of utterance. No inference can be derived from the use of the default. However, if a speaker uses the marked present perfect, the following questions and inferences will arise: in using a tense containing a perfect state when he didn't have to, the speaker invites the listener to infer that he commits to the existence of some special consequence of the event at the moment of utterance.

Let us check how we can derive the infelicity of sentences like '*John has died yesterday*' in English. Assuming that the speaker always goes for the default form, unless there is a good reason to avoid it, the preference for the simple past in such sentences is an instance of the second maxim of quantity (*Do not say more than you need*). However, a speaker might choose the present perfect if he considers the localisation of the event, as well as the resulting perfect state, to be necessary to be communicated.

If the present perfect is the unmarked form, there are also two cases to consider. If the speaker uses the default present perfect, the event may or may not have any particular consequence at the moment of utterance; the default is not informative. However, if the speaker uses a simple past tense, the listener will

ask himself why the speaker unnecessarily used a tense containing no perfect state, and infer then that it is because the speaker commits to the non-existence of special consequences of the event at the moment of utterance.

Let us consider why a sentence like ‘*I found it!*’ is infelicitous in German. Assuming again that the speaker chooses the default unless he has reasons to avoid it, the use of a perfect-state-less simple past will indicate to the hearer that the speaker does not believe that there is a consequence of the event for the moment of utterance. But if there is nothing in the context to attach the finding-event to, the use of a simple past will be a violation of the first maxim of quantity (*Say as much as you can*).

Under the assumptions presented above, it follows straightforwardly why the variation is restricted to present perfects and simple pasts. Other perfect forms (finite or non-finite) do not compete in the same way with a “simple” tense, that is, a tense without a perfect state. For instance, there is no alternative to a past perfect without a perfect state (i.e., anteriority of the interval of assertion (or the eventuality) with respect to a point of reference situated before the moment of utterance), which would have the semantics outlined in (3-b), and therefore, no blocking can arise:

- (3) a.  $\llbracket \text{past} \circ \text{perfect} \rrbracket = \lambda p \exists i, i', s [i \prec n \wedge i' \prec i \wedge Q(s) \wedge i \subseteq \tau(s) \wedge p(i')]$   
 b.  $\llbracket \text{past} \circ ? \rrbracket = \lambda p \exists i, i' [i \prec n \wedge i' \prec i \wedge p(i')]$

This assumption also allows for a verifiable, cross-linguistic prediction: according to a pragmatic, competition-based account, no language having only one one-step past-referring tense should display any restriction reminiscent of the present perfect or simple past puzzles. However, if a semantics- or syntax-based account is correct, such a language might exist.

Summing up, the filtering device based on basically Gricean pragmatics seems to work, and to give us a good description of the data. Still, the present account suffers from a lack of explicative power, as the stipulated markedness parameter seems to be completely *ad hoc*, and in a way that appears to be diffi-

cult to amend — at least when it is considered on a purely synchronic level of analysis.

## 5 Synchronic Markedness as a Consequence of Diachronic Processes

The undergeneration-problem of standard BOT when applied strictly synchronically to the distribution of the present perfect and simple past tenses is not the only issue with BOT as a general theory of partial blocking. As noted by Benz (2006), BOT faces important problems of overgeneration as well, predicting cases of partial blocking in contexts where they aren't attested.

The main insight in Benz (2006) is that at least certain kinds of partial blocking phenomena cannot be explained solely in the light of a synchronic snapshot, by resorting to an algorithm like the one provided by BOT, or by more traditional-looking formalisms like the one proposed by Horn (1984). Benz insists on the necessity of a learning mechanism (which he calls *associative learning*), and the diachronic process necessary for the partial blocking to evolve. It is on top of these diachronic learning processes that BOT (or game theory) comes into play.

It is well-known that the distributions of the one-step past-referring tenses in contemporary German or French are the result of a long diachronic process. It is also well known that present perfects — deriving often from resultative forms — frequently become past tenses in the course of history (cf. Meillet, 1909/1982, 1912/1982). In the process, they displace the ancient simple past form — which may eventually die out.<sup>13</sup> Languages like English and German can be seen to exemplify different stages in this development.

In a first stage, exemplified by classical Latin, there is only one one-step past-referring tense, which necessarily is the default. In a second stage,<sup>14</sup> the

<sup>13</sup> Nothing requires the present perfect to be the winner in the diachronic change: in at least some dialects of Brazilian Portuguese, the present perfect is extremely restricted, and the simple past prevails in almost all contexts (cf. Laca et al., to appear).

<sup>14</sup> This could be a situation such as we observe in most varieties of contemporary English. Note

past tense is still dominating (and thus default). However, a present perfect form has become available.

Then, in a third stage, the present perfect is used more and more, and eventually becomes the default for some areas.<sup>15</sup> Finally, the present perfect becomes default everywhere, and the simple past tense is restricted to non-current relevance contexts (e.g., contemporary standard German). If the old simple past tense disappears completely, we are back at the beginning of the circle.

How is it possible to understand this shift of the present perfect to a more and more past-tense like meaning? An analogy sometimes advanced is *inflation* (cf. Dahl, 2001). The basic idea is the following: by resorting to a marked, unusual form, the speaker invites the hearer to induce a certain type of meaning effect. However, the more a speaker exploits such an effect, the smaller that effect will become, because the hearer gets used to it, or even anticipates it. Therefore, the frequency of a form is not only an indicator for a grammaticalization-process, but also a factor in this process (cf. Bybee, 2003).

In our case, the effect produced initially (thus in languages like English) is one of current relevance, induced by the presence of a marked perfect state where the default would have been not to use one. However, in most contexts the current relevance effect should be deducible by general pragmatic principles, without any additional formal marking. Why indeed should somebody mention an event that wouldn't be relevant in the utterance context? If the frequency of present perfects remains low, the hearer could deduce that the events appearing in present perfect have some particular importance, but the higher the frequency of this tense becomes, the less informative its use will be for the hearer. At some point, there may occur a swap in 'polarity': if the use of the marked form becomes that frequent that it is expected everywhere, it is not its appearance, but

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that it is in the period between the first and the second stage that the essential part of what is strictly speaking the *grammatical* change of the perfect takes place.

<sup>15</sup> Cf. the "rule of the 24 hours": an event that occurred during the current day takes the present perfect; if it happened before, the simple past must be used. This is exemplified in contemporary Iberian Spanish, or in 17<sup>th</sup> century French.

its absence that will become informative for the hearer. Thus, we get a situation resembling the German distribution.

In this way, we can tie the markedness-effect (and swap) indirectly to a parameter of frequency in synchrony,<sup>16</sup> although considering the synchronic side of things isn't enough. Learning processes, as Benz (2006) has clearly shown, are crucial for the derivation of partial blocking phenomena, and form a necessary complement to BOT in a general theory of partial blocking.

## 6 Conclusion

In this paper, I have shown that the present perfect puzzle should be seen as a part of a bigger whole, namely the cross-linguistic variation of one-step past-referring tenses. I have argued that its analysis must involve partial blocking, and I have shown its implications for BOT — namely an undergeneration-issue. This problem can be resolved by adding a markedness-parameter to the theory.

Finally, I have tried to reconsider the synchronic algorithm of BOT in a diachronic perspective, following the lead of Benz (2006), in order to motivate the markedness parameter.

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*Gerhard Schaden*  
*CNRS Laboratoire de linguistique formelle*  
*30, rue du Château des Rentiers*  
*75013 Paris*  
*France*  
*gerhard.schaden@linguist.jussieu.fr*