Partial Inversion in English

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Abstract

A typical finite clause in English has a single constituent that serves as subject. This constituent precedes the finite verb in non-inverted clauses like simple declarative clauses, follows the finite verb in inverted clauses like polar questions, agrees in person and number with the finite verb and with a tag subject when a tag is present, undergoes subject raising, and so on (Postal 2004). Five constructions violate these generalizations and in the literature have called into question the identity of the subject constituent. In each of these five constructions the finite verb agrees with a following constituent in a declarative clause despite the fact, among others, that the constituent preceding the verb exhibits subject behaviors of the kind identified by Keenan (1976). To the authors' knowledge, despite intensive analysis of several of these patterns, the group as a whole has not been subject to prior study. The constructions are: Presentational Inversion (e.g., *On the porch stood marble pillars*), Presentational *there (e.g., The earth was now dry, and there grew a tree in the middle of the earth,* Deictic *there* (e.g., *Here comes the bus*), Existential *there* (e.g., *There's a big problem here*) and Reversed Equative *be* (e.g., *The only thing we've taken back recently are plants*). The approach of Sign-Based Construction Grammar (Sag 2012) enables us to establish precisely what all five patterns have in common and what is particular to each, revealing that a constructional, constraint-based approach can extract the correct grammatical generalizations, not only in 'core' areas of a grammar, but also in the hard cases, where concepts such as *subject,* which readily handle the more tractable facts, fail to fit the facts at hand. We see further that the five split-subject patterns, sometimes identified as clausal, yield to a strictly lexical analysis.

0. Introduction

Canonically, a finite clause in English has a single constituent that serves a subject. This constituent precedes the finite verb in non-inverted clauses such as simple declarative sentences, follows the finite verb in inverted clauses such as matrix questions, agrees in person and number with the finite verb and with a tag subject when a tag is present, undergoes subject raising, and so on (Postal 2004). Five non-canonical constructions violate these generalizations and in the literature have called into question the identity of the subject constituent. In each of these five constructions the finite verb agrees with a following constituent despite the fact – among others – that the constituent preceding the verb exhibits subject behaviors of the kind identified by Keenan (1976). An example demonstrating the subject-raising property is shown in (0):[1]

(0)   Out of the woodwork during their show seemed to emerge all of these really big meat-head type guys and
        they started moshing hard.

Such cases involve what might be considered a competition between preverbal and postverbal constituents for the status of traditional subject: while the PP argument acts like the syntactically privileged argument of *emerge* for the purposes of raising, the NP argument also bears indices of this privilege, as the only obligatory argument of *emerge* and the one that in finite contexts determines its inflection. While the postverbal nominal argument fulfills one of the conditions sufficient for subject status (controlling verb agreement), the preverbal setting argument fulfills two (the ability to undergo raising and preverbal position).[2] We refer to this situation, and the constructions that participate in it, as *partial inversion*. Regarding such cases, especially the ones we term Presentational Inversion (PI, often referred to as Locative Inversion[3]) and Existential *there* (E-*there*)*,* there is an extensive literature, often involving arguments about whether the preverbal constituent is to be regarded as

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[1] All positive numbered examples were retrieved from Google searches at the time of drafting, except as otherwise noted.
[2] This situation is relevant to Keenan's (1976) proposal concerning the separability of subject properties that coalesce in canonical cases. Keenan's enterprise, however, is typological, and his goal is to characterize each language's subject as having a particular cluster of subject properties. The competition scenario, by contrast, is separability of subject properties observed within a single language and a single construction. It is a scenario in which subject properties (indicia of syntactic privilege) accrue to distinct arguments within a given predication, as in a range of cases discussed by Van Valin and LaPolla (1997: chapter 6).

[3] We follow Postal (2004) in rejecting the term Locative Inversion in light of attested examples, to be discussed in Section 4, in which the preverbal constituent does not express a location. In employing the term "Presentational Inversion" for this pattern, we do not intend to imply that no other patterns are "presentational" or illustrate "inversion." For example, the pattern we term "Presentational *there*" has both properties.

subject, and, if so, in what sense (including Bresnan 1994, Postal 2004, Kim 2003, Culicover & Levine 2001, Bruening 2010, Schachter 1992, Webelhuth 2011, and Salzmann 2013, among others, for Presentational Inversion). The five maximal constructions[4] we will be concerned with are Presentational Inversion (PI), Presentational *there* (P-*there*), Deictic Inversion (DI), Existential *there* (E-*there*), and Reversed Equative *be* (RE-*be*)*,* illustrated in (0)-(0).[5]

(0) **Presentational Inversion** [PI] (AKA Locative Inversion)
      a. But then emerged suddenly a new fear.
      b. From despair arose the greatest nation.
      c. [On the river the moon produced a comforting glow] and in the distance shown rays
        of lightning ...
      d. [Down at the harbor there is a teal-green clubhouse for socializing and parties.] Beside
        it sparkles the community pool. (*Vanity Fair*, August 2001)

(0) **Presentational *There*** [P-*there*]
      a. There will arise someday a pharoah [sic] that does not know Joseph.
      b. With humans there emerged the incredibly enlarged forebrain and an equally incredible capacity for
        programming the forebrain to consciously deal with the survival task requirements for forecasting that face
        all of us daily.
      c. But there began a series of upheavals, he says, "directed chiefly towards the
        northern hemisphere almost exclusively,"...
      d. There then developed games of being chased and caught and from time to time he
        wanted me to pick him up in my arms like a baby,...

(0) **Deictic Inversion** [DI]
      a. Here come the robot lawyers.
      b. There goes the bus ...
      c. There's my Dad with a bunch of cowboys ...
      d. Here came the waitress. She had on a mini-skirt, high heels, see-through blouse with
        padded brassiere.

(0) **Existential *There*** [E-*there*]
      a. Is there really an elephant in the garden?
      b. There are likely to be problems with the finale.
      c. There remain three issues to be addressed.
      d. There exist two possible solutions.

(0) **Reversed Equative *Be*** [RE-be]
      a. My biggest worry are the injury risks.
      b. ... your best bet are places where the shoreline drops off quickly...
      c. My worst nightmare were the soups she would make for dinner.
      d. But the problem were the raiders outside the town...

We distinguish these agreement patterns from others in which a post-verbal constituent embodies all of clause's subject properties, as in auxiliary-initial clauses, (0)a; quotative inversion, (0)b; or predicate pre-posing, (0)c.

(0)   a.   Never has he looked so happy. May you triumph! Are you home?
       b.   "I love you too," said my mother.
       c.   Also intact were the auditory pathways and the motor pathways to the speech organs.

While the examples in (0), like those in (0)-(0), illustrate postverbal agreement, they do not exemplify *partial* inversion because they lack distribution of subject properties over more than one constituent.

In each of the five partial-inversion cases, the finite verb agrees with a post-verbal constituent which receives discourse-pragmatic focus. This constituent is not necessarily the immediate postverbal constituent, as illustrated by examples (0)a and (0)a. By considering all five cases of partial inversion together, we will attempt to demonstrate that the question of which

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[4] Maximal constructions license the types that occupy terminal nodes in an inheritance hierarchy of typed feature structures, to be discussed later. Non-maximal constructions express cross-constructional generalizations.
[5] SBCG is a declarative, constraint-based framework. We retain the term "inversion," despite its association with procedural approaches, for the sake of continuity with traditional terminology. Similarly, with "raising," etc.

constituent is the subject is not a fruitful one. Rather, we propose, in Sign-Based Construction Grammar (SBCG, Sag 2010, 2012, Kay and Sag 2012, Michaelis 2012, Chaves 2014, Van Eynde 2015), a uniform analysis, which captures formally the properties that the five patterns have in common, uses no special-purpose machinery to describe either the inflectional properties of the quirky-agreement patterns or their constituent structure, and accounts economically, in an approach that does not rely on the concept *subject,* or on case properties of arguments, for the distribution of properties of canonical 'subjects' across the various constituents of the five constructions. In addition, we will show that the SBCG formalism is capable of portraying precisely the discourse-pragmatic and aspectual properties of the constructions in this 'family', as they are revealed by attested English sentences. For example, we will argue – against the prevailing view – that the PP 'subject' of PI does not necessarily denote a topic or 'discourse old' referent (*pace* Bresnan 1994, Birner and Ward 1998, Webelhuth 2011, Salzmann 2013). The approach taken here offers significant additional analytic benefits, in that it accounts for heretofore unacknowledged variation in formal and interpretive properties of partial inversion predications. The parameters of variation to be addressed are these: (i) a verb appearing in the PI pattern need not be intrinsically locative-selecting; (ii) the preposed element in PI is not necessarily referential; (iii), E-*There* predications (illustrated in (0)) and equative-*be* sentences that are not reversed like the ones in (0) need not feature post-verbal agreement. We suggest here that a single construction, the Split Subject Construction – a licensor of a particular lexeme-lexeme relationship – captures all properties common to the five patterns, including their argument structure, their agreement properties and their use conditions. We hope to demonstrate the parsimonious character of a monostratal, highly lexical, localist, constraint-based, approach over approaches admitting of inaudible constituents (Postal 2004, Bruening 2010), movement (see Salzmann 2013 for references to earlier treatments in the GB/Minimalism tradition), or of several distinct dimensions of structure (Bresnan 1994). Our analysis is strictly lexical in that no phrasal construction is required to license any of the examples (0)-(0) that is not also required to license clauses exhibiting canonical subjects and canonical agreement. All of the non-canonical properties hold in the lexicon. Finally, on a methodological note, we encounter and clarify several instances in which theoretical analyses have been built on intuitive grammaticality judgments against which the web furnishes compelling counterevidence.

SBCG assumes that a language consists principally in a non-finite set of *signs*. Signs are modeled as functional feature structures (FSs) assigning values to the features PHONOLOGY (PHON),[6] (morphological) FORM, ARGUMENT STRUCTURE (ARG-ST), SYNTAX (SYN), SEMANTICS (SEM), and CONTEXT (CNTXT). SBCG recognizes a second type of model object: a *construct* models a local tree as a functional feature structure with two features: a MOTHER (MTR) feature, whose value is a sign, and a DAUGHTERS (DTRS) feature, whose value is a non-empty list of signs.[7] As is common in constraint-based approaches, a strict distinction is maintained between elements of the language model, e.g., signs and constructs, and elements of the grammar which license them: *listemes* and *constructions*. A *listeme* licenses a lexeme or a phrasal lexical expression. Constructions are of two types, *lexical class constructions*, which, in combination with listemes, describe classes of *lexemes*, and *combinatorial constructions*, which describe classes of *constructs*, local trees. A lexical rule in SBCG is a combinatorial construction with a single daughter. The Split Subject (SS) Construction, which we take up section 1, is a lexical rule, a non-branching local tree. It plays a major role in the analysis of partial inversion. A somewhat more detailed introduction to SBCG, based on Kay & Michaelis (forthcoming) and Kay, Sag & Flickinger (ms), is present in the Supplementary Information (SI.1). For a thorough introduction to SBCG, see Sag 2012.

The remainder of this paper is structured as follows. Section 1 introduces the Split Subject Construction, which encapsulates the unity of the partial inversion phenomenon by specifying what the five types of partial inversion have in common. Section 2 discusses Presentational Inversion (AKA Locative Inversion). Previous arguments regarding the location and category of "the subject" of a PI clause are discussed, leading to the conclusion that that search is essentially chimerical. Section 3 treats Presentational-*There*. Section 4 is devoted to Deictic Inversion. Section 5 treats Existential-*there*. Section 6 discusses Reversed Equative *be*. Section 7 presents our conclusions.

1. The Split Subject Construction

Without elaborating a full theory of agreement,[8] we follow the general approach of Pollard and Sag 1994 (P&S): 60-99 in proposing that the inflectional properties of English finite verbs reflect certain interpretive properties of one privileged argument. Canonically, in English the Agreement Source (AS) is the external argument (XARG). In split-subject verbs, the AS

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[6] The PHONOLOGY feature is not relevant to the material of the present chapter and will not be included in our diagrams.
[7] Since signs do not contain a DTRS feature and since constructs are limited to local trees whose daughters are signs, all non-local dependencies are encoded in SBCG as a sequence of local dependencies. A tree that spans more than two levels of structure can be interpreted as illustrating the successive embedding of constructs that contributes to the *analysis* of the licensing of the root sign but does not correspond to any model object in SBCG. This aspect of the theory constitutes an explicit claim about the predominantly local nature of dependencies in human languages (see, for example, Sag 2007).
[8] For a fully developed theory of agreement within a closely related, constraint-based approach, see Wechsler and Zlatić 2000, 2003 (W&Z). See also Kathol 1997 and Wechsler 2011.

and the XARG are distinct. The Supplemental Information (SI.2) contains further description of our approach to agreement within SBCG.

The Split-Subject Construction (SS) licenses a unary branching structure, that is, a mother with a unique daughter. Constructions of this kind implement the concept of lexical rule (Müller & Wechsler 2014). SS is also a *derivational construction,* that is, one which specifies a DTRS list – in this case singleton – containing *lexical signs* (words or lexemes) and a lexeme mother (Sag 2012: 119 ff.). As noted, the single daughter of SS is of the type *intransitive-verb-lexeme.* The mother is of the type *split-subject-intransitive-verb-lexeme* (*s-s-intrans-v-lxm*). The type *split-subject-intransitive-verb-construct* plays an essential role in each of the five patterns of partial inversion.

In SS the mother's XARG is distinct from the daughter's. The XARG of the mother of a split-subject construct may or may not also be a complement of the daughter. This point has particular bearing on the analysis of PI. While Bresnan (1994) and Kim (2003) assert that the initial constituent in PI must be an argument of the lexical verb, this appears not to be the case. Bresnan presents the constructed data in (0) (Bresnan 1994 ex. 13):

(0)   a.   Among the guests was sitting my friend Rose.
        b.   *Among the guests was knitting my friend Rose.

Compare to (0) the attested example in (0).

(0)   And there, in the midst of the swirl, was smiling Sam Waksal – a reedy, charming
        bachelor biotech entrepreneur ...[9]

Attested examples like (0), in which the fronted constituent in PI is not an argument of the lexical verb, are common (see the wide array of examples in (0) below, and will give us cause to reject Bresnan's (1994) view of PI as a topicalization pattern.[10]
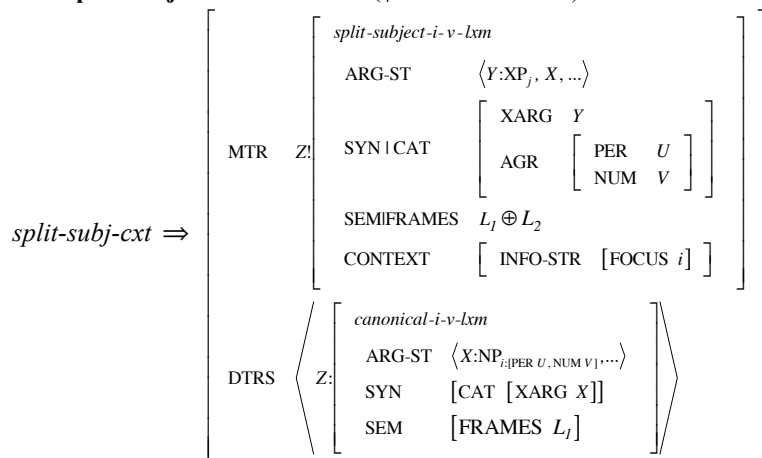
In the mother of a *split-subject-construc*t, the AS is not the XARG; it is an internal argument and is identified with the XARG of the daughter. In creating an external argument that is not the AS, SS effectively splits canonical subject properties between the 'new' and 'old' XARGs. The lexeme types that directly license PI, P-*there*, DI, E-*there,* and RE-*be* are all subtypes of *s-s-intrans-v-lxm*. Since in each case the preverbal, non-agreeing constituent appears in subject position in a simple declarative clause, this analysis contrasts with many approaches to PI (e.g., Bresnan 1994, Postal 2004, Kim 2003, Bruening 2010), which analyze the preverbal constituent of PI as occupying a filler position in an extraction structure. As compared to the present analysis, an extraction analysis posits unnecessary syntactic structure. The unmotivated syntactic structure is avoidable in an analysis that divides canonical subject properties between two constituents.

In a finite PI, P-*there*, DI, E-*there*, or reverse RE-be clause, the verb is inflected in accordance with the PER(son) and NUM(ber) values of the eventual post-verbal (internal but nevertheless agreement-triggering) argument by an inflectional construction that is sensitive to these values and to the V(erb)F(orm) and TENSE values of the verb. An example of such an inflectional construction is presented in the Supplementary Information section, SI.2.

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[9] Out of context, it might appear that (0) favors a reading in which 'smiling' is an adjective modifying Sam Waksal. However, in the original text the following sentence is, "That night Waksal had particular reason to celebrate: not only was the party a perfect amalgam of all that he had aspired to ... but 2001 had been the defining year for his long-struggling business." This suggests that *smiling* is indeed a progressive participle in (0), denoting SW's current state. See http://www.vanityfair.com/news/2002/06/imclone-cancer-drug-sam-waksal, for the full context.

[10] Salzmann (2013) notes similar examples of fronted elements that are not arguments of the PI verb. He points out that these facts are inconsistent with standard analyses in the GB/MP tradition, in which the fronted constituent originally occupies Spec,TP, and also with argument-structure analyses like Bresnan's, in which the fronted element must be included in the inherent argument structure of the verb.

(0) **The Split-Subject Construction** (↑ *derivational-cxt*)

$$
\textit{split-subj-cxt} \Rightarrow
\begin{bmatrix}
\text{MTR} & Z! &
\begin{bmatrix}
\textit{split-subject-i-v-lxm} \\
\text{ARG-ST} \quad \langle Y{:}\text{XP}_j,\ X, \ldots \rangle \\
\text{SYN}\,|\,\text{CAT}
\begin{bmatrix}
\text{XARG} \quad Y \\
\text{AGR}
\begin{bmatrix}
\text{PER} & U \\
\text{NUM} & V
\end{bmatrix}
\end{bmatrix} \\
\text{SEM}\,|\,\text{FRAMES} \quad L_1 \oplus L_2 \\
\text{CONTEXT} \quad [\,\text{INFO-STR}\ [\text{FOCUS}\ i]\,]
\end{bmatrix} \\[4ex]
\text{DTRS} & &
\left\langle
Z{:}
\begin{bmatrix}
\textit{canonical-i-v-lxm} \\
\text{ARG-ST} \quad \langle X{:}\text{NP}_{i:[\text{PER}\ U,\ \text{NUM}\ V]}, \ldots \rangle \\
\text{SYN} \quad [\text{CAT}\ [\text{XARG}\ X]] \\
\text{SEM} \quad [\text{FRAMES}\ L_1]
\end{bmatrix}
\right\rangle
\end{bmatrix}
$$

The notation (↑ *derivational-cxt*) indicates that the *split-subject-construct* type is a subtype of *derivational-construct*. The mother's type is *split-subject-intransitive-verb-lexeme* (*s-s-i-v-lxm*). The tag X identifies the daughter's external argument with the second (internal) argument in the mother's ARG-ST list. The similar but non-identical composite feature-structure tags, 'Z:' on the unique daughter and '$Z!$' on the mother, indicate that the two feature structure descriptions are the same in all respects in which they are not explicitly shown to differ. (See Sag 2012:125 fn.71 for further discussion of this notational convention.) The ARG-ST list of the mother differs from that of the daughter in containing an external argument Y that is distinct from the external argument X of the daughter. Recall from the discussion above that the XARG of the mother may or may not be an argument of the daughter. The AS, tagged X, of the mother is the XARG of the daughter, but not the XARG of the mother. The SEM value of the mother differs from that of the daughter in that it contains a list of frames of unspecified membership L_2 in addition to those of the daughter L_1.[11] In some of the maximal constructions that inherit Split Subject, frames are present in the mother that are not present in the daughter; when this does not occur, L_2 is the empty list.

SS is a pragmatically specialized construction: it requires the internal argument of an *s-s-i-v-lxm* to fill the role of focus . The internal argument is realized as the postverbal NP in a simple declarative clause headed by a split-subject verb. In the terms of Birner (1996: 90) and Huddleston and Pullum (2002 [CGEL]), the postverbal argument is not necessarily discourse new but is never discourse older than the argument appearing in subject position. (The original observation, restricted to PI, is to our knowledge due to Birner 1996: 90). More generally, we follow Lambrecht 1994 (see also Lambrecht and Michaelis 1998) in viewing focus as a discourse relation rather than a simple discourse status. In the relational treatment, a focal argument constitutes an unpredicted argument in a predication. An argument is unpredicted in this sense when it is construed as identifying a variable in a discourse-presupposed open proposition, as in narrow- or argument-focus predications, e.g., *CONGRESS is to blame*. An argument is also unpredicted when both it and the predicator that selects it are discourse new; such is the case in sentence-focus or thetic predications, e.g., *Your SHOE'S untied*. While the majority of SS predications are sentence-focus predications, in that neither the relation denoted by the verb nor the postverbal argument are discourse-presupposed, nothing hangs on this, since the postverbal argument is focal whether the property denoted by the SS verb can readily be construed as a contextually given, as in the case of *was sitting* in (0)a above – we can assume that a certain number of guests will be seated at any given time – or not, as in the case of *was smiling* in (0) above – we cannot assume that any of them were smiling.

As we have defined it, SS does not depend on, or indeed reliably correlate with, the case of the focal argument, the AS. In particular, there is no necessary correlation between verbal inflection and nominative case in English. While nominative pronominal arguments are attested in what Borer (2005: 256) calls V1 contexts in English (0), such tokens have an archaic flavor, and this pattern is less prevalent than that in which the pronominal argument is accusative (0).[12]

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[11] Subscripted, capital, italic L is used to tag lists. The symbol '$\oplus$' denotes concatenation of lists. For example, If $L_1 = \langle a,b \rangle$ and $L_2 = \langle c,d \rangle$, then, $L_1 \oplus L_2 = \langle a,b,c,d \rangle$.

[12] For example, Searching COCA for the sequence "There BE[fin] personal_pronoun[1p]", one finds 144 (89%) legitimate hits for *me/us* vs. 18 (11%) legitimate hits for *I/we*. (Illegitimate hits are typified by parentheticals such as *there is, we believe, ...*).

(0)	a	There in the crowds stood I…
	b.	July 4th is for boys playing baseball and in 1962 here stood I, a Youth of Endless Summers patiently waiting for the perfect pitch.
	c.	Only a fool goes to fight an army alone, yet here stand we Christians on the battlefield.
	d.	There are they who say they believe there is no God.

(0)	a	There in the doorway stands me, a wide framed 6'2" mexican dude.
	b.	And there goes me again posting random stuff along the way.
	c.	But there sat the mackerel and there sat us and for five minutes neither the fish nor the actors moved.
	d.	Save for God's grace (and a few worldly breaks), there go us.
	e.	The portal opened. The swirling blood squirmed around the sky again. There stood us.
	f.	Hes [sic] your life? If you break up, there goes him AND your life.

Borer observes that V1 constructions across languages "have presented a problem for theories of nominative case assignment and agreement" (ibid), noting that the nominative case pattern of (0) (rather than, say, the accusative pattern of (0), is unpredicted unless, for example, one assumes "LF movement to nominative position" or some similar mechanism. The advantage of any such strategy is unclear, because it fails to predict the alternative accusative case pattern in (0). Likewise those theories that do predict non-nominative post-verbal arguments like those in (0), through structural accusative or inherent partitive case assignment (as in Belletti 1988) run afoul of the facts of (0). We thus agree with Borer's assessment that a universal (by which we understand *non-construction-particular*) approach to case assignment in such patterns is not feasible.

In sum, the Split Subject Construction is a derivational construction with a single lexeme daughter. It licenses a mother of type *split-subject-intransitive-verb-lexeme*. The verbs that head VPs and clauses of the types illustrated in (0)-(0) instantiate the type *split-subject-intransitive-verb-lexeme*. The Split Subject Construction does the job of creating, on the basis of a canonical intransitive verb, a non-canonical version of that verb in which the external argument and the AS are dissociated. Having captured, by means of the Split Subject Construction, the properties common to the class of partial-inversion lexemes, we now turn to the five distinct classes of partial-inversion lexemes listed in the introduction: Presentational Inversion (section 4), Presentational *there* (section 5), Deictic Inversion (section 6), Existential *there* (Section 7) and Reversed Equative *be* (Section 8).

2. Presentational Inversion (PI)

In this section we first motivate the derivational construction that licenses PI verbs (Subsection 2.1) and then defend the specific part to the analysis that specifies the setting argument to be the syntactic XARG, rather than the filler of a filler-gap construct.

2.1 A Lexical Analysis

As noted earlier, a fundamental assumption of Bresnan's (1994) analysis of PI is that the fronted element in PI is an inherent argument of the lexical verb. We will argue that this assumption is incorrect and thus that a crucial condition of Bresnan's analysis is unfulfilled. Bresnan's argument depends in part on the widely shared hypothesis that in constituent structure the initial element of a PI declarative clause is in extracted position – Spec,CP in current parlance (Postal 2004, Kim 2003, Bruening 2010, among others). She argues that universally, only NPs can occur in the c(onstituent)-structure positions reserved for subjects or objects. Locative arguments in English (unlike those in Chichewa, a classifier-agreement language) cannot be realized as NP. As a PP, a locative argument (e.g., that of *lives* in (0)a below) cannot be realized as a c-structure subject; it can, however, take the role of a grammaticized topic, analogous to the pre-clausal topic expressions that appear in topicalization sentences (e.g., *That I'm not so sure about*). Such topics are considered f(unctional)-structure topics. Just as a pre-clausal topic expression in a topicalization sentence characteristically shares its referential and syntactic properties with a gap in the following clause, PI is said to involve "the identification of the values of two functions in f-structure": the grammaticalized discourse function TOP (the role of the pre-clausal oblique expression) and the syntactic function SUBJ, the role that would be occupied by the locative argument were it an NP (Bresnan 1994: 106). Assuming further that "the f-structure attributes of the topic and the gap must be identical" (p. 118), and that these attributes include case and agreement features, Bresnan predicts acceptability contrasts like those in (0) (Bresnan's example 120) on the grounds that *pleases* has a subject-case gap while *in San Jose* has an oblique case feature.

(0)	a.	In San Jose lives a woman..
	b.	*In San Jose pleases me.

In the analysis of PI to be given below, in which PI constructs are defined as a type of SS construct, nothing prevents the oblique external argument of the mother lexeme from being realized in the canonical subject position of a subject-predicate clause (the phrasal realization of PI arguments will be illustrated in the derivation tree given in (26) below). This analysis predicts the acceptability contrast in (0) from the fact that PI requires the input verb to be intransitive while *please* is transitive. No unusual constituent structure is posited for PI; the PI sentence in (0)a has the constituent structure of an ordinary subject-predicate sentence – that is, one in which the external argument is an NP. In this respect, we differ from Bresnan, who proposes a constituent-structure analysis of PI in which the S to which the initial, *setting,* element is adjoined exhaustively dominates a VP (see her Figure 3, p. 105). In addition to providing a simpler syntactic analysis, we offer one that conforms more closely to the linguistic facts as we observe them.

First, as we will note in connection with cleft and interrogative examples in (0) below, the pre-clausal oblique expression in PI need not have the discourse-pragmatic role of topic and may in fact have a focal referent. Since the locative expression in PI is not necessarily a topic, a rationale for analyzing PI as an instance of topicalization is lacking. Secondly, we observe that the initial element in a declarative PI clause need not be an obligatory argument of the lexical verb. This is shown in (0).

(0) a.   In the bed was sleeping a young woman with long, dark hair.
     b.   ... and in the distance glowed the lights of a small town.
     c.   From the mast flapped the banner of King Aurelius and of Braime.
     d.   ... and in the distance glowed a dim unnatural light which penetrated the remotest parts of the cavern.
     e.   On the horizon shimmered the mirage.
     f.   Under the tree were playing a group of dirty children.
     g.   Nearby grazed some horses...
     h.   In Maria's sticky hand melted a chocolate-chip ice-cream cone. (Birner and Ward 1998: 193)
     i   And in this lacey leafage fluttered a number of grey birds with black and white stripes and long tails. (Levin and Rappaport Hovav 1995: 226)
     j.   Down at the harbor there is a teal-green clubhouse for socializing and parties. Beside it sparkles the community pool. (*Vanity Fair*, August, 2001)
     k.   Beside it glowed the delicate apricot, whose scent was like a woman's perfume.
     l.   Inside it buzzed a flying insect, furry-bodied and gray.

The fact that PI permits verbs – like *flap*, *shimmer*, *melt, sparkle* and *buzz* – that assign no locative argument seriously weakens the case for topicalization in PI. In examples like those in (0) there is no gap within the clause to share f-structure attributes with the pre-clausal oblique expression. Unselected initial PP arguments are readily accommodated by the present analysis: to rely on a derivational construction as the licensor of PI lexemes is in fact to anticipate a possible valence mismatch between the two lexemes mediated by the rule. According to the SS construction in (0), the argument that serves as XARG in the mother lexeme need not belong to the ARG-ST list of the daughter lexeme.

However, the present analysis does share with Bresnan's a lexicalist approach, which distinguishes it from recent phrasal analyses like that of Bruening (2010). An advantage of the lexicalist view is that by factoring phrasal information out of the PI construction, it can account for the variety of phrasal expressions in which PI is evidently operative, according to canonical syntactic processes. While all of the examples of PI that we have seen thus far have been simple declarative (Subject-Predicate) sentences, with the initial constituent appearing immediately adjacent to the finite verb. This is not the case in general. PI interacts both with various filler-gap constructions and with Raising in a way that renders any phrasal analysis problematic, as shown in (0).

(0)   a.   These are phrases, riffs, from which I hope will emerge in time a full composition, an eschatological aesthetic of music. (relative clause)
      b.   From whence will come any help? (matrix wh-question)
      c.   The queen, who guessed from whence came such perfidious suggestions, with one word reduced these pretended disclosures to their proper value. (embedded wh-question)
      d.   Did out of this impasse come existentialism, a belief that man could define his temperament and impose meaning on the world? (polar interrogative)
      e.   However, it was out of the left wing that came the whole post-modernist ...view (cleft)
      f.   From out of nowhere seemed to come the deep, resonant voice that interrupted their satanic devotion. (raising)

The existence of matrix wh-questions like (0)b and polar interrogatives like (0)d, cause us to question Bruening's (2010) claim that PI is incompatible with those contexts in which 'do support' occurs, i.e., in which an auxiliary is required as head of the

VP containing the postverbal argument.[13] More generally, these examples reveal that the setting ('locative') expression can occupy a variety of syntactic positions. Accordingly, they suggest that – whatever one's theory of cleft, filler-gap or raising structures – PI cannot be equated with its prototypical declarative instantiation, in which the setting expression immediately precedes a VP headed by the finite verb. It is for this reason that we reject the assumption, implicit in many analyses of PI, that PI is a sentence pattern or phrasal configuration. Rather, in agreement with Bresnan (1994), we view PI as the output of a lexical rule. On this account, PI lexemes contain no phrasal information. The particular syntactic configuration in which the arguments of a PI verb appear is determined by the (independently required) phrasal construction with which the PI verb combines. Below we present examples of SBCG derivations that show how lexical and phrasal constructions jointly license PI clauses.

The examples in (0), particularly those that containing *wh*-questions and cleft sentences, vitiate the widely made claim that the setting expression in PI denotes a topic (Bresnan 1994, Birner and Ward 1998, Webelhuth 2011, Salzmann 2013). This constitutes a second argument against viewing declarative PI sentences as topicalization sentences, whether one's topicalization analysis presupposes PI to be a phrasal pattern (as in Kim 2003) or the product of general-purpose argument-realization constraints (as in Bresnan 1994). In *wh*-questions, as in (0)b,c, the filler expression represents a narrow focus: such questions, like narrow-focus declarative sentences, concern the value of a variable denoted by the *wh*-expression (Engdahl 2006, Lambrecht and Michaelis 1998, *inter alia*). In example (0)c, the identity of the 'source' argument is unknown; such sentences are not countenanced by a functional account of PI like that of Webelhuth (2011), in which the construction instructs the hearer to add an entity to a "conceptually accessible" spatial schema. A similar point can be made with respect to cleft sentences: in cleft sentences, the post-copular expression again constitutes a narrow focus – the value of the variable in a presupposed open proposition (Hedberg 2000, Lambrecht 2001). For example, (0)e might be said to presuppose that the post-modernist view arose from *some* source. Such sentences supply the value of the location variable rather than presupposing the identifiability of that location. In fact, even the raising example (0)f poses a problem for a topic-based account of PI: the expression *from out of nowhere* does not denote a mutually known or previously established location, let alone a topical one. Thus, while we follow functional theorists of PI in asserting that the construction serves an information packaging function, we do not view it as placing any information-structure constraint on the setting expression. Instead, these fact show PI to be a focus-marking construction, discourse-pragmatically constraining only the postverbal argument.[14]

If the setting expression does not fill a particular discourse-pragmatic role, it might still be feasible to characterize it according to its syntactic category or semantic role. Here again constraints inferred from prototypical instances appear insufficient when tested against the full range of data. Bresnan 1994: 75 (ex. 5) presents the examples in (0) as evidence that the fronted element in PI (her Locative Inversion) need not be a PP.

(0)   a.   Crashing through the woods came a wild boar. [Birner, personal communication [to Bresnan], 1990, attributed to Georgia Green]
       b.   Coiled on the floor lay a one-hundred-and-fifty-foot length of braided nylon climbing rope three-eighths of an inch thick. [Birner 1992:58]

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[13] Emphatic and negation contexts are two additional *do*-support configurations claimed by Bruening to be incompatible with PI. However, while Bruening judges the constructed examples in (i-ii) to be ungrammatical, the attested examples in (iii-v) suggest again that PI is in fact compatible with *do*-support contexts:

    (i)   *From this observation DID emerge a new understanding of natural language! (=Bruening's (2d))
    (ii)   *From this observation has not emerged a new understanding of natural language (=Bruening's (2c))
    (iii) Out of these controversies, however, did arise a better knowledge of the true meaning of religion. (emphatic *do*)
    (iv)   To this day, from the heterodox camp has not emerged a methodologically acceptable alternative to the standard approach. (negation)
    (v)   No, opposite him was not sitting a strange woman in his girl's body; it was his girl, herself, no one else. (negation)

[14] As discussed earlier, PI sentences (and partial-inversion sentences in general) can be seen to contain a focal postverbal argument whether the particular PI sentence is construed as an argument-focus sentence (wherein the relation denoted by the verb is part of the presupposition) or a sentence-focus sentence, in which both verb and postverbal argument are construed as focal. Sentence (i) illustrates an argument-focus PI sentence: the verb *be* is outside the focal scope, inasmuch as the sentence appears to presuppose the open proposition 'x is next on the docket'. Sentence (ii), however, could not plausibly be said to presuppose 'x was ticking on one wall'; it is therefore most plausibly treated as sentence-focus sentence.

    (i)   Next on the docket was the Hunter 31.
    (ii)   On one wall ticked a clock without a case.

Bresnan stresses the fact that these examples contain a locative VP. The locative argument is for her a necessary component of a PI predication, since the PI sentence is seen as saying something about a location – that it has some entity within it. It is in this sense that PI is seen as an exponent of presentational focus:

> In presentational focus, a scene is set and a referent is introduced on the scene to become the new focus of attention. In the core cases, a scene is naturally expressed as a location, and the referent as something of which location is predicated – hence, a theme. (Bresnan 1994: 90)

Webelhuth (2011:92) offers a similar account of PI, arguing that it, like "deictic inversion" (our DI), "draw[s] the hearer's attention to the object expressed by the postverbal NP via the region it is contained in". It is apparent, however, that PI does not require the preverbal element to display locative semantics, and it is for this reason that Postal (2004) and Bruening (2010), among several others, oppose Bresnan's semantic characterization of PI. They bring to bear examples of the kind attested in (0):

(0) a. A motion to call a convention was rejected by a large majority and in its stead was adopted a resolution authorizing special town meetings…
     b. For that reason was adopted a special Law on Protection from Domestic Violence…
     c. From this can be deduced the fact that the roots of A in R are asymptotically equal to those of A1.
     d. With this pen was written all of the events that would occur from then, til eternity.
     e. Against this has been objected the inconvenience of a protracted session.
     f. It is a solemn question, Stephen, because on it may depend the salvation of your eternal soul.
     g. To those two gods correspond the goddesses Ishtar and Isis.

The examples in (0) suggest something of the range of semantic roles that the preverbal element may fill – including a reason (0)b, a logical premise c, an instrument (0)d and a standard of comparison (0)g. In no case does the preverbal element denote a location, metaphorically or otherwise.

Taking such data to preclude a semantic analysis, Postal and Bruening propose a syntactic characterization of the initial element of PI: it is a PP. Our finding is that neither a syntactic definition of the constraint on the initial element nor a semantic one agrees with observable data. As shown in (0) and (0), respectively, both adverbial and nominal[15] phrases can occupy the preverbal slot in declarative PI clause, in addition to the verbal locatives exemplified in (0).
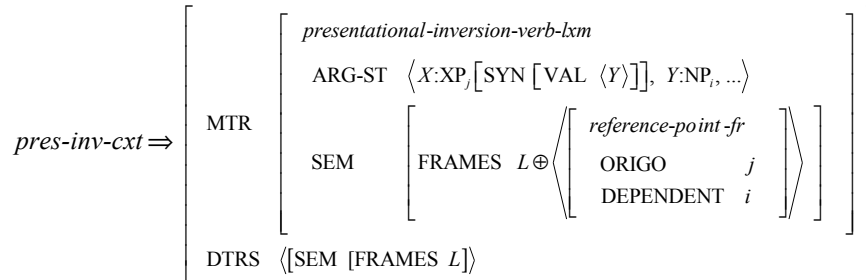
(0) a. ... and they spurred and lashed their horses and came upon the maiden; she, perceiving this, quickly plucked a hair from the crown of her head and flung it from her, and suddenly arose a mighty forest…
     b. Slowly and gradually appeared the form of the Lady of the Mist.
     c. Although small at first the light began to grow and grow, until suddenly emerged a beautiful, iridescent white dragon which embodied life.
     d. At first all went well, and then suddenly arose the mysterious complaint that I was persona non grata with the British Council.
     e. Their voices, from clearest soprano to richest bass, blended in low concordances, until, gradually, came words, like figures forming in mist.

(0) a. Yesterday arrived a special guest: @Fiorello!
     b. Yesterday arrived a Barque and a Sloop from Virginia bound to Boston.
     c. Finally tomorrow will arrive the new collection Born Free, an initiative founded with a singular goal: to eliminate mother-to-child HIV transmission by 12/31/2015.
     d. We only know that yesterday came a rain of stones upon us. They did much damage and injured some of our people.
     e. Then arose a mighty chorus.

It appears that there is also no syntactic constraint on the XARG in PI beyond the fact that it must be a syntactically possible argument *or* adjunct of the verb. Aside from this very general syntactic constraint – which need not be specified in the construction – the only constraint appears to be that the initial element of PI must serve as a "setting" for a presentational act. The most usual setting is no doubt a place, physical or metaphorical – hence the heuristically useful but nonetheless inaccurate label *locative inversion*. However, a temporal designation can do as well as a locative one. At a more abstract level, a setting

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[15] McCawley's (1988) proposal that apparent NPs like those in examples (0) are really PPs presents a number of similarities between such NPs and PPs. However, his proposal depends on the existence of inaudible prepositions, a possibility not available in an approach that eschews inaudible constituents.

phrase in PI can be any phrase that directs the attention of the addressee in a way that facilitates the act of presenting to the addressee's thus-focused attention the referent of the postverbal phrase. Hence, adverbs like *suddenly* or *gradually* and nouns like *yesterday* and *tomorrow* can serve as setting phrases in PI. On this view, PI resembles what Langacker (1993) refers to as a reference-point construction: reference point predications are said provide a point of access within a conceptual network that includes both a setting expression and the entity or state of affairs of interest. In PI clauses the conceptual starting point may be the location, the time or, in the case of sentence-focus PI clauses, the manner in which an event unfolds (e.g., *slowly, suddenly, gradually*). We represent the reference-point function of PI with a *reference-point-frame*, with the arguments ORIGO and DEPENDENT.[16] The Presentational Inversion Construction is given in (0):

(0) **Presentational Inversion Construction** (↑ *split-subj-cxt*)

$$
pres\text{-}inv\text{-}cxt \Rightarrow \begin{bmatrix} \text{MTR} \begin{bmatrix} presentational\text{-}inversion\text{-}verb\text{-}lxm \\ \text{ARG-ST} \ \langle X{:}XP_j[\text{SYN} [\text{VAL} \ \langle Y \rangle]], \ Y{:}NP_i, ... \rangle \\ \text{SEM} \begin{bmatrix} \text{FRAMES} \ L \oplus \left\langle \begin{bmatrix} reference\text{-}point\text{-}fr \\ \text{ORIGO} \qquad j \\ \text{DEPENDENT} \quad i \end{bmatrix} \right\rangle \end{bmatrix} \end{bmatrix} \\ \text{DTRS} \ \langle [\text{SEM} [\text{FRAMES} \ L]] \rangle \end{bmatrix}
$$

Since PI defines a subtype of *split-subject-construct*, the AVM appearing to the right of the double-shafted arrow in (0) represents the additional constraints that must be obeyed by a *presentational-inversion-construct* beyond those defining a *split-subject-construct*. PI adds to a *split-subj-cxt* the constraint that the mother's XARG is a phrase that serves as the ORIGO argument in a *reference-point-frame*. It identifies the focused, internal argument of the mother with the DEPENDENT argument in this frame. For example, in (0)b, repeated as (0), the PP *from despair* is the XARG, *the greatest nation* is the agreement source and also the XARG of *from despair*.

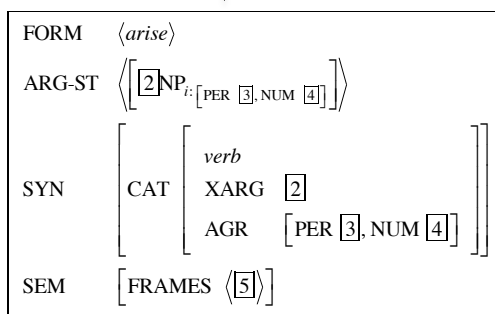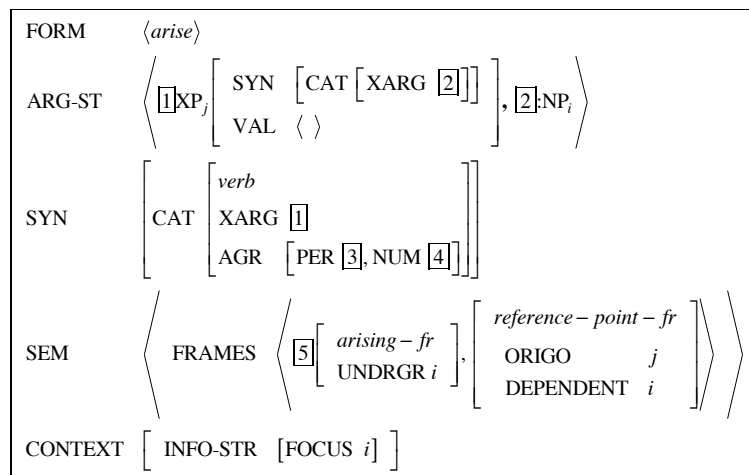(0)   From despair arose the greatest nation.

Also in (0) *From despair* serves as the ORIGO argument and *the greatest nation* as the DEPENDENT argument. In PI, as well as in the other four maximal partial inversion constructions, the constraint information regarding agreement, as well as that regarding the focus status of the postverbal argument, is inherited from *split-subject-cxt*, as defined by the Split Subject Construction (0). Nothing in the PI construction requires the ORIGO argument of the mother lexeme to belong to the ARG-ST list of the daughter lexeme. As a result, the present account accommodates examples like those in (0) and (0) above, in which the XARG of the PI predication is not a selected argument of the verb. Recall that the PI verbs in these examples include such non-locative-selecting verbs as *smile, sparkle, melt, flutter* and *flap*. These examples are hard to reconcile with Bresnan's (1994) vision of PI as a configuration resulting from the interaction of universal principles that determine how the arguments of a specifically locational verb are syntactically realized. On that account, "locative inversion arises when location is predicated of a theme argument which is presentationally focused, causing the locative to be mapped to the subject and the theme to an unaccusative object in accordance with the LFG mapping theory" (Bresnan 1994: 92).[17] Realization rules, by definition, do not alter argument structure but realize it. We have shown clear evidence, however, of PI verbs that differ in valence from their non-PI form. The PI construction is not a realization rule, universal or otherwise. Instead, it describes a lexeme-to-lexeme, derivational relationship. There is nothing to prevent the two lexemes so related from having distinct argument structures. The present account thus captures the intuition that PI is a valence-altering device.

---

[16] This reference-point analysis bears some resemblance to the 'imagined camera' analogy used by Partee and Borschev (2007) to describe the function of a class of Russian negative existential sentences comparable to PI. They argue that such sentences presuppose the presence of an implicit observer, whose visual field (the setting element) constitutes the region that is monitored for the presence of a particular entity (expressed by theme argument). Because it equates the perspectival center with a location, the Partee and Borschev analysis does not obviously apply to the temporal-setting examples in (18). To cover such examples, we believe that it is necessary to decouple the concepts of 'setting' and 'location'. A setting need not be a location.

[17] Bresnan (1994: 91) does acknowledge "penumbra cases" like *Through the window was shooting a sniper*. In such cases, she argues, "we [can] think of presentational focus as overlaying a theme-locative predication […] on the lexical argument structure of the verb". It is difficult, however, to determine the source of the "overlay theme" since presentational focus has nothing intrinsically to do with theme-locative argument structure.

As illustrated by the construct shown in (0), a given PI *presentational-inversion-verb-lexeme*, in this case the PI version of the lexeme *arise*, is licensed by the PI construction shown in (0). Of the shelf *arise* has one argument; PI *arise* has two arguments: the original theme and the origo of the arising event.

(0)

$$
\begin{bmatrix}
\text{FORM} & \langle \textit{arise} \rangle \\
\text{ARG-ST} & \left\langle \boxed{1}\text{XP}_j \begin{bmatrix} \text{SYN} & \left[\text{CAT} \left[\text{XARG } \boxed{2} \right] \right] \\ \text{VAL} & \langle \ \rangle \end{bmatrix}, \ \boxed{2}{:}\text{NP}_i \right\rangle \\
\text{SYN} & \left[\text{CAT} \begin{bmatrix} \textit{verb} \\ \text{XARG} & \boxed{1} \\ \text{AGR} & \left[\text{PER } \boxed{3}, \text{NUM } \boxed{4} \right] \end{bmatrix} \right] \\
\text{SEM} & \left\langle \text{FRAMES} \left\langle \boxed{5} \begin{bmatrix} \textit{arising} - \textit{fr} \\ \text{UNDRGR } i \end{bmatrix}, \begin{bmatrix} \textit{reference} - \textit{point} - \textit{fr} \\ \text{ORIGO} & j \\ \text{DEPENDENT} & i \end{bmatrix} \right\rangle \right\rangle \\
\text{CONTEXT} & \left[\text{INFO-STR} \left[\text{FOCUS } i \right] \right]
\end{bmatrix}
$$

$$
\begin{bmatrix}
\text{FORM} & \langle \textit{arise} \rangle \\
\text{ARG-ST} & \left\langle \left[\boxed{2}\text{NP}_{i: \left[\text{PER } \boxed{3}, \text{NUM } \boxed{4} \right]} \right] \right\rangle \\
\text{SYN} & \left[\text{CAT} \begin{bmatrix} \textit{verb} \\ \text{XARG} & \boxed{2} \\ \text{AGR} & \left[\text{PER } \boxed{3}, \text{NUM } \boxed{4} \right] \end{bmatrix} \right] \\
\text{SEM} & \left[\text{FRAMES} \ \langle \boxed{5} \rangle \right]
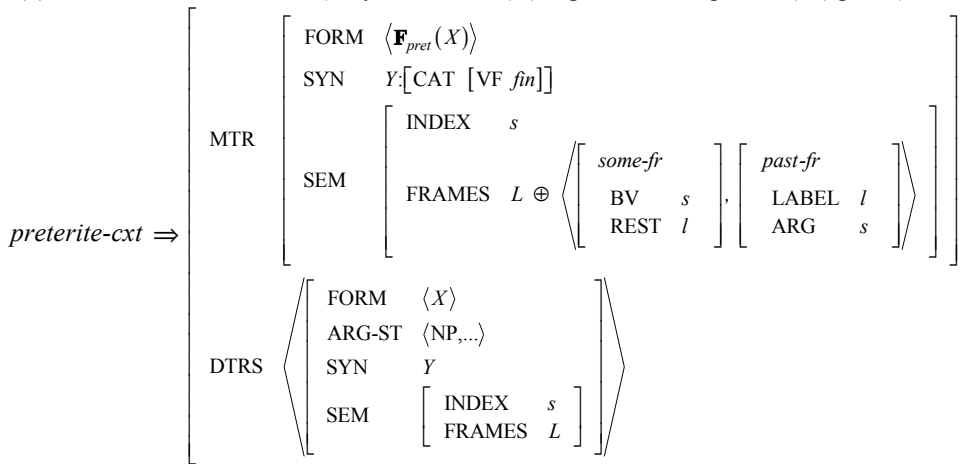\end{bmatrix}
$$

Derivation of the *presentational-inversion-lxm* arise.

The construct pictured in (0) is licensed by the construction shown in (0). Accordingly, there is a mother sign and a single daughter sign. Each feature structure is enclosed in a box. Tags are indicated by boxed numerals in feature structure representations.[18] The daughter lexeme has a single argument NP$_i$ whose index is the UNDERGOER of an *arising-fr*. As the first (and only) member of the ARG-ST list, it is the XARG of the daughter. In the mother, the tag $\boxed{2}$ indicates that this argument is not the XARG. A different XARG appears, tagged $\boxed{1}$, of which the index *j* is the ORIGO argument of the *reference-point-fr*. The INDEX *i* of the internal (non-XARG) NP (also the agreement source) is the information-structure FOCUS.

The syntactic skeleton of the derivation in (0) below illustrates in outline form the way the sentence *Down came snowflakes* is licensed by the Presentational Inversion Construction (0), the Preterite Construction (0), the Predicational Head-Complement Construction (0), and the Subject-Predicate Construction (0).
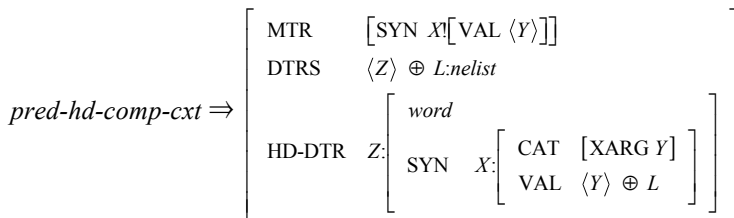
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[18] In representations of model objects, tags identifying feature structures are boxed numerals. Tags for lists – of which there are none in (0) – are boxed capital letters. These conventions are adopted to avoid confusion of diagrams of model objects, appearing in boxes, or which contain model objects, derivation trees like (0), with diagrams of constructions (descriptions of classes of model objects).

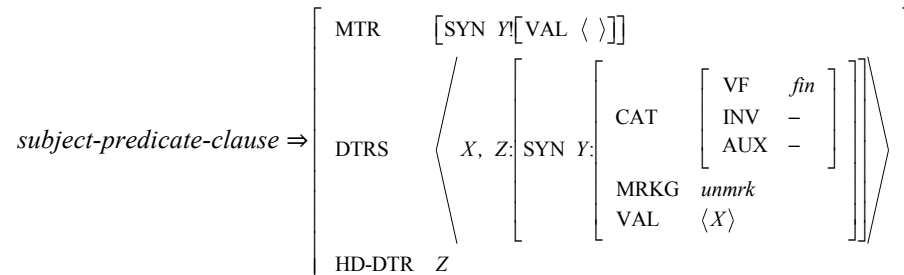**(0) Preterite Construction** (↑ *inflectional-cxt*) (adapted from Sag 2012 (57) p.116)

$$
\text{preterite-cxt} \Rightarrow
\begin{bmatrix}
\text{MTR} &
\begin{bmatrix}
\text{FORM} & \langle \mathbf{F}_{pret}(X) \rangle \\
\text{SYN} & Y{:}[\text{CAT}\ [\text{VF}\ \textit{fin}]] \\
\text{SEM} &
\begin{bmatrix}
\text{INDEX} & s \\
\text{FRAMES} & L \oplus \left\langle
\begin{bmatrix} \textit{some-fr} \\ \text{BV} & s \\ \text{REST} & l \end{bmatrix},
\begin{bmatrix} \textit{past-fr} \\ \text{LABEL} & l \\ \text{ARG} & s \end{bmatrix}
\right\rangle
\end{bmatrix}
\end{bmatrix} \\
\text{DTRS} &
\left\langle
\begin{bmatrix}
\text{FORM} & \langle X \rangle \\
\text{ARG-ST} & \langle \text{NP},... \rangle \\
\text{SYN} & Y \\
\text{SEM} & \begin{bmatrix} \text{INDEX} & s \\ \text{FRAMES} & L \end{bmatrix}
\end{bmatrix}
\right\rangle
\end{bmatrix}
$$

The Preterite Construction is an Inflectional Construction. In (0), the notation in the mother's FORM value says that the preterite form of a verb whose base form is *X* is the image of *X* under the morphological function that yields the preterite form of every verb (in English, in which past-tense forms do not vary by person or number). Appendix 1 discusses morphological functions briefly; see Sag (2012: 113-114) for more detail. The combination of the notations [REST *l*] in the *some-fr* and [LABEL *l*] in the *past-fr* indicates that the *past-fr* is the RESTRICTION on the BOUND VARIABLE *s* in the *some-fr*.

(0) Predicational Head-Complement Construction (↑ *headed-cxt*) (Sag 2012 (152) p. 112)

$$
\text{pred-hd-comp-cxt} \Rightarrow
\begin{bmatrix}
\text{MTR} & [\text{SYN}\ X!\text{[VAL}\ \langle Y \rangle]] \\
\text{DTRS} & \langle Z \rangle \oplus L{:}nelist \\
\text{HD-DTR} & Z{:}
\begin{bmatrix}
\textit{word} \\
\text{SYN} & X{:}\begin{bmatrix} \text{CAT} & [\text{XARG}\ Y] \\ \text{VAL} & \langle Y \rangle \oplus L \end{bmatrix}
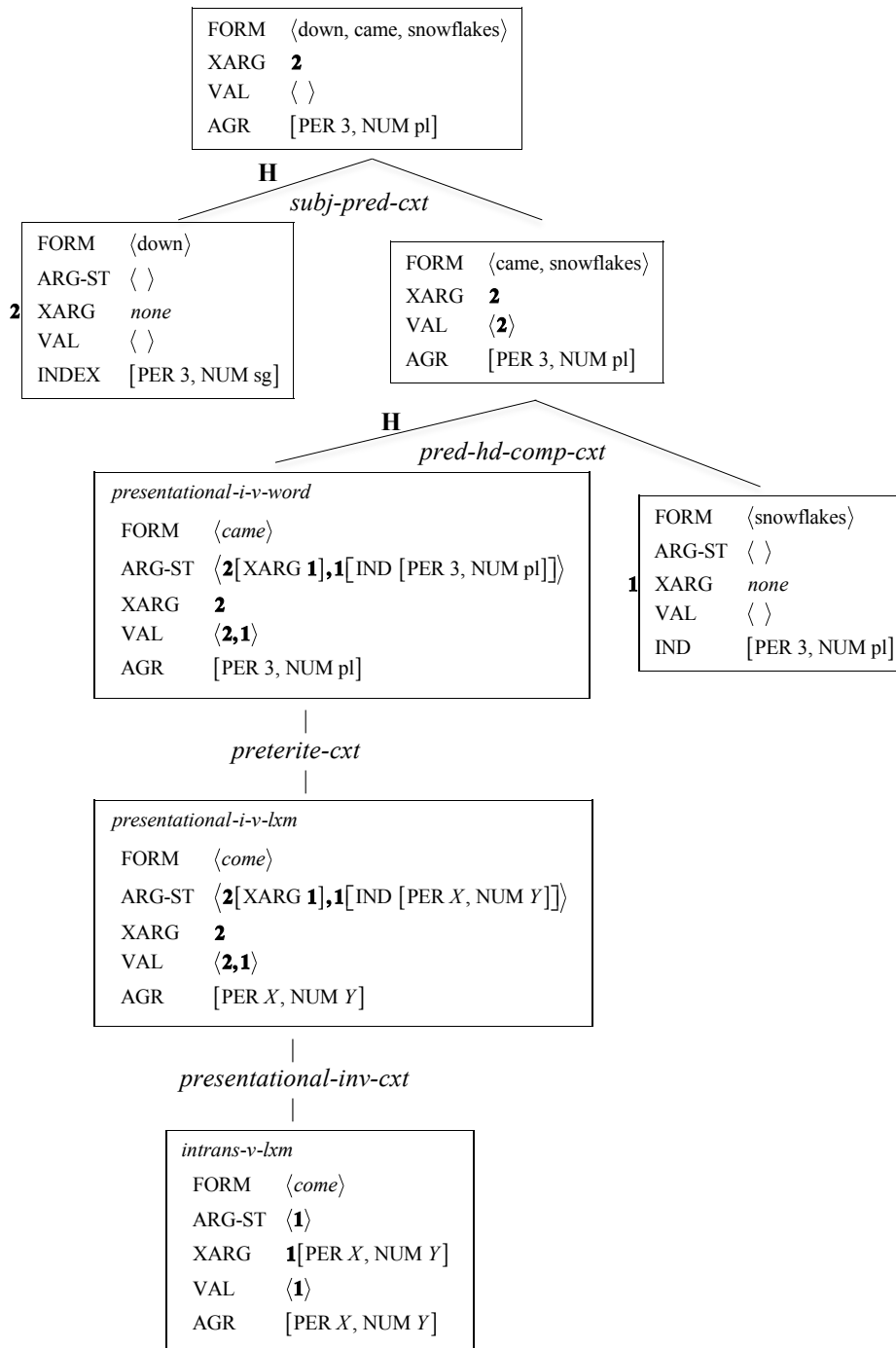\end{bmatrix}
\end{bmatrix}
$$

The Predicational Head-Complement Construction (0) licenses a subtype of *headed-cxt*. The mother of a *predicational-head-complement-construct* may be a VP, PP, AP, or N'. In a *pred-hd-comp-cxt* the non-XARG valents of a lexical head are constrained to be sisters to that head. Construction (0) says that in a *pred-head-comp-cxt* the head daughter is a *word* whose valents consist of its XARG *Y* and a non-empty list *L*. The daughters of the construct type consist of the head daughter and the phrases (or words) constituting the list *L*. The mother's SYN value, *X!*, is the same as the head daughter's SYN value, *X:*, except that the members of *L* are absent from the VAL list of the mother, since at this level all the non-XARG arguments have been realized overtly.

(0) Subject-Predicate Construction (↑*headed-cxt,* ↑*declarative-clause-cxt*) (Sag 2012 (105) p.146)

$$
\text{subject-predicate-clause} \Rightarrow
\begin{bmatrix}
\text{MTR} & [\text{SYN}\ Y!\text{[VAL}\ \langle\ \rangle]] \\
\text{DTRS} &
\left\langle X,\ Z{:}\text{SYN}\ Y{:}
\begin{bmatrix}
\text{CAT} & \begin{bmatrix} \text{VF} & \textit{fin} \\ \text{INV} & - \\ \text{AUX} & - \end{bmatrix} \\
\text{MRKG} & \textit{unmrk} \\
\text{VAL} & \langle X \rangle
\end{bmatrix}
\right\rangle \\
\text{HD-DTR} & Z
\end{bmatrix}
$$

Construction (0) licenses finite declarative clauses. It inherits both *headed-cxt* and *declarative-clause-cxt*. The non-head daughter *X* is the unique valent of the head daughter *Z*. The head daughter's CAT feature specifies that the head daughter is of finite morphological form, is barred from inverted clauses, and does nor occur in positions reserved for auxiliary verbs. The head daughter's syntax and the syntax of the mother are identified, except for the fact that the VAL list of the mother is empty while the daughter's is not. A derivation tree resulting from a particular joint licensing of constructs by these constructions is shown in (0).

(0)

FORM ⟨down, came, snowflakes⟩
XARG **2**
VAL ⟨ ⟩
AGR [PER 3, NUM pl]

H

subj-pred-cxt

FORM ⟨down⟩
ARG-ST ⟨ ⟩
2 XARG *none*
VAL ⟨ ⟩
INDEX [PER 3, NUM sg]

FORM ⟨came, snowflakes⟩
XARG **2**
VAL ⟨**2**⟩
AGR [PER 3, NUM pl]

H

pred-hd-comp-cxt

presentational-i-v-word
FORM ⟨came⟩
ARG-ST ⟨**2**[XARG **1**],**1**[IND [PER 3, NUM pl]]⟩
XARG **2**
VAL ⟨**2**,**1**⟩
AGR [PER 3, NUM pl]

FORM ⟨snowflakes⟩
ARG-ST ⟨ ⟩
1 XARG *none*
VAL ⟨ ⟩
IND [PER 3, NUM pl]

preterite-cxt

presentational-i-v-lxm
FORM ⟨come⟩
ARG-ST ⟨**2**[XARG **1**],**1**[IND [PER X, NUM Y]]⟩
XARG **2**
VAL ⟨**2**,**1**⟩
AGR [PER X, NUM Y]

presentational-inv-cxt

intrans-v-lxm
FORM ⟨come⟩
ARG-ST ⟨**1**⟩
XARG **1**[PER X, NUM Y]
VAL ⟨**1**⟩
AGR [PER X, NUM Y]

Derivation of *Down came snowflakes.*

The bottom box in (0) represents schematically the canonical intransitive verb lexeme *come.* Its unique argument **1** is the XARG and also the unique valent. The AGR features are identified with the corresponding features of the index of the XARG, **1**. Looking upward, this *canon-intrans-v-lxm* is the unique daughter of a *presentational-inv-cxt*, licensed by the Presentational Inversion Construction (0). The mother of the *presentational-inv-cxt*, of type *presentational-i-v-lxm* differs from its canonical *intrans-i-v-lxm* daughter in adding a new argument **2,** which is the (new) XARG. The VAL list of the mother contains both the added XARG **2** and the daughter's XARG **1,** now no longer the XARG. The AGR features are not identified with those of the new XARG **2**, but remain identified with **1**, which is now an internal argument. The form value <*come*> is unchanged from that of the daughter. The *presentational-i-v-lxm come* is in turn the unique daughter of a *preterite-cxt*, licensed by the inflectional construction (0). The mother of the *preterite-cxt* is a *presentational-i-v-word* whose ARG-ST, XARG and VAL are unchanged from those of its lexeme daughter (although, not shown in the figure, the semantics is augmented with a *past-fr*, and the VERB FORM value is *finite,* while the daughter's is *base*.) The mother's FORM value is <*came*>. The AGR features have been

resolved to [PER 3] and [NUM pl], which makes it possible for *came* to head a VP whose nominal complement's INDEX has those values. The *presentational-i-v-word <came>* is in fact the head daughter (**H**) of a *predicational-head-complement-construct* licensed by construction (0), in this case licensing a VP. The non-head daughter of the VP displays [FORM *<snowflakes>*] and is tagged **1**, thus identified with the internal argument of *came*. The INDEX values of [PER 3, NUM pl] are identified with the AGR values of the *presentational-i-v-word*. In the mother of the VP ([FORM *<came, snowflakes>*]), the VAL list is reduced to the XARG **2**. The latter sign is in turn the head of a *subject-predicate-construct*, licensed by construction (0). Agreement remains determined by the XARG of the original simple intransitive lexeme. According to our analysis *down* is in the position occupied by canonical subjects. Its tag **2** is absent from the VAL list of the mother, *Down came snowflakes,* of the *subj-pred-cxt*. The VAL list of *Down came snowflakes* is empty.

2.2 The Setting Expression as XARG

In this section we turn to a controversial aspect of this analysis: the identification of the setting expression with the XARG status. The majority opinion in the literature is that the fronted element in a declarative PI clause is in an extracted position, not the subject position. Exceptions include Culicover & Levine 2001 and Doggett 2004. Bresnan (1994) is not an exception, in that she holds that with respect to c-structure the fronted element is in a topic position adjoined to a VP despite being the f-structure subject.

Bresnan (1994) cites five subject properties of the setting element of PI. Detailed facts and arguments defending and attacking these observations as establishing subject properties of the PI initial constituent are reviewed in SI.3.

2.2.1. Raising

The initial constituent of PI clause undergoes subject raising, as in (1) and (23)f, repeated as (0).

(0)   a.   Out of the woodwork during their show seemed to emerge all of these really big meat-head type guys and they started moshing hard.
      b.   From out of nowhere seemed to come the deep, resonant voice that interrupted their satanic devotion.

2.2.2 The Anticomplementizer ("that-trace") effect.

In a PI clause the complementizer *that* cannot introduce a complement clause just as a complement clause cannot be introduced by the complementizer *that* in the case of subject extraction.

(0)   a.   A towering cruise ship, she noted with alarm (*that) was bearing down on her. (invented example)
      b.   From what deliberations do you think, (*that) will emerge a concensus. (invented example)

2.2.3 The Complementizer Effect

Just as the Anticomplementizer Effect is reversed when the subject extraction is from a relative clause – in which case *that* is required – so *that* is required with PI relative clauses.

(0)   a.   It was a fateful decision (that) they soon regretted... (optionality added to attested version)
      b.   It was a fateful decision *(that) was soon regretted... (optionality added)
      c.   It was on the second island (that) they found the treasure. (invented example)
      d.   It was on the second island *(that) was found the treasure. (invented example)

2.2.4 The so-called "Parallelism" Constraint

Bresnan argues that a parallelism constraint (PC) on across-the-board extraction (XAB) operates in PI, showing that the fronted setting expression in PI is the subject. Bresnan's examples of the PC in simple cases (1994: 98, exx 71-72)[19] are given in (0). According to Bresnan, the PC requires that if the highest subject is extracted from one conjunct it must be extracted from all. This condition is satisfied in all of the cases of (0) except c. In particular it is satisfied in d.

(0)   a.   She's someone that __ loves cooking and __ hates jogging.
      b.   She's someone that cooking amuses __ and jogging bores __.
      c.   *She's someone that cooking amuses __ and __ hates jogging.

---

[19] Cited by Bruening as exx. 47, p. 54.

      d.   She's someone that cooking amuses ___ and I expect __ will hate jogging.

The application of the PC to PI is illustrated by Bresnan in (0)(1994: 98, exx. 73-74).[20]

(0)   a.   That's the old graveyard, in which __ is buried a pirate and __ is
             likely to be buried a treasure. (SUBJ-SUBJ)
     b.   That's the old graveyard, in which workers are digging __ and a treasure
             is likely to be buried __. (NONSUBJ-NONSUBJ)
     c.   ??That's the old graveyard, in which workers are digging __ and __ is
             likely to be buried a treasure. (NONSUBJ-SUBJ)
     d.   That's the old graveyard, in which workers are digging __ and they
             say __ is buried a treasure. (NONSUBJ-EMBEDDED SUBJ)

Interestingly, Postal defends the use of the PC as a subjecthood diagnostic and implies that it supports subject properties of the fronted constituent in PI, while Bruening, who follows Postal's null expletive analysis of PI, nonetheless rejects the hypothesis that the PC applies to subjects *per se*. He consequently denies that the PC supports subject properties of the PI setting element. We do not review Postal's and Bruening's arguments, pro and con respectively, because we believe there is no parallelism constraint, as evidenced by the following examples.

(0)   a.   The things she so desperately craved __ and __ had been sorely lacking in her life.
     b.   The only other thing that I wanted __ and __ wasn't available on the Icon was the real-time
             temperature reading (as it warms up).
     c.   Believing gave me exactly what I needed __ and __ had been sorely lacking as a teenager
             trapped in a history of familial abuse: …
     d.   Regeneration Waltz recreates a sense of the rest and recovery that was sought after __ and yet
             __ eluded so many veterans.
     e.   well my guy friend who I like __ and __ doesn't like me never does that.
     f.   This was something I really wanted __ and __ wasn't available during my first purchasing
             spree.
     g.   And now here I am, sitting next to the girl that I like __but __ hates me.
     h.   I thought that it was a creature that Disney tried to hide __ but __ escaped and attacked
             someone ...
     i.   The missing thing that came to my assistance in Bob's office was my saviour, a present to
             take to the grave. Something I had always wanted __ but __ had eluded me.

While all of the sentences in (0) express adversative conjunct pairs, PC exceptions also occur in coordinate sentences that express a mutually reinforcing relation between the conjuncts.

(0)   a.   One comedienne that I seem to like __ and __ amuses me (even if I don't laugh out loud) is
             Sarah Millican…
     b.   While I'm working on the music posts, those songs plus other things I can't find embeds for
             plus just random stuff that I like __ and __ amuses me goes into Volume Zero.
     c.   Almost every country on Earth has vacancies for traveling teachers, but wouldn't it be better to
             be based in a place that you like __ and __ likes you back?
     d.   … so don't expect to live in a country that you hate __ and __ hates you freely.
     e.   What can I do to get this guy that I like __ and __ likes me back to commit to going out on a
             date?
     f.   Look who I saw __ and __ saw me this morning!
     g.   well my guy friend who I like __ and __ doesn't like me never does that.
     h.   Body Snatchers was one of the first movies I saw __ and __ scared me half to death.
     i.   George Romero's "Night of the Living Dead," (which this writer might add was the only
             zombie movie I saw __ and __ scared me to death!)...
     j.   Those who were given caffeine but thought they received decaf reported lower levels of
             withdrawal symptoms – levels nearly equal to those experienced by the group that was
             promised __ and __ received caffeine.

Similar examples in *or* are also attested.

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[20] Cited by Bruening as exx. 48, p. 54.

(0)	a.	It means I avoid crowded panicky shops which isn't something I like __ or __ likes me.
	b.	Celest would remind them that it is better to go through a breakup than be with someone who either you hate __ or __ hates you.

The adversative and mutually reinforcing (for lack of a better term) cases are reminiscent of the well-known Goldsmith-Lakoff exceptions to the Coordinate Structure Constraint (CSC). Goldsmith 1985 provides adversative examples like (0) and Lakoff 1986 many and varied mutually reinforcing examples somewhat like (0) (originally proposed by Ross 1967), among many others, with extensive discussion.

(0)	How much can you drink __ and still stay sober?

(0)	What did Harry go to the store and buy __?

Perhaps some syntacticians, despite these systematic and open-ended sets of examples, still consider the CSC to retain a measure of value as an empirical generalization. If so, perhaps some residual level of empirical value can be accorded the PC as regards clauses containing core arguments only. One might speculate, on the other hand, that both the CSC and the PC represent *stylistic* choices, which are conditioned by both syntactic and semantic-pragmatic factors – factors that relate the conjuncts themselves in the Goldsmith-Lakoff cases and relate constituents within the conjuncts in the PC case. In any case, given the data presented in this section, such a suggestion would constitute extremely weak grounds for citing the PC, insofar as it can be said to exist at all, as support for a subject property of the fronted setting expression in PI.

4.2.5. *Do* support

Bresnan (1994: 102f) observes that *do* support is disallowed when PI is questioned, citing this fact as a further subject property of the initial element in PI.

(0)	a.	 On which wall hung a portrait of the artist? (Bresnan 1994:102, ex. 85a)
	b.	*On which wall did hang a portrait of the artist? (Bresnan 1994:102, ex. 85b)
	c.	 Which portrait of the artist hung on the wall? (Bresnan 1994:102, ex. 86a)
	d.	*Which portrait of the artist did hang on the wall? (Bresnan 1994:102, ex. 86b)

This behavior contrasts with that of P-*there* in comparable circumstances. In a P-*there* clause, *there*, not the setting expression, is the XARG.

(0)	a.	*On which wall there hung a portrait of the artist? (Bresnan 1994:102, ex. 87a)
	b.	 On which wall did there hang a portrait of the artist? (Bresnan 1994:102,
		ex. 87b)

We conclude that observations 4.2.1, 4.2.2, 4.2.3, and 4.2.5 establish subject properties of the setting element in PI clauses and that item 4.2.4, the alleged parallelism constraint, is empirically dubious.

4. Presentational *there*

Probably most of the tokens of presentational *there* clauses one encounters have, like those in (0), an initial locative or other scene-setting prepositional or adverbial phrase and have the feel of a variant of PI with expletive *there* stuck in for no good reason.

(0)	a.	In the snow, there sat a poor man,...
	b.	On the table there was lying a stack of photos,...
	c.	Out of New London there ran a steady stream of tooting automobiles,...
	d.	About it, prone or tilted in the mire, there lay the mighty tablets of star-quarried stone ....

However, as we saw in examples in (0)a-d, no initial PP or other setting phrase need occur in a Presentational *there* clause. While PI readily accepts active verbs, Bresnan (1994: 99, acknowledging Milsark 1974, Burzio 1981 and Lumsden 1988) points out that P-*there* does not accept some dynamic verbs, particularly directionals. She offers the negative judgments in (0) (Bresnan's exx. 76a-d), with which we concur.

(0)   a.   Into the room (*there) ran mother.
       b.   Out of it (*there) steps Archie Campbell. (Birner 1992: 43)
       c.   About half an hour later in (*there) walk these two guys.
       d.   Home (*there) came John.

In arguing against the expletive subject analysis of PI, Bresnan writes, 'inversions without an expletive source [constitute] the most obvious problem for the expletive-subjective hypothesis' (1994:99). Postal (2004: 30) proffers the objection (among others) that this argument relies on the concept 'source,' which appeals to an outdated transformational theory that Bresnan herself in 1994 no longer adhered to. He concludes: 'An advocate of the expletive analysis is free to say about (0) [= Postal's (44)] that "nothing more is at issue than the conditions under which the expletive must (as opposed to can) be invisible" (Postal 2004: 30). From a constraint-based point of view the empirical content of the latter observation is sufficient to establish that PI and P-*there* are distinct constructions, requiring distinct analyses. Since SBCG doesn't admit of inaudible elements, in the place of specifying where the expletive must be audible, we specify below in the P-*there* Construction – i.e., for those environments in which Postal would say the expletive must be audible – the semantic constraint that distinguishes P-*there* from PI.

Presentational *there* clauses contrast most noticeably with Deictic *there* clauses in that the latter contain locative *there* whereas P-*there* contains expletive *there*. P-*there* clauses contrast most noticeably with Existential *there* clauses in allowing a wide range of verbs, not just *be* plus a small handful of other verbs of existence, and in freely allowing definite postverbal NPs as in (0)d and (0).

(0)   a.   ... it was from this combination that there grew the contemplative school of Zen Buddhism.
       b.   This evening there arrived from Gratz the grave, dark-faced son of the
             picture cleaner, with a horse and cart laden with two large packing
             cases, having many pictures in each.
       c.   Meanwhile, in the doorway there stood the master, with his back to the crowd and his face to
             the officers of his regiment, airily making his farewells.

As mentioned, a P-*there* verb specifies that its XARG is expletive *there*, shown in (0). In the listeme for expletive *there* the FRAMES value is the empty list, the INDEX value is *none*, and the LID is <*there*[*expletive*]-*fr*>. Expletive *there* thus represents an exception to the usual identity of FRAMES values and LID values for lexemes. Such exceptions obtain only and always for listemes in which the FRAMES list is empty.

(0) **Listeme for Expletive *There***

$$
\begin{bmatrix}
lexeme \\
\text{FORM} \quad <there> \\
\text{SYN} \quad \begin{bmatrix} \text{CAT} \begin{bmatrix} noun \\ \text{LID} \quad \langle there[expletive]\text{-}fr \rangle \end{bmatrix} \end{bmatrix} \\
\text{SEM} \quad \begin{bmatrix} \text{INDEX} \quad none \\ \text{FRAMES} \quad \langle \rangle \end{bmatrix}
\end{bmatrix}
$$

The Presentational *There* Construction adds to the Split Subject Construction the constraint that the mother's XARG is expletive *there* and the semantic constraint that the verb cannot be dynamic, as indicated in examples (0). With regard to the latter, we assume that the type *frame* has two immediate subtypes *dynamic-fr* and *non-dynamic-fr* and that the P-*there* Construction specifies that the verb is non-dynamic.

(0) **The Presentational-*there* Construction** (↑ *split-subj-cxt*)

$$
presentational\text{-}there\text{-}cxt \Rightarrow \begin{bmatrix}
\text{MTR} \begin{bmatrix}
presntl\text{-}there\text{-}i\text{-}v\text{-}lxm \\
\text{ARG-ST} \quad \langle X{:}noun[\text{LID}\langle there[expl]\text{-}fr\rangle], \text{NP,...} \rangle \\
\text{SYN} \quad [\text{CAT} \ [\text{XARG } X]] \\
\text{SEM} \quad [\text{FRAMES} \ L{:}\langle non\text{-}dynamic\text{-}fr\rangle]
\end{bmatrix} \\
\text{DTRS} \quad \langle [\text{SEM} \ [\text{FRAMES } L]] \rangle
\end{bmatrix}
$$

5. Deictic Inversion[21]

The Deictic Inversion Construction, as discussed in detail by Lakoff (1987: 468 ff.), specifies either *here* or *there* as XARG, both of which we take to be intransitive, deictic prepositions (CGEL: 613-614) and allows as verbs only *come, go,* and *be[at]*. Lakoff (1987: 468 f.) states that in deictic inversion clauses *here* or *there* is not the subject, which if correct would mean that these words cannot display the subject properties that our analysis attributes to them as the XARG of a *split-subject-i-v-lexeme*. Lakoff offers two items of evidence for this view. The first is the alleged resistance of this pattern to Raising. This claim seems correct for many attempts to construct examples but still comes up against numerous attested counterexamples.

(0) a. Here seemed to come the proof, for on both feet the toes were joined by a thin membrane.
  b. She told me on TV a number of hostages had escaped from the front doors. There seemed to be my look-a-like walking out of the hotel on live TV.
  c. On two or three occasions – and here seems to come the "negligence" of the guest, if any – the plaintiff opened the box in the room, and counted the money in the presence of several persons.
  d. And here seemed to be a much too up-close-and-personal view of LeBron James...
  e. Scarcely had Don Quixote descried them when the fancy possessed him that this must be some new adventure; and to help him to imitate as far as he could those passages he had read of in his books, here seemed to come one made on purpose, which he resolved to attempt.
  f. So here appear to be my options if I start a completely new library: …
  g. That's just what it seems like to me; first came the pain in my leg from the irons, and here seems to come following after it, pleasure.
  h. In any event, there seems to go my theory that this quote could explain the 'Protestant Ethic' with it's emphasis on material wealth…
  i. there seems to go my thursday nite at the movies
  j. so there seems to go my plan of reducing power-load from the tablet using it as a desktop PC with external monitor
  k. There seems to go the connection of Isaac as his father. No documented proof.
  l. So, here seems to be a strong cost driver pushing for an optimal connection of technology and business
  m. I didn't read it all, but here seem to be some latest edits:http://…
  n. Here seemed to be a union from which jealousy had been leached.
  o. The Medici, after all, had led the humanistic revival of Florence and here seemed to be a man who was preaching a new spiritualism
  p. It's still early to say, but here seem to be the obvious pros and cons. Pro:…
  q. I wrote for an appointment, and came to see the great master himself. My heart beat wildly. Here seemed to be my opportunity.
  r. Here seemed to be a union from which jealousy had been leached.
  s. I did some searching and here appears to be the large fig (*Ficus carica*) in California: http://www...

Despite the fact that DI examples clearly exhibit raising, agreement with the postverbal nominal also occurs.

(0) a. Here comes the bus.
  b. Watch Out, America: Here Come the Dallas Cowboys.
  c. There goes John's old tutor.
  d. There go two boys who just turned twenty...
  e. Here's a quick write-up on my new 29er.
  f. Here are several situations where there is an incorrect application of the ideas presented in this section.

Lakoff's second argument that *here/there* is not the subject is that DI clauses resists tags. This predicts ungrammaticality for example (0).

(0) *There's Harry with his red hat on, isn't there? (Lakoff 1987: 468, unnumbered ex.)

In an unsuccessful attempt to check the accuracy of this judgment, we found a plethora of web examples of a corresponding form (e.g., "There's * isn't there?") that however appear to exemplify the distinct existential construction. Our web search for deictic examples of this form was thus effectively swamped. Such examples are apparently too rare show up in searches of
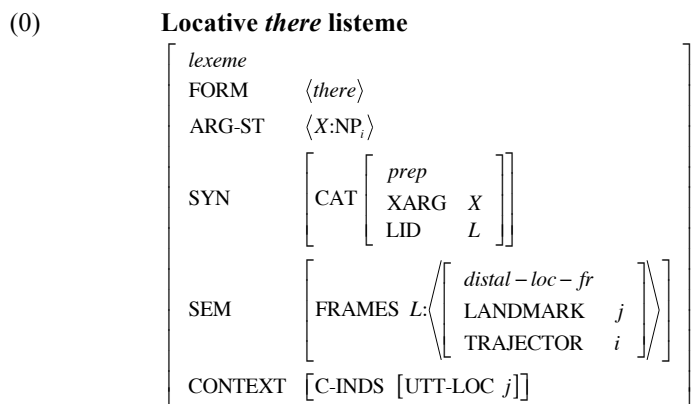
---

[21] This pattern is often referred to as presentational or "presentative" *there*, e.g. Keenan 2003: 187 footnote. We follow here the terminology of Lakoff (1987: 468).

corpora that permit more refined search syntax, in particular COCA, if they exist at all. We do not imagine in any case that we would find many DI examples with tags, possibly none. Whether such examples are truly non-existent or just very rare, we are inclined to attribute their paucity to the illocutionary function of the construction rather than to a syntactic constraint. Similar considerations apply to the resistance of DI to negation and embedding (also noted by Lakoff 1987:469). The issue for our analysis, in any case, is not whether the initial *here* or *there* is 'the subject', but rather whether it has some, but not all, subject properties – which the examples in (0) and (0) show to be the case.

As the initial element in a DI clause is limited to the locative prepositions *here* and *there*, so the verb possibilities are limited to *be, come,* and *go*. In an SBCG grammar, the semantic frames form part of the overall multiple inheritance type hierarchy (Sag 2012; 88f, based on Davis & Koenig 2000). We assume the parts of the frame portion of the type hierarchy shown in (0). Accordingly, in the DI construction, the XARG is restricted to lexemes with [LID *<axial-fr>*] and the verb itself is constrained by [LID *<loc/move-fr>*].

(0) **a.** *loc/move-fr*   **b.**   *axial-fr*

     come-fr go-fr be[at]-fr   *proximal-loc-fr   distal-loc-fr*
                                                   [FORM *<here>*]   [FORM *<there>*]

The listeme for the locative preposition *there,* is shown in (0). We follow the terminology of Langacker (1986:7) in referring to the point of reference in the *distal-location-frame* as the LANDMARK and the located entity the TRAJECTOR.

(0)   **Locative *there* listeme**

$$
\begin{bmatrix}
lexeme \\
\text{FORM} \quad \langle there \rangle \\
\text{ARG-ST} \quad \langle X{:}NP_i \rangle \\[4pt]
\text{SYN} \quad \begin{bmatrix} \text{CAT} \begin{bmatrix} prep \\ \text{XARG} \quad X \\ \text{LID} \quad L \end{bmatrix} \end{bmatrix} \\[8pt]
\text{SEM} \quad \begin{bmatrix} \text{FRAMES } L{:} \left\langle \begin{bmatrix} distal-loc-fr \\ \text{LANDMARK} \quad j \\ \text{TRAJECTOR} \quad i \end{bmatrix} \right\rangle \end{bmatrix} \\[8pt]
\text{CONTEXT} \quad \begin{bmatrix} \text{C-INDS} \ [\text{UTT-LOC } j] \end{bmatrix}
\end{bmatrix}
$$

In (0) the FORM value is, unsurprisingly, *<there>*. The SYN value shows this lexeme to be an intransitive preposition, whose XARG, tagged X, is the single member of its ARG-ST list, an NP with [INDEX i]. The index variable i is in turn identified with the TRAJECTOR (located entity) of a *distal-location-frame* in the SEM|FRAMES value. The other argument of the *distal-location-frame*, the LANDMARK j, is not a syntactic argument of the intransitive preposition, appearing instead in the CONTEXT value as the location of the utterance (cf. Sag 2012: 96).[22]

Contrary to some negative judgments in the literature, e.g. (0), DI is compatible with past tense, as shown in (0).

(0)   *Here I came with a silly hat on. (Lakoff 1987: 483, unnumbered ex.)

(0)   a.   Here came the waitress. She had on a mini-skirt, high heels, see-through blouse with padded
                 brassiere.
         b.   So I looked, and here came a white horse!
         c.   Here came the entrails, to be scraped and washed clean for sausage casings; ...
         d.   Here came the Rabbi, his back bent, his face shaved, his pack on his back.
         e.   Here came the Princess, and as she passed hats were lifted.
         f.   Pretty soon here came the King on his horse...
         g.   We knew from parallax considerations that it had to be well outside the solar system,
                 and so here was the mystery revealed.
         h.   Well there went George all the way down. Luckily a few friends pulled me out of the hole.
         i.   She watched the kids get on the bus one at a time. There went Alice and Jim.
         j   Here came the Russians. Six museum directors from Russia visited Amish

---

[22] The listeme for *here* is similar, with [FORM *<here>*] and *proximal-location-frame* in place of *distal-location-frame.*
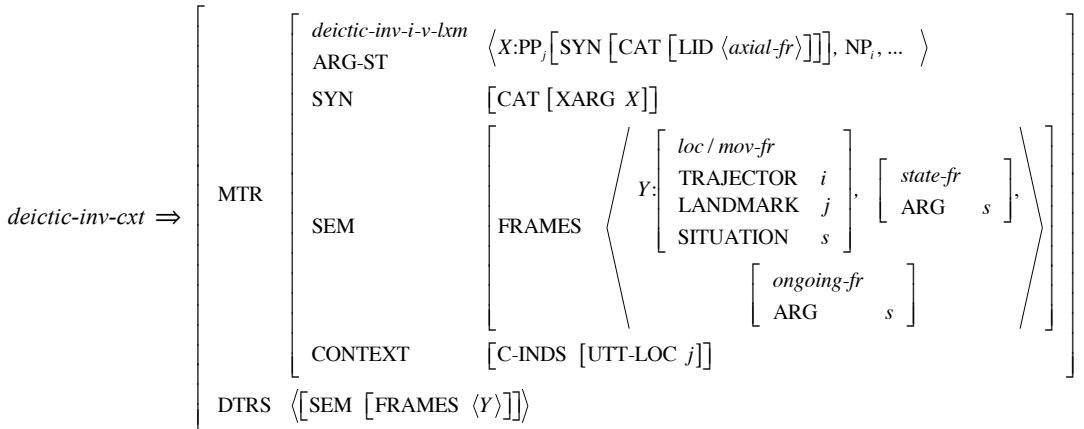
Acres in Nappanee, Indiana on December 18, 2014.

k. Everybody looked over, I can't say for sure but I think they were all thinking the same thing, there went your grandfather, there went George Porter, ...

l. My brother completely missed me so the coach started sending the other kids one at a time. I dodged them all. Then there went my brother with miss number two.

m. And there went Mrs. Gideon too, running awkwardly, puffing for breath.

n. There went Dr. and Mrs. Sorabjee, leaving little Amy alone at their table.

o. We had never heard of giant worms, but here was the fossil evidence.

p. But here was a visible symbol of the degradation of sin.

q. But, here was a curious thing.

r. And so here was the Rosetta stone for ICL perception of the Hagenbach case...

Like the PI and P-*there* constructions, the Deictic Inversion Construction defines a subtype of *split-subject-cxt*. The appearance of locative *there* or *here* in subject position is assured by the specification that the XARG's LID is *<axial-fr>*. The identity of the verb is restricted to *be, come*, or *go* by the specification that its LID is *<loc/move-fr>*. As frequently noted, DI is incompatible with progressive aspect.

(0) a. *Here is coming Kim.
     b. *There was going my last hope.

Accordingly, the DI construction imposes a stative, specifically progressive, interpretation on the denoted situation of location or movement. The situation reported in a DI utterance is 'ongoing' in the sense that Reichenbachian event time includes reference time (where reference time is speech time for present tense verbs and a time prior to speech time for past tense verbs).

(0) **Deictic Inversion Construction** (↑ *split-subj-cxt*)

$$
deictic\text{-}inv\text{-}cxt \Rightarrow
\begin{bmatrix}
\text{MTR} &
\begin{bmatrix}
\begin{array}{l} deictic\text{-}inv\text{-}i\text{-}v\text{-}lxm \\ \text{ARG-ST} \end{array} & \left\langle X{:}\text{PP}_j \left[\text{SYN} \left[\text{CAT} \left[\text{LID} \left\langle axial\text{-}fr \right\rangle \right] \right] \right], \text{NP}_i, ... \right\rangle \\[2mm]
\text{SYN} & \left[\text{CAT} \left[\text{XARG } X \right] \right] \\[2mm]
\text{SEM} & \left[\text{FRAMES} \left\langle Y{:}\begin{bmatrix} loc\,/\,mov\text{-}fr \\ \text{TRAJECTOR} \quad i \\ \text{LANDMARK} \quad j \\ \text{SITUATION} \quad s \end{bmatrix}, \begin{bmatrix} state\text{-}fr \\ \text{ARG} \quad s \end{bmatrix}, \begin{bmatrix} ongoing\text{-}fr \\ \text{ARG} \quad s \end{bmatrix} \right\rangle \right] \\[2mm]
\text{CONTEXT} & \left[\text{C-INDS} \left[\text{UTT-LOC } j \right] \right]
\end{bmatrix} \\[2mm]
\text{DTRS} & \left\langle \left[\text{SEM} \left[\text{FRAMES} \left\langle Y \right\rangle \right] \right] \right\rangle
\end{bmatrix}
$$

Construction (0) defines the lexeme type *deictic-inv-i-v-lxm* as a subtype of *split-subj-i-v-lxm,* and further constrains it as follows. The XARG *X* is a PP whose LID value is constrained to satisfy *<axial-fr>*, which, according to (0)a limits the possibilities to locative *here* and *there.* The second argument is the non-XARG nominal of *split-subj-i-v-lxm*, whose INDEX *i* occurs also in the SEM|FRAMES value as the TRAJECTOR argument of a *loc/move-fr.* That frame, tagged *Y,* recurs in the value of the verb's LID, assuring, by (0)b, that the verb must be *come, go,* or *be.* The LANDMARK argument of the *loc/move-fr* is the index *j*, which we see in the CONTEXT value as indexing the location of the utterance. The two remaining frames predicate stativity and ongoing-ness of the SITUATION variable *s* of the *loc/move-fr*.[23]

7. Existential *There*

There is an extensive literature on existential sentences, which we do not review in detail here.[24] Existential *there* sentences in English accept (at least) the verbs *be, exist, remain,* and perhaps others. Zucchi (1995) goes so far as to include *arrive,* but we follow widespread usage in considering E-*there* sentences to have only stative readings. In fact we agree with the majority of authors (e.g., Milsark 1977, Barwise and Cooper 1981, Keenan 1987, 2003, and Abbott 1992, 1993, 1997, among others) that the verb of an existential sentence denotes an existence predicate. We note, however, following Abbott (1993, citing Karttunen

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[23] For simplicity of presentation we have not attempted to develop or import a formal temporal theory, which would break down *ongoing-fr* into finer elements.

[24] For a recent monographic treatment, see Szekely (2015).

1969; see also Szekely1995: 116), that this 'existence' may include discourse referents that are in fact fictional. The interpretation of 'existence' to include 'discourse existence' which "includes the possibility of actual existence as a special case" (Abbott 1993: 41), is a key move in Abbott's accommodation of the major insights achieved in the strictly semantic view of (English) existentials (e.g., Milsark 1977, Barwise and Cooper 1981, de Jong l987, Enç 1991, Keenan 1987, 2003), with a mixed semantic-pragmatic view that enjoys greater empirical coverage. Abbott claims that "the function of existential sentences is to draw the addressee's attention to the existence and/or location of the entity or entities denoted by the focus NP" (ibid). Her account is consistent with those existential sentences whose focal arguments refer to entities that are presupposed to exist. We here draw upon Abbott's insights in describing the functions of E-*there* sentences with both definite and indefinite focal NPs. These include 'reminder' existentials, so-called 'list' (i.e., QUD) existentials, and news-reporting or thetic existentials. We also note a formulaic existential pattern (*before there was x, there was y*) that to our knowledge has not previously been observed.

Abbott's approach owes much to analyses based on observations of actual speech made by Prince (1981, 1992) and Ward & Birner (1995) (see also now Birner & Ward 1998), and she cites a tradition of pragmatically based treatments of existentials, including Hetzron (1975), Bolinger (1977), Rando and Napoli (1978), Woisetschlaeger (1983), and Lakoff (1987). Abbott (1997) parts company with Ward and Birner with regard to the latter's adoption of Prince's concept of *hearer new* as the unique key to the illocutionary ("pragmatic") force of existential sentences. Abbott cites examples, similar to (0) and (0) with NPs containing demonstrative determiners, in which the demonstrative manifestly refers to an entity that is not new to the addressee, but rather contains an explicit reminder of the addressee's awareness of the entity's existence.

(0)   BS: There is an explosion of food culture in the United States at the moment…
         MS: … And while, as you say, there is this explosion of food culture in the US…

(0)   A: One way that love works in this text is through subtle clairvoyance and the faintest
                  suggestion of magic ...
         B: …But as you say, there is this "subtle clairvoyance" between the two of them, and yet we see
                  them more fully than they see each other.

A fundamental division for Abbott is between those existential sentences that do not presuppose existence of the focal NP denotatum and can thus initiate a discourse (as in the case of thetic existentials to be discussed below) and those that do carry an existence presupposition and thus "require special contextualization and…cannot initiate a discourse (Abbott 1993: 42). This latter category includes the reminder cases, as in (0) and (0), and the unfortunately christened 'list' cases, e.g., (0) and (0), in which what the speaker seeks to place in the focus of attention of the addressee is not only the denotation of the NP itself, but also the fact that it answers a question under discussion (QUD, Roberts 1998).[25]

(0)   A: Is there anything to eat?
         B   Well, there's the leftover chicken from last night. (Abbott 1993: 42 ex. 4)

(0)   A: I guess we've called everybody.
         B   No, there's still Mary and John. (Abbott 1993: 42 ex. 5)

Keenan (2003), by contrast, excludes both the so-called list and reminder cases from his analysis, on the grounds that they allegedly resist polar interrogation and negation. Keenan offers (0), as an illustration of a list context:

(0)   A: How do I get to UCLA from here?
         B: Well there's always the bus, but it doesn't run very often.

Concerning this dialog, he says:

> *Is there always the bus?* (and *There isn't always the bus*) are unnatural in such contexts, so questioning (and
> negating) do not preserve the naturalness of DPs like *the bus* in such sentences (Anna Szabolcsi, p.c.) … [Keenan
> goes on to rule out what we have termed the Deictic-*there* cases.] Finally, "reminder contexts" do not naturally
> question or negate. They are cases where A reminds B of an already acknowledged reason for not doing X, one

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[25] In (0) and (0) the QUD is explicit, but in other cases, which we will see a few examples of below, the QUD is implicit. From now on, we will refer to what have been called 'list' contexts in the literature as QUD contexts.

that A seems to have momentarily forgotten, and A responds, "*Well, yes, there's always that.*" (Keenan 2003: 187, footnote).

As we have suggested above, the so-called list cases are more adequately characterized as those in which a definite NP occurs in an existential sentence that proffers an answer to a QUD. *Pace* Keenan, negation and polar interrogation do appear to be acceptable in such cases. Attested utterances like (0)-(0) would appear to counter-exemplify the claim that negated existentials with definite NPs are always unnatural in such contexts.

(0)   There isn't the Cat Suit because this image was made before the releasing of the game.

(0)   He says it's a loss for Eastern Canada that there aren't silage corn trials here, but he doesn't expect to see anything change for the better anytime soon. "It wouldn't take much to do corn-silage trials if farmers wanted; [QUD = What resources would be necessary for corn-silage trials in Eastern Canada?] the infrastructure is there, but *there isn't the stakeholder willingness to pay for it*," he says. (italics added)

(0)   My favorite place to get books, though is … actually in the garbage bins behind a regular bookstore called Pegasus books. They are a used bookstore which throws out so many things you wouldn't even believe – great works of fiction, encyclopedias, and even scholarly books. Of course you have to be willing to take what is there, [QUD: What *is* the range of books available in the garbage bins behind Pegasus Books?] and *there isn't the selection of online bookstores* ...(italics added)

(0)   I see. That WebJar points to: [URL]
      You can grab the jar from: [URL]
      And see what is in there.
      [QUD: What is in the WebJar?]
      So yes, *there isn't the file you are looking for in that WebJar*. Maybe you should…(italics added)

Keenan does not further elaborate his claim regarding negation, so it is hard to judge with certainty what should count as counterexamples. On their face, examples (0)-(0) appear to counterexemplify the claim that negative existentials with definite NPs are unnatural in QUD contexts.

Examples of polar interrogative existentials in QUD contexts are equally natural:

(1)   The law was that there had to be two or three witnesses in agreement in order to establish guilt. The point here was
        not whether adultery was punishable, but [QUD: What *was* the point?] *were there the lawful number of
        collaborating witnesses to the act.* (italics added)

(2)   Is there always the same amount of wind on Earth at any one time?

(3)   Are there really the small biting insects in the Guitar Hero series of games or is
        someone referring to Flea, the bassist of the Red Hot Chili Peppers.

(4)   Are there really the support networks out there to help potentially radicalised young
        people come back into the mainstream, or are there just people whose hidden roles
        are surveillance and control?

(5)   Is there truly the possibility of another storm coming our way next week?

(6)   Is There Really the RIGHT "RUG" for me?

(7)   But, is there really the abundance of raw talent and invention here that's needed to take
         the driving seat?

(8)   But does this compromise reveal a deeper institutional inclusion? Is there really
        the possibility of future flourishing for us who dissent from the progressive ethos
        of faculties that increasingly self-identify.

The "reminder" cases like (0) and (0) take in more than just reminders of a "reason for not doing [something]" (Keenan 2003: 187, footnote).   Speakers sometimes remind interlocutors of their words for the purpose of questioning or denying the claim those words express. The responses in the examples in (8) and (8), while invented, seem acceptable substitutes, grammatically speaking, for the attested responses in (0) and (0).

(8)   BS: There is an explosion of food culture in the United States at the moment…
        MS: Is there really this explosion of food culture you seem so anxious to dissect?
                  (invented response)

(8)   A: One way that love works in this text is through subtle clairvoyance and the faintest suggestion
                  of magic: ...
        B: In my reading, there is in the novel not this "subtle clairvoyance" you describe but rather an
                  exchange of explicitly lubricious messages. (invented response)

Some attested examples follow:

(8)   but the Hospital say, '… We are very well satisfied with the decision thus far, that you,… have the
        power to enforce this servitude against those residing on the opposite side of the street…' My Lords…
        suppose it should turn out that they had no right – that *there is not this servitude as to the tenants of the
        other side* …(italics added)

(8)   I think you realize from this letter that *there is not the difference that you imagined* existing in our
        attitude towards the Indians…(italics added).

(8)   ... there was never this fuss about Bob Dylan doing a tribute to Frank Sinatra.

(8)   There was never that "space" that you so beautifully defined where the relationship could grow & be
        nurtured...

Speakers sometimes also remind their interlocutors of their own (that is, the speaker's own) recent utterances and in such reminders employ demonstrative determiners in negative existential clauses.

(8)   According to the Scriptures, if a person touches another while the latter is in contact [with a corpse], he
            too is defiled for seven days; but if he touches him when *there is not this contact*, then he is only defiled
            until the evening. (italics added; [square brackets] in original)

(9)   (the farer on the Great Way), the bodhisattva, comprehends the (ultimate) sameness of all deeds; and he
           does not take the good deed as meritorious and the evil deed as devoid of merit. (For, in the ultimate
           truth *there is not this distinction of good and bad.*) (italics added)

Keenan's justification for excluding the reminder and QUD cases on the grounds of non-productivity is thus empirically challenged. Moreover, as a matter of methodology, one is entitled to ask why unacceptability of a form in one context (negation, polar question) justifies not dealing with its acceptability in another context (declarative sentence). We conclude that while existential sentences with definite NPs are contextually restricted, the relevant patterns are productive.

We have seen that QUD (AKA 'list') contexts welcome proper nouns and definite descriptions. There is also a productive, bi-clausal formula, exemplified in (9)[26] that strongly favors proper names and definite descriptions. In this formula an existential subordinate clause presents a well-known current or recent exemplar of some category (e.g., iconoclastic women pop singers in (9)a), while the main E-*there* clause contrasts this exemplar with a historical antecedent.

(9)   a.   Before there was Beyoncé there was Madonna.
        b.   Before there was the internet there was the daily newspaper.
        c.   Before there were the New Casualists, there were the Provisional Painters, and before there
               were the Provisional Painters, there were the 1980s.
        d.   Before there were the Heartbreakers, before there were psychedelic music videos and Alice In
               Wonderland-like imagery, before there was "Mary Jane." We'll, maybe not before there was
               Mary Jane, but before he was living "Like a Refugee," there was Mudcrutch. Featuring a Tom
               Petty no one knew about yet.
        e.   Before there was the Baby-Sitters Club, there were four girls named Kristy Thomas, Mary
               Anne Spier, Claudia Kishi, and Stacey McGill.
        f.   Before there was the CIA there was the OSS.

The sentences in (9) also illustrate the fact that E-*there* sentences can bring into attentional focus entities whose actual-world existence is not at issue: each such sentence contrasts a topical entity (in the *before*-clause) to a less discourse-active but equally familiar entity (in the main clause). The more general point is that allowance must be made for proper names and definite descriptions in E-*there* sentences. Additionally, McNally & Van Geenhoven (1998:7), in arguing for a definition of weak/strong that cuts across the distinction quantificational/non-quantificational (among several others), point to the sentences in (9) (presumably invented), which they characterize as containing "necessarily quantificational NPs which quantify over kinds or similar higher order objects."[27]

(9)   a.   There was every sort of complaint imaginable.
        b.   There was each type of question on the exam.
        c.   There were most varieties of tomatoes available in that seed catalogue.
        d.   There were both kinds of films on the program.

Unsurprisingly, attested example like these are readily observed:

(9)   a.   There was every variety of hats, with every imaginable slouch ; and there was every cut and style of
               coat and pantaloons…
        b.   There is each sort of attire, prepared to wear, totes, footwear, …
        c.   Among our dresses there were most kinds of shabby and greasy wear, and much fustian and corduroy
               that was neither sound nor fragrant.
        d.   There were both kinds of apples in the sauce.

E-*there* sentences have presentational functions beyond that of asserting the bare existence of an entity. As an additional kind of presentational meaning that existential predications may convey, consider the thetic or news-reporting function, in which what the speaker draws the addressee's attention to is less the existence of the referent of the postverbal NP *per se* than the fact that some entity satisfies the secondary predication of an optional 'coda'. In (9), the PP *in a tutu* is doubtless best analyzed as a modifier within the NP.

(9)   People like to wear crazy outfits as well; *there was a man in a tutu* ...(italics added)

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[26] This formula, of the variety that Language Log blog calls a "snow clone", is popular in headlines and the lede sentences of feature articles.
[27] McNally & Van Geenhoven cite Lumsden 1988 (now 2014) as a source of similar examples.

In (9) the man is, to be sure, asserted to exist, but the existence of a man *per se* is not the main thing the speaker seeks to draw to the attention of the addressee; a further intended focus of the addressee's attention is the fact that the man was wearing a tutu. In our view, by putting *a man* in focus position, the speaker seeks to bring into the addressee's attention the entirety of the tutu-wearing scene. Both the existence of the man and the matter of his wearing a tutu are new information, and therefore (9) qualifies as a thetic or sentence-focus sentence, as discussed in Section 3 above. Example (9) might be glossed 'People like to wear crazy outfits as well; there was a tutu-wearing man' (modulo constraints on compound formation). Duffield and Michaelis (2011) suggest that sentences of this type are motivated by the tendency of speakers to avoid putting a focused constituent in a typically topical position, as would occur in the simple, declarative equivalent: *A man was wearing a tutu*. This kind of existential affords the speaker the opportunity to abide by the principle of separation of reference and role: "Do not introduce a new referent and talk about it in the same clause" (Lambrecht 1996:185). While we adopt Abbott's view that that an E-*there* sentence functions to draw the hearer's attention to the existence or location of an entity, we would add to this basic insight that in addition to the existence or location of the postverbal NP, the speaker may also wish to focus the attention of the addressee on the state denoted by a secondary predication such as *in a tutu*.

To sum up so far, our analysis of existential sentences largely follows the mixed semantic-pragmatic analysis of Abbott, positing a basic existential predication with a possible secondary predication (contained in either the existence verb, the coda, or both) and a pragmatic specification that the postverbal NP is in focus. It appears that the *reasons* a speaker may have for wishing the postverbal NP to occupy the attentional focus of the addressee are many and may, in particular, include drawing the addressee's attention to the situation described by the secondary predication of the coda.[28]

We now turn to the syntactic properties of E-*there*, as a prelude to an analysis that formulates these properties, along with the semantico-pragmatic properties discussed above, in a construction that further constraints the type *split-subject-cxt*.

As we saw in (0), repeated as (9), existential *there* sentences exhibit both postverbal agreement and raising.[29] E-*there*, like P-*there*, requires expletive *there*.[30]

(9) **Existential *There*** [E-*there*]
   a. Is there really an elephant in the garden?
   b. There are likely to be problems with the finale.
   c. There remain three issues to be addressed.
   d. There exist two possible solutions.

As mentioned, in an SBCG grammar, the semantic frames make up part of the multiple inheritance hierarchy of typed feature structure. We assume that in the frame hierarchy one immediate subtype of *state-frame* is *existence-frame* and that *existence-frame* has at least three immediate subtypes, as indicated in (9).
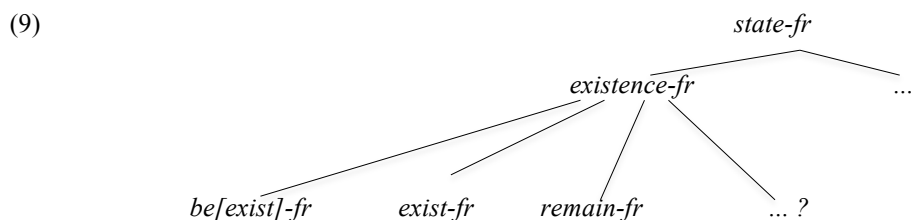
---

[28] As Abbott points out, persistent observations of definite NPs in postverbal position in existentials, ever since Milsark (1997) – including some of the kinds of examples noted above – pose a serious empirical challenge to any treatment in which such NPs violate in one way or another the Case Theory of transformational generative grammar, as in the analyses of Safir (1987) or Belletti (1988). For discussion, see Abbott (1993: 52-53).

[29] We assume there is a separate lexical construction licensing sentences with singular verbal morphology and plural postverbal NPs, like (i)

(i)   There's way too many ostriches.

Based on unsystematic observation it seems to us that there may be significant variation regarding (a) the restriction of the singular verbal morphology with plural postverbal NPs to *there's* versus *there is,* (b) whether either of these 'singular-for-plural' forms extend for any speaker to either *exist* or *remain*, and (c) how much variation there is within and across speakers with respect to all these matters and how such variation as does exist may be conditioned. We do not address any of these questions in this paper.

[30] See Szekely (2015: 116 ff.) for a list of arguments that existential *there* is expletive *there*.

(9)

$$
\begin{array}{c}
\textit{state-fr} \\
\diagup \qquad \diagdown \\
\textit{existence-fr} \qquad\qquad ... \\
\diagup\;\;|\;\;\diagdown\;\;\diagdown \\
\textit{be[exist]-fr} \qquad \textit{exist-fr} \qquad \textit{remain-fr} \qquad\qquad ... \; ?
\end{array}
$$

The FRAMES list of every existential verb contains a subtype of *existence-fr*. The Existential-*there* Construction specifies a subtype of *split-subj-cxt* whose mother's FRAMES list contains a (subtype of) *existence-fr*. The E-*there* construction also specifies that the mother's XARG is expletive *there*. The mother's internal argument inherits the properties of pragmatic focus and determination of verbal agreement from *split-subj-cxt*. The mother's FRAMES value specifies an existence predication of the internal argument and leaves open the possibility, as in the case of *remain*, for the specification of further frames. We noted that existential *be* countenances discourse existence (0), (0), (8)-(9). It appears that existential *exist* does not have this property. Compare to (0) and (0), repeated as (9) and (9), examples (9) and (9) which substitute of *exist* for *be* in B's reply. Real-world existence is the only available reading for these replies, which therefore can only be taken as an indirect, possibly jocular or ironic, responses to A's question, if not *non sequitur*.

(9) A: Is there anything to eat?
     B   Well, there's the chicken from last night. (Abbott 1993: 42 ex. 4)

(9) A: I guess we've called everybody.
     B   No, there's still Mary and John. (Abbott 1993: 42 ex. 5)

(9) A: Is there anything to eat?
     B   #Well, the leftover chicken from last night exists. (invented example)

(9) A: I guess we've called everybody.
     B   #No, Mary and John still exist. (invented example)

(9) **Existential *there* Construction** (↑ *split-subj-cxt*)

$$
\textit{existential-there-cxt} \Rightarrow \left[\text{MTR} \begin{bmatrix} \textit{e-there-i-v-lxm} \\ \text{ARG-ST} \quad \langle X{:}noun[\text{SYN [CAT [LID } \langle \textit{there[expletive]-fr}\rangle\text{, NP}_i,...]} \rangle \\ \text{SYN} \quad\quad [\text{CAT [XARG } X]] \\ \text{SEM} \quad\quad \left[\text{FRAMES} \left\langle \begin{bmatrix} \textit{existence-fr} \\ \text{ENTITY} \quad i \end{bmatrix} \right\rangle \right] \end{bmatrix} \right]
$$

The Existential *there* Construction (9) adds to the information of *split-subj-cxt* only that the mother's XARG is expletive *there* and that the frame contributed by the daughter is consistent with *existence-fr*.

6. Reversed Equative *be* [RE-*be*][31]

The examples of reversed equative *be* given above as (0) are repeated below as (9).

(9) a   My biggest worry are the injury risks.
     b.   Your best bet are the DIET MARGARINES ...
     c.   My worst nightmare were the soups she would make for dinner.
     d.   But the problem were the raiders outside the town...

---

[31] We know of no uniform nomenclature for types of copula clauses. What we are calling 'equative' clauses correspond closely to those identified by CGEL (p. 266 ff) as 'specifying' copula clauses. A range of syntactic categories can serve as arguments of equative *be*. We do not attempt to specify these or the complex relations of connectivity that relate them; in (10) we employ the catchall abbreviation XP. See CGEL: 266 ff. for detailed discussion. We observe that all categories other than *noun*, when determining agreement, specify [PER 3, NUM sg].

Equative *be* of course occurs in "unreversed" form as well.[32] Compare to the examples in (9) the attested "unreversed" examples in (9).

(9)   a   My biggest worry is people who think they know everything.
         b.   Your best bet is places like eBay.
         c.   My worst nightmare is people who throw their gum on the ground.
         d.   But the problem is drivers.

Our evidence for a split-subject analysis of RE-*be* is weaker than that for the other subtypes of *split-subject-construct* because we do not find firm evidence that RE-*be* occurs with raising of the preverbal constituent. One finds a few, quite few, examples that look like raising, such as (9), but one also finds more examples of plural *seem* and *appear* in which both the subject and NP complement of *be* are singular, such as (9).

(9)   a.   The problem appear to be the plugins that the HP software installed in the IE
                browser to enable saving and editing web clips.
         b.   The problem seem to be the quotes AND the german character Ö.

(9)   a.   My Maytag LSE 7800 was leaking and the problem appear to be seal-related.
         b.   The problem appear to be related to custom actions.
         c.   The problem seem to be the categories handler, but I'm not sure.
         d.   but the problem seem to be the Diagnostic Tool (it still complains).

The examples in (9) may represent or non-native English[33]. Their relative frequency compared to examples like those in (9) renders uncertain the judgment that the examples in (9) truly represent raising.

There is, however, independent evidence that supports the assignment of subject properties to the preverbal NP of an equative *be* sentence displaying postverbal agreement. First, it appears that the preverbal constituent in an RE-*be* sentence cannot receive a focal accent that is construed contrastively:[34]

(9)   a   *No, the FIRST thing to go are manners. (cf. The FIRST thing to go are MANNERS.)
         b.   *Your BEST bet are the smaller venues. (cf. Your BEST bet are the SMALLER venues.)
         c.   *My PROBLEM are all the ads on blogs. (cf. My PROBLEM are all the ADS on BLOGS.)
         d.   *My FIRST sight were two huge bare feet. (cf. My FIRST sight were two huge,
                   BARE FEET.)

Unreversed equative *be* is not constrained in this manner, as the invented examples in (9) show:

(9)   a   The FIRST thing to go is manners. (cf. The FIRST thing to go is MANNERS.)
         b.   Your BEST bet is the smaller venues. (cf. Your BEST bet is the SMALLER venues.)
         c.   My PROBLEM is all the ads on blogs. (cf. My PROBLEM is all the ADS on BLOGS.)
         d.   My FIRST sight was two huge bare feet. (cf. My FIRST sight was two HUGE,
                   BARE FEET.)

The postverbal NP in a RE-*be* sentence is necessarily construed as focal. RE-*be* shares this property with other members of the Split Subject family.

A second line of evidence in favor of viewing the preverbal expression as the XARG of RE-*be* comes from tag-questions: in RE-*be* sentences, it is the preverbal NP, rather than the postverbal (agreeing) NP, that predominantly controls the reference of the postverbal pronoun in a tag. In a Qualtrics survey, 195 respondents were asked to choose the appropriate tag for each of

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[32] In fact Microsoft Word flags the reversed form as ungrammatical.
[33] Or possibly native dialects of narrow distribution, regionally and/or socially.
[34] All of the acceptable alternatives in (9) feature a 'double peak' accentual pattern, in which subject and predicate form separate 'intermediate' phrases, each of which carries its own sentence accent (Ladd 1995: 276ff). Lambrecht and Michaelis (1998) argue that such sentences, which have occasionally been viewed as 'double focus' sentences, are in fact predicate-focus sentences with discourse-new or low-activation subject referents. The sentence accent within the subject NP (which they refer to as a *topic-ratification* accent) is irrelevant to the focus articulation of the predication, and is dispensable. The predicate accent, by contrast, is indispensable to the construal of such predications as predicate-focus sentences.

five equative *be* sentences with postverbal agreement.[35] The survey items and the tag options offered for each are shown in (95):
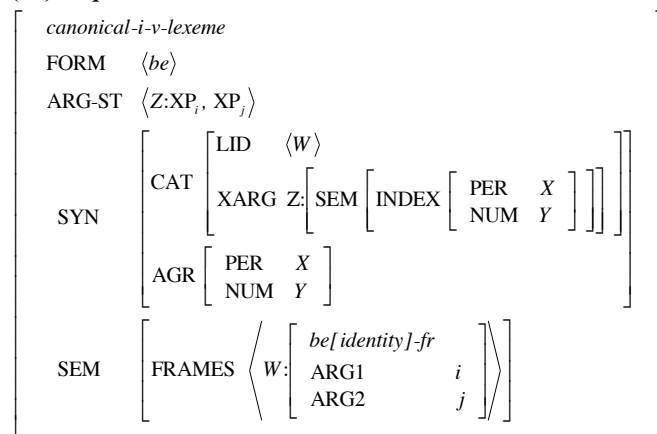
(10) a   The only thing we get paid for are the aluminum cans.
            Preverbal-NP tag: isn't it?
            Postverbal-NP tag: aren't they?
      b.   The major issue were the people handling the applications.
            Preverbal-NP tag: wasn't it?
            Postverbal-NP tag: weren't they?
      c.   Your primary concern are the additional charges.
            Preverbal-NP tag: isn't it?
            Postverbal-NP tag: aren't they?
      d.   Your first sight were those two huge bare feet.
            Preverbal-NP tag: wasn't it?
            Postverbal-NP tag: weren't they?
      e.   The problem is the people who don't vote.
            Preverbal tag: Isn't it.
            Postverbal tag: Aren't they.

Respondents were given the choice of adding either tag, neither tag, or both tags. Only a handful chose both, while a full third (294) of the total (891) responses rejected the both-tag option. Of the 598 responses approving a single tag 501 (84%) chose preverbal NP control of the tag to 97 (16%) postverbal. Although there were clearly aspects of this task that respondents were not comfortable with, the degree of respondents' preference for preverbal control is highly unlikely to be due to chance. If we consider each single-tag response as an independent trial with the null hypothesis probability of postverbal control as .5, the probability of obtaining 501 or more postverbal control responses in 598 independent trials is, to four decimal places, zero. We conclude there is strong evidence for attributing a subject property to the preverbal NP in RE-*be*, although agreement is with the postverbal NP.

Our SBCG grammar accounts for both the unreversed E-*be* and RE-*be* patterns by positing an equative *be* lexeme that licenses examples like those in (9) and that also serves as input to (i.e., as daughter of) a construction inheriting the Split Subject Construction, creating, as mother of the resulting construct, a split-subject version of equative *be,* whose internal argument carries the agreement information, as illustrated by the examples in (9).

In (10) we show the listeme for the equative *be* lexeme. The lexeme is specified to be a *canon-intrans-v-lxm*.

(10) Equative *be* Listeme

$$
\begin{bmatrix}
\textit{canonical-i-v-lexeme} \\
\text{FORM} \quad \langle be \rangle \\
\text{ARG-ST} \quad \langle Z{:}XP_i,\ XP_j \rangle \\
\text{SYN} \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{LID} \quad \langle W \rangle \\ \text{XARG } Z{:}\begin{bmatrix} \text{SEM} \begin{bmatrix} \text{INDEX} \begin{bmatrix} \text{PER} & X \\ \text{NUM} & Y \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix} \\ \text{AGR} \begin{bmatrix} \text{PER} & X \\ \text{NUM} & Y \end{bmatrix} \end{bmatrix} \\
\text{SEM} \begin{bmatrix} \text{FRAMES} \left\langle W{:} \begin{bmatrix} \textit{be[identity]-fr} \\ \text{ARG1} \quad\quad i \\ \text{ARG2} \quad\quad j \end{bmatrix} \right\rangle \end{bmatrix}
\end{bmatrix}
$$

The Reversed Equative *be* Construction defines a subtype *split-subj-cxt* that simply specifies the daughter to be equative *be* with plural XARG and singular non-XARG.

---

[35] Sentence (10) was presented to only 116 respondents. All test sentences were based on attested examples. All the preverbal-NP tags are singular while all the postverbal-NP tags are plural. We did not find enough attested examples of RE-*be* with plural preverbal NP and singular postverbal NP, such as *Too many people is the problem*, in time to include them in the Qualtrics study).

(10) **Reversed Equative *Be* Construction** (↑ *split-subj-cxt*)

$$rev\text{-}equa\text{-}be\text{-}cxt \Rightarrow \left[\text{DTRS} \left\langle \left[\begin{array}{ll} \text{ARG-ST} & \langle X{:}\text{NP}[pl], \text{NP}[sg]\rangle \\[1em] \text{SYN} & \left[\begin{array}{ll} \text{XARG} & X \\ \text{LID} & be\text{-}identity-fr \end{array} \right] \end{array} \right] \right\rangle \right]$$

Since canonical equative *be*, when realized in an ordinary subject-predicate clause, occurs with the postverbal NP in focus position (as a function of the Subject-Predicate Construction or of some more general principle), there seems to be no semantic or discourse-pragmatic difference between reversed and non-reversed equative *be* clauses. There is certainly inter-speaker variation in preference for one pattern or the other and probably intra-speaker variation as well. If this variation is not random, it might be fruitful to examine the relative strength of the conditioning factors.[36].

7. Conclusion

We have considered five clausal patterns in English in each of which certain of the properties that are standardly considered "subject" properties are distributed between two different constituents. To our knowledge, despite intensive analysis of several of these patterns, the group as a whole has not been subject to prior study. The SBCG approach has enabled us to see precisely what the five patterns have in common, namely the Split Subject Construction, and what is particular to each, revealing that a constructional, constraint-based approach like SBCG has the ability to extract the correct grammatical generalizations, not only in so-called "core" areas of a grammar, but in the hard cases, where concepts such as *subject,* which readily handle the more tractable facts, fail to fit the facts at hand. We see further that the five split-subject patterns, often identified as clausal, yield to a strictly lexical analysis (Kaplan & Bresnan 1982, Pollard & Sag 1994, Müller & Wechsler 2014, among many others). Unlike the lexical rules that modulate between usual valence patterns, we find that lexical rules involved in marked phenomena like those treated here tend to produce as outputs derived lexical items with properties not usually found in listemes, for example, an external argument that does not control agreement. This should occasion no surprise, since such facts are the essence of the marked phenomena to which the lexical analysis is dedicated to account. Along the way we have noted that several of the intuitive acceptability judgments on which analyses of some of these patterns have depended fail to agree with observations of actual usage to a degree that is hard to reconcile with performance error or dialect diversity.

---

[36] Duffield (2013) represents a first step in this direction. In a series of behavioral experiments, Duffield found that, for example, subjects primed with a sentence like, "There are many kinds of birds in the forest," and presented with a visual prompt depicting an aggregate entity (e.g., a group of robins) and a singular NP subject (e.g., *the one nesting in the leafy tree*) consistently produced the reversed equative agreement pattern (e.g., *The one nesting in the leafy tree are robins*) when instructed to complete a short passage with an equative sentence.

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SI.1. Sign-Based Construction Grammar

The FSs that constitute the language model are organized by multiple inheritance hierarchy of *types*. The type *sign* has the immediate subtypes *lexical sign* and *expression*. The type *lexical sign* has the immediate subtypes *lexeme* and *word*. The value of the FORM feature is a morphological representation of the *sign*, notated here in standard English orthography. The value of SYN is a feature structure that specifies the features CAT(egory), VAL(ence), and MRKG (marking).[37] CAT values are FSs assigned to various word-class types (*noun, verb,* etc.), and specify values for the features appropriate to that type, including Lexical Identity (LID), whose value is a list of *frames*.[38] The MARKING (MRKG) value of a lexical sign (only) is identified with its LID value.[39] LID values are percolated from heads, making the identity of the lexical head available at the phrasal level; MRKG values are percolated from functors (specifiers or modifiers). Thus in an NP or N' the identity of both the head (via the LID value) and the modifier or specifier (via the MRKG value) are visible to potential governing predicators.

The value of the ARG-ST feature is a list of the *signs* that are the arguments – syntactic and semantic – of a predicating lexeme or word, in order of increasing obliqueness, or decreasing accessibility (intuitively: subject, direct object,...). Members of the ARG-ST list reappear in the list value of the VAL feature, except when extracted or given null realization. The ARG-ST feature is limited to lexical signs; unlike the VAL feature, it does not appear in phrasal signs. This limitation provides one aspect of the highly local nature of SBCG. The external argument is the argument that gets 'raised', 'controlled', etc. When a lexical sign has an external argument, it is the first element on the ARG-ST list. There is a syntactic CAT feature, XARG, whose value is the external argument.[40] The XARG feature in effect allows a predicator that selects a given type of phrasal sign to 'see' the first argument of the verb within that phrase. As well as identifying the target of control and raising the XARG feature plays a key role in the analysis of idioms (Kay, Sag & Flickinger (submitted), Kay & Michaelis (submitted). In a simple English declarative clause, the XARG is the subject.

The VAL list of a word shrinks as successive phrases headed by the word are projected. Expressions like NPs, PPs, APs, and clauses have the empty list as their VAL value: they are 'saturated', in the sense that they contain constituents corresponding to all of the predicator's arguments.

A second property of the SBCG architecture that enforces locality is that only constructs, but not signs, have a DTRS feature. Since the members of the list constituting the value of the ARG-ST feature are *signs* and since a *sign* does not have a DTRS feature, it is possible for a predicator to specify properties only of its daughters, not of its 'granddaughters'. Long-distance dependencies are encoded as a sequence of local dependencies, via the GAP (aka SLASH) feature, in the tradition of GPSG and HPSG.

The value of SEM includes specifications for the features INDEX and FRAMES. We assume an indefinitely large number of referential indices *1, 2, ...* The FRAMES feature takes a list of elementary predications[41] as its value.

SI.2. Agreement

Agreement properties are part of the referential index of that argument, and the nature of these properties is determined in considerable part by what is relevant in the context in which the act of reference takes place, rather than exclusively by denotational properties of the argument *per se*. The two are usually, but not invariably, correlated, although sometimes, as in the case of arbitrary gender, the properties determining agreement are purely syntactic. P&S give examples that illustrate the manner in which context of use may determine such properties – as in the reference transfer cases first noted by Nunberg 1977.

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[37] Since, the MARKING feature does not play a role in the present analysis, that feature is not usually included in the diagrams of this paper.

[38] Typically this will be a singleton list. See Sag (2012) for greater detail.

[39] For readers familiar with HPSG, the LID feature subsumes the function of the PFORM feature and accomplishes the analogous function for lexical heads of all categories.

[40] For convenience, we sometimes refer, somewhat loosely, to the value of the XARG feature as 'the XARG'.

[41] In the present study these lists are all singleton (See Sag 2012). Roughly, SBCG frames are equivalent to the RELS of Minimal Recursion Semantics (MRS), in Copestake et al. (2005). We adopt here a simplified form of MRS. We make no use of either the LTOP feature or the mechanisms for keeping track of relative scoping relations. We make limited use of the LABEL feature, which is explained when it first appears.

P&S also suggest an analogy between the agreement-relevant features of indices and the reference markers of Discourse Representation Theory, based on the way the two function in the tracking of referents in a sustained discourse. For example, in (A.1)a the plural verb *are* reveals that the food (hash browns) is the discourse object being tracked, whereas in (A.1)b the singular verb *is* reveals that the referent being tracked is the diner.

(A.1)   [P&S (18), p.69]   a.   The hash browns at table nine are/*is getting cold.
                           b.   The hash browns at table nine is/*are getting angry.

We follow W&Z and Kathol (1999), who assign an AGREEMENT (and/or CONCORD) feature to targets of agreement in order to account for a wide range of phenomena. For example, verbs can show person and number agreement when there is no argument to furnish the index features. Kathol illustrates the point, indicating that in German impersonal passives there is third person singular agreement inflection on the verb although there is no subject argument, as in. Latin shows similar facts in (A.2) and (A.3).

(A.2)   [Kathol 1999 (15) p.10[42]]   An jenem Abend   wurde   viel   gelacht.
                                      during that evening   was:3sg   much   laughed
                                         `There was much laughter that evening.'

(A.3)   [Napoli 2013 (6) p. 375]   Ad virtutem   venitur   per   ipsam
                                   to virtue   come:3sg:pass   through   herself
                                      `One comes to virtue through virtue itself.'
                                      (Seneca, *Epistulae Morales* 89.8.10)

English finite verbs show third singular agreement with sentential and prepositional subjects. P&S assign [PER 3] and [NUM sg] values to the INDEX value of expletive *it* and [PER 3] to the INDEX value of expletive *there,* thus by implication [PER 3] and [NUM sg] to PP's and S's in referential position. We follow P&S in assigning [PER 3] and [NUM sg] to the index values of expletive *it* and also to the INDEX value of PP's and S's.

Although P&S neither restrict their attention to English agreement nor overlook some of the complex agreement phenomena of English, Kathol (1999) and W&S establish that more feature machinery than that provided by the INDEX agreement process of Pollard and Sag 1994 (P&S) is required to capture the details of agreement in a wider range of cases, including conflicts between constituent internal and cross-constituent agreement and conflicts between grammatical gender and natural gender. Haug &Nikitina (forthcoming) have recently reviewed a substantial amount of cross-linguistic data to establish the range of analytical devices required to account for agreement phenomena across languages. From the point of view of SBCG, their findings have shown that there are cases where a verb must carry an AGREEMENT feature (e.g., impersonal verbs – and, we might add, split-subject verbs), cases where such a feature is possible but not necessary (e.g., canonical English subj-verb agreement), and cases where a single such feature will not suffice (e.g., when a verb agrees with both subject and object independently). We do not here attempt to present a general theory of agreement, but only posit the minimal agreement machinery necessary to capture the facts of English canonical and non-canonical verbal agreement.[43]

Sag (2012), does not discuss agreement. Sag (2012: 112) presents the construction in (A.4) for constraining verb lexemes, which we expand slightly in (A.5) to show the AGR(eement) feature.

(A.4) **Verb Lexeme Construction** (↑ *lexeme*), (Preliminary, after Sag 2012: 187)

$$
verb\text{-}lxm \Rightarrow \begin{bmatrix} \text{ARG-ST} & \langle X, ...\rangle \\ \text{SYN} & \begin{bmatrix} \text{CAT} & \begin{bmatrix} verb \\ \text{LID} & L \\ \text{SELECT} & none \\ \text{XARG} & X \end{bmatrix} \end{bmatrix} \\ \text{SEM} & [\text{FRAMES } L] \end{bmatrix}
$$

The representation in (A.4) may be read as follows. A sign of the type *verb-lexeme* inherits the constraints of the type *lexeme* (i.e., '↑*lexeme*') and is constrained according the FS description in the AVM following '⇒'. The value of the ARG(ument)-
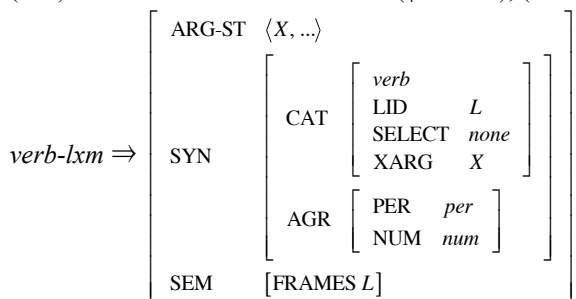
---

[43] In particular, we do not take up W&Z's persuasive arguments that both an AGREEMENT feature and a separate CONCORD feature are necessary to deal with the complex agreement phenomena of a language like Serbian/Croatian.
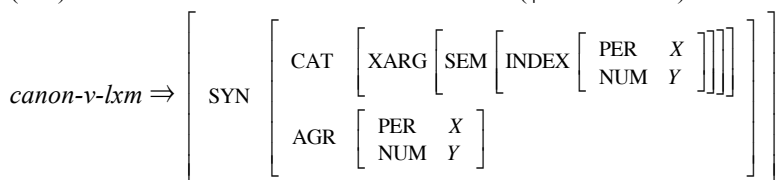
ST(ructure) feature is a list whose first member is represented by the identificational tag X. The value of the SYN(tax) feature is a FS description showing the SYN(tax) feature CAT(egory). [44] The CAT value is a FS of type *verb*. The LID feature value is the list tag L, which can be seen below as the value of the FRAMES feature of the SEM value. The SELECT feature is shown for completeness, but plays no active role in verbs. The XARG value, X, is a tag identifying this item with the first element of the VAL list.

(A.5) **Verb Lexeme Construction** (↑ *lexeme*), (Final)

$$
\textit{verb-lxm} \Rightarrow
\begin{bmatrix}
\text{ARG-ST} & \langle X, ... \rangle \\
\text{SYN} &
\begin{bmatrix}
\text{CAT} &
\begin{bmatrix}
\textit{verb} \\
\text{LID} & L \\
\text{SELECT} & \textit{none} \\
\text{XARG} & X
\end{bmatrix} \\
\text{AGR} &
\begin{bmatrix}
\text{PER} & \textit{per} \\
\text{NUM} & \textit{num}
\end{bmatrix}
\end{bmatrix} \\
\text{SEM} & [\text{FRAMES } L]
\end{bmatrix}
$$

Canonically, the English finite verb agrees with the external argument (XARG). As noted, the XARG is the only argument of a lexical head visible from outside the phrase projected by that head and serves as the subject in a simple, declarative, subject-predicate clause. We further constrain the Verb Lexeme Construction as the Canonical Verb Lexeme Construction to reflect this fact.

(A.6) **Canonical Verb Lexeme Construction** (↑ *verb-lexeme*)

$$
\textit{canon-v-lxm} \Rightarrow
\begin{bmatrix}
\text{SYN} &
\begin{bmatrix}
\text{CAT} & \left[\text{XARG} \left[\text{SEM} \left[\text{INDEX} \begin{bmatrix} \text{PER} & X \\ \text{NUM} & Y \end{bmatrix} \right] \right] \right] \\
\text{AGR} & \begin{bmatrix} \text{PER} & X \\ \text{NUM} & Y \end{bmatrix}
\end{bmatrix}
\end{bmatrix}
$$

This lexical-class construction ensures that a canonical English verb *lexeme* identifies the agreement information of the verb with that of the INDEX of its XARG. The inflectional constructions that are sensitive to AGR values specify *word* mothers that are [VF *fin(ite)*] and identify the SYN values of mother and daughter; so morphological and phonological reflexes of agreement will only occur on finite verbs, in English. In other languages agreement in participles is widespread and in infinitives not uncommon.[45] The two immediate subtypes of *verb-lexeme* posited in Sag (2012) are *transitive-verb-lexeme* and *intransitive-verb-lexeme*. *Canonical-verb-lexeme* is cross-classified with each of these to produce immediate subtypes of *canonical-transitive-verb-lexeme* and *canonical-intransitive-verb-lexeme*, as shown in (A.7).
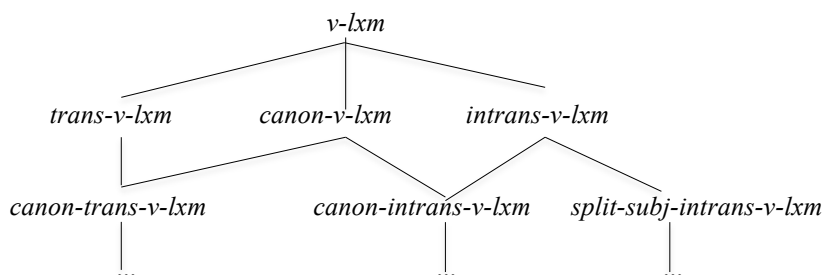
(A.7) *v-lxm*
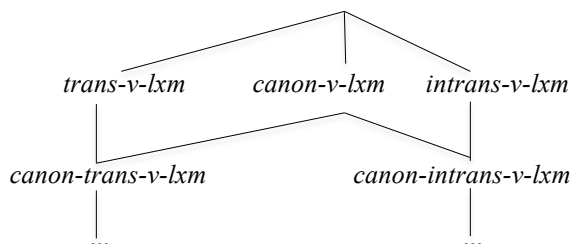
While agreement with the XARG is the canonical choice in English, it is not the only choice, as saw in (2-6) of the main text. A derivational construction that assigns the role of agreement source (AS) to a non-XARG is needed to account for non-canonical, "quirky" agreement. That construction is the Split Subject Construction. The SS Construction provides the unity to our analysis of the superficially disparate phenomena of English partial inversion. The *split-subject-intransitive-verb-lexeme*

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[44] Certain features, such as MARKING, VAL, and WH and REL, which play a role in filler-gap structures, are not shown because they are inherited from *lexeme*, which is a subtype of *syntax-object* and whose features are assigned in the grammar signature, i.e., higher in the type hierarchy. See Sag (2012: 72-73, ex. 180).
[45] E.g., In Portuguese, Galician, Medieval Old Neapolitan, and Sardinian (Ledgeway 1998), Hungarian (Tóth 2000), Hindi-Urdu (Bhatt 2005, among others), and several Caucasian languages (Haspelmath 1999, Polinsky & Potsdam 2001).

type, licensed by the mother of the SS Construction, inherits *intrans-v-lxm*, but not *canon-intrans-v-lxm,* yielding the type hierarchy in (A.8).

(A.8)

```
                              v-lxm
               ┌────────────────┼────────────────┐
         trans-v-lxm      canon-v-lxm       intrans-v-lxm
               │        ┌──────────┘      ┌──────┴──────────┐
      canon-trans-v-lxm      canon-intrans-v-lxm      split-subj-intrans-v-lxm
               │                    │                       │
              ...                  ...                     ...
```

SI.2.1 Inflection.

Our approach to morphology is in general realizational, following in detail that of Sag 2012: 107 ff. (See Sag 2012: 107, fn. 54 and p. 113 for background). Affixes are not constituents, i.e., not signs. Affixation and other morphological process are the result of morphological functions that have as input the FORM value of the daughter, called the *stem* of an inflectional or derivational construction and as output the FORM value of the mother. A derivational or inflectional construction specifies, the relevant morphological function. The morphological function for pluralizing English nouns is given in (A.9).

(A.9) $\mathbf{F}_{noun.pl}$

Stem	$\mathbf{F}_{noun.pl}$(Stem)
ox	oxen
sheep	sheep
criterion	criteria
...	
Others	
x	x-s

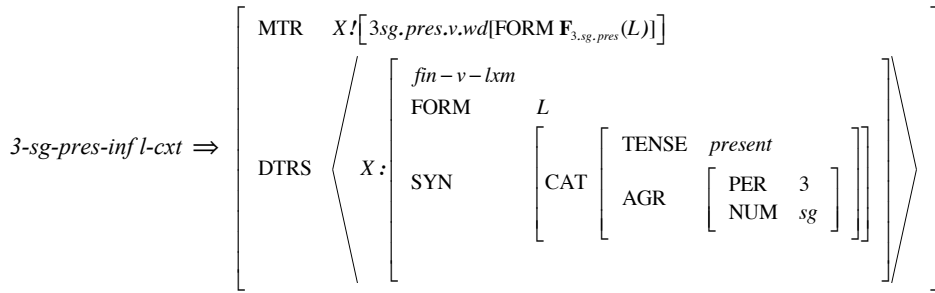The morphological function for third person singular present tense verbal agreement is given in (A.10).

(A.10) $\mathbf{F}_{3sg.Agr}$

Stem	$\mathbf{F}_{noun.pl}$(Stem)
have	has
be	is
do	does
will	will
...	
Others	
x	x-s

Inflectional constructions (in English) pump a *lexeme* daughter to a *word* mother, taking account relevant syntactic information in the daughter and applying the appropriate morphological function to the daughter's FORM value to produce the mother's FORM value. In the case of verbal agreement inflection, the AGR value of the daughter is crucial. Recall that this value will be identical to that of the XARG in canonical verbs, but not in split-subject verbs.

(A.11) **Third Singular Present Tense Inflectional Construction** ($\uparrow$ *inflectional-cxt*) [46]

$$
\textit{3-sg-pres-infl-cxt} \Rightarrow
\begin{bmatrix}
\text{MTR} & X! \begin{bmatrix} 3sg.pres.v.wd[\text{FORM } \mathbf{F}_{3.sg.pres}(L)] \end{bmatrix} \\[2em]
\text{DTRS} & \left\langle X: \begin{bmatrix} fin-v-lxm \\ \text{FORM} \quad L \\[1em] \text{SYN} \quad \begin{bmatrix} \text{CAT} \begin{bmatrix} \text{TENSE} \quad present \\[0.5em] \text{AGR} \begin{bmatrix} \text{PER} & 3 \\ \text{NUM} & sg \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix} \right\rangle
\end{bmatrix}
$$

---

[46] Without attempting here to solve a complex problem in English morphology, we assume for convenience that there is a syntactic feature TENSE in English verbs which accounts for "present tense" morphology in conditional protases, narrative present, imperatives with future reference, future reference with future adverbs (*She arrives tomorrow*), repeated or habitual events, and timeless truths, perhaps more.

SI.2.2 Long distance agreement (LDA) in split-subject structures

LDA occurs in split-subject structures such as existentials. This observation and related facts of Icelandic furnished the empirical basis of Chomsky's (2000) proposal of the Agree operation within the Minimalism framework.[47] LDA in English existentials is illustrated in (A.12) and in PI in (A.13).

(A.12) a. There seem to be numerous problems.
        b. There seem to be a few trees between the green and me.
        c. If there do not appear to be truffles beneath the oak, but there appear to be to X
            because X is under some sort of illusion (or delusion) as to how things would appear if
            there were truffles, that is a matter of X's attitudes...

(A.13) a. From the base of the main sector below appear to arise two branches, the one at
            the extreme base being the stem of the wide fork…
        b   But here may seem to arise two material objections…

Non-finite verb forms do not inflect in English or Icelandic but in a language in which non-finite forms inflect, the non-finite verbal head of the lower VP or clause in an LDA structure may show the same agreement features as the matrix verb and the source argument. Example (A.14) of Hindi-Urdu is taken from Boeckx (2004, example 5).

(A.14)   Vivek-ne   [kitaab parh-nii]   chaah-ii
         Vivek-ERG book.F read-INF.F want-PFV.F
         Vivek wants to read the book.

In (A.14) the infinitive *parh-nii* 'read-INF.F' agrees both with its nominal complement *kitaab* 'book.F' and the matrix verb *chaah-ii* 'want-PFV.F'. Example (A.15) is from Godoberi, a Nakh-Daghestanian language (Haspelmath 1999:131, ex. 1).

(A.15)   a. ʕali- č'u   gyazeti   b-ax-i   b-eʔu-ča
             Ali-CONT [paper(ABS) N-take-INF] N-forget-AOR
             Ali forgot to buy a newspaper.

         b. ʕali-č'u   gyazeta-be   r-ax-i   r-eʔu-ča
             Ali-CONT [paper-PL(ABS) PLN-take-INF] PLN-forget-AOR
             Ali forgot to buy newspapers.

In the a (sg) and b (pl) versions, respectively, the infinitive *b-ax-i* (sg)/*r-ax*i (pl) agrees with its absolutive argument *gyazeti* (sg)/*gyazeta-be* (pl) and also with the matrix verb
b-eʔu-ča (sg)/*r-eʔu-ča* (pl). Such facts suggest that the apparently long-distance relation between the matrix verb and the nominal in an infinitival or other non-finite complement may, in some cases at least, be composed of two local relations, one between a complement infinitive and its nominal complement and the other between the complement infinitive and the matrix verb.[48] For English it suffices to say that a subject-raising verb agrees with whatever its complement agrees with. In the usual case, when the matrix verb agrees with the unexpressed subject of the complement (*Fido* (sg) *seems* (sg) *to like bones* (pl)) this will have no effect different from the usual assumption that the matrix verb is agreeing with its subject. But in split subject cases like (A.12) and (A.13) the apparent long distance agreement is correctly predicted. Accordingly we posit the lexical class construction in (A.16), defining the type *subject-raising-verb-lexeme* as a subtype of *intransitive-verb-lexeme*. The parts of the AVM shown in red indicate what is added to take care of LDA in English to what is otherwise a standard definition of a raising verb in a constraint-based approach.

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[47] There has been extensive examination within that framework regarding LDA in general and the Agree operation in particular. See, for example, Polinsky & Postdam (2001), Boeckx (2004), Bhatt (2005), Legate (2005), and Sigurðsson & Holmberg (2008), among others.

[48] We have not studied the facts of Hindi-Urdu or Godoberi and there may be relevant facts not taken into account in what follows. However, it appears from the description of Boeckx (2004: 25-27, examples 5-14) that the relevant facts of Hindi-Urdu LDA, for example, could be accounted for in SBCG by specifying a subtype of control verb whose infinitival complement (i) has exactly one internal (i.e., non-XARG) argument, (ii) that argument is not overtly case-marked, (iii) the NUMBER and GENDER values of the internal argument are identified with the corresponding value of the infinitive's AGR feature, and (iv) the AGR feature of the infinitive is identified with that of the matrix verb. (Given the larger generalization that Hindi-Urdu verbs never agree with case-marked subjects, that constraint would presumably be specified higher in the type hierarchy.)

(A.16) **Subject Raising Lexical Class Construction** ($\uparrow$ *intrans-verb-lxm*)

$$subject\text{-}raising\text{-}v\text{-}lxm \Rightarrow \left[\begin{array}{l} \text{ARG-ST} \quad \left\langle X{:}\text{XP}, \text{VP}\left[\text{SYN}\left[\begin{array}{ll} \text{CAT} & [\text{XARG } X] \\ \text{AGR} & Y \end{array}\right]\right]\right\rangle \\[6ex] \text{SYN} \qquad \left[\begin{array}{ll} \text{CAT} & [\text{XARG } X] \\ \text{AGR} & Y \end{array}\right] \end{array} \right]$$

SI.3 Subject properties and their discontents

Bresnan (1994) presents several arguments for attributing subject properties to the fronted constituent in PI (her LI). They are all relevant in one way or another to our analysis, but care must be exercised because not all of Bresnan's arguments apply to our analysis directly. For Bresnan, the fronted element is the *functional* subject (the syntactically "underlying" subject that comes with the lexical entry), but it is not found in subject position in a simple, declarative PI clause. Rather, as in several previous analyses of PI (e.g., Kim 2003), Bresnan's preverbal PP does not appear in the position occupied by canonical subjects, but rather is "base-generated in topicalized position as sister of S in the c-structure" (Bresnan 1994: 104). As implied above in our discussion of the Split Subject Construction, in the present analysis the preverbal constituent in PI is not extracted (or "base-generated" as sister to S); rather it occupies the subject position, as the left daughter of a *subject-predicate-construct*. The most comprehensive array of arguments countering Bresnan's claims about (functional) subject status has been offered by Postal (2004) and amplified by Bruening (2010). In assessing the relevance of Bresnan's observations to our own analysis we will pay special attention to the counterarguments of Postal and Bruening (hereafter PB). Note that our position is not that the fronted PP is *the* subject; it is rather that the fronted PP has some subject properties.[49]

SI.3.1 Raising

As illustrated in examples (27), in PI the XARG may undergo Raising. For Bresnan, this is appropriate for the functional subject because Raising is a lexical process. Postal and Bruening (BP) point out that the raising facts are equally compatible with their null-expletive-subject analysis because they can say that it is the null expletive that raises and that the fronted PP is just an ordinary fronted PP. SBCG does not countenance either empty constituents or movement. It implements essentially the same analysis of Raising in PI as does Bresnan because, as seen above, Split-Subject, and hence PI, make the mother's XARG distinct from the daughter's XARG and thus the argument that is targeted in subject-raising matrix verbs.

SI.3.2 The Anticomplementizer ("*that*-trace") effect

Bresnan and PB agree that PI displays the anticomplementizer ('*that*-trace') effect (hereafter ACE). Noting that Bresnan (1977: 186) was the first to notice the phenomenon, Bruening (2010: 51) cites the following examples from Culicover and Levine (2001).

(A.17) a. That bunch of gorillas, Terry claims (*that) *t* walked into the room.
             (Culicover & Levine 2001:285, ex. 4)
        b. Into the room Terry claims (*that) *t* walked a bunch of gorillas.
             (Culicover & Levine 2001:285, ex. 3a)

Bresnan appeals to the traditional doctrine that this effect is a result of subject extraction to argue that the preverbal constituent in a simple PI clause is the functional subject. Postal (2004) and Bruening (2010), argue that the ACE is not about subject extraction, per se, but about something more general. Postal notes that the ACE applies to apparently subjectless parentheticals like those in (A.18), as shown in (A.19).

(A.18) a. Lasers can, as is obvious, cut through stone walls. (Postal 2004:32 ex. 51a)
        b. Lasers can, as was proved by Mike, cut through stone walls. (Postal 2004:32 ex. 51b)

---

[49] This claim is not, broadly speaking, in direct conflict with Postal's position, as he accepts that the preverbal phrase in PI displays some subject properties. He also argues that this phrase displays more non-subject properties than subject properties, a claim that we do not attempt to adjudicate. We do not accept Postal's analysis, which relies not only on the notion of a phonetically empty (expletive) subject constituent, impossible in our framework, but also on the proprietary notion "quace", which, very roughly, is the case associated with a given structural position canonically, but – crucially – not invariably (Postal 2004: 61).

(A.19) a. Ted was cheated, as I assumed (*that) was obvious. (Postal 2004:36 ex. 69a)
        b. Ted was cheated, as I thought (*that) had been proved by Michelle. (Postal 2004:36 ex. 69b)

Postal's proffered proof that there is a null expletive subject in parenthetical clauses such as (A.18) and (A.19) is based on the observation that certain verbs such as *feel, hold, say*, *suppose,* and *think* when passivized do not allow sentential subjects, as illustrated in (A.20) (= Postal's ex. 56. p.33).

(A.20) a.   Everyone intelligent feels/holds/says/supposes/thinks that gold is rare.
        b.   *That gold is rare is felt/held/said/supposed/thought by everyone intelligent.
        c.   It is felt/held/said/supposed/thought by everyone intelligent that gold
             is rare.

Since the passive forms of these verbs occur in subjectless *as* parentheticals like (A.21), it cannot be that *as* is the subject of such clauses but must correspond to an extraposed clause, as in (A.22).

(A.21) Gold is not, as is deeply felt/widely held/sometimes said/usually supposed/
        generally thought, extremely rare. (Postal: 2004: 33 ex.57)

(A.22) Lasers cannot, as it had previously seemed to everyone, cut through stone
        walls. (Postal 2004:32 ex. 53b)

Since subjectless *as* parentheticals are subject to the ACE and since subjectless *as* parentheticals are demonstrated by facts like those in (A.20) not to exhibit subject extraction, ACE must not be a result of subject extraction.

So far, so good. However the argument does not consider the possibility that the words *felt, held, said, supposed,* and *thought* in (A.21), are not verbal passive participles but adjectives derived from such participles. Some observations support the view that they are adjectives. First, these words appear as prenominal attributives.

(A.23) a. The inclusion of intercultural aspects in health services is a deeply **felt** need in the country.
        b. But the import restrictions that have been going up against U.S. products in this case in
            Europe and Japan have been based on sincerely **felt** consumer food safety and environmental
            protection concerns.
        c. His **supposed** benefactor was in fact panning to sell the escapee in Missouri and back into
            slavery.
        d. *The **supposed** criminal* shall be tried, says the constitution, by an impartial jury of the state
            and district wherein the crime shall have been committed ...
        d. On democratic reform, Kyoto, election finance, you name it, the position seems to depend on
            the audience, not on any firmly **held** views.
        e. At that point wishful thinking and some badly shorting synapses apparently turned into the
            lightly **held** conviction that I had "read some place" that Bed Rocks always had high knobs.
        f. (e.g. according to the **said** need for a balanced distribution of the tax burden)
        g. Remember the often **said** definition of insanity: 'doing the same thing & expecting a different
            result'.
        h. Against the widely **thought** notion that you're either born a leader or you're not, leadership is
            something that everyone must work at to be more effective.
        i. It's an often **thought** sentiment after weddings… so if you're getting married please consider
            this advice.

Secondly, there exist adjectives *unfelt, unheld,* and *unsupposed*, for which there exist no verbal sources in *un-*, suggesting that they must be derived – assuming they are derived – from adjectives *felt, held, supposed,* and *thought.*

(A.24) a. This is a widely different thing from religious exhibition. It has in it nothing of pomp or of
            exuberance, nothing of the assumption of *unfelt sentiment*, nothing ...
        b. As ... I ... pointed out, it's not an *unheld opinion* or an unheard of tactic.
        c. War involves in its progress such a train of unforeseen and unsupposed circumstances...
        d. Thus we see taking shape, on the same site of inauguration, a gap [*décalage*] between an
            unthought origin and a thought beginning.

There does exist the rare verb *unsay*, but its meaning is not consistent with the meaning of the adjective *unsaid*. To unsay something, as in (A.25), one has to have first said it – that is, not have left it unsaid as in (A.26).

(A.25)   John Douglas tries *to unsay* what never should have been uttered.

(A.26)   However, there seemed to be more to the meeting that *was left unsaid*.

Finally, there are complementation inconsistencies between some of these alleged passive participles and their supposed active verbs. For example, *said* and *thought* accept marked infinitive complements, although *say* and *think* do not.

(A.27)   a.   Every man *is said to* have his peculiar ambition.
         b.   *Bentham says every man to have his peculiar ambition.
         c.   The rapper's fiancée *is thought to* be pregnant.
         d.   * *People are thinking the rapper's fiancée to be pregnant.*

If the predicators in sentences like (A.21) are in fact adjectives, nothing prevents an analysis of *as* parentheticals as non-restrictive relative clauses, with *as* in the role of relative pronoun, parallel to the syntactic role (although not semantic role) of *which* in (A.28).

(A.28)   It does seem to me that the Court's treatment of the issue of just satisfaction, which has often been said to defy analysis, provides support for the former view.

Neither Postal nor Bruening consider the adjective possibility. Unless the adjective possibility for the main predicates in (A.21) is eliminated, the Postal-Bruening objection, based on *as* parentheticals, to Bresnan's claim that the ACE provides evidence of a subject property of the setting expression in PI, loses some of its force.[50]

---

[50] Postal argues further that there exist in English "complement-taking verbs which do not, in simple clauses, permit their complements to be non-subjects but do permit them as subjects." According to Postal's hypothesis that *as*-parentheticals can only be formed from non-subjects, "such verbs could not permit (any) A-Parentheticals, in particular, no passive M-A-Parentheticals [i.e., subjectless *as* parentheticals]" (Postal 2004: 33-34, ex. 60[= i], 61b[=ii]). Postal provides the following judgments, also cited by Bruening (2010: 52).

(i)   a.   *This theory captures/expresses/reflects that languages have verbs.
         b.   *It is captured/expressed/reflected by this theory that languages have verbs.
         c.   That languages have verbs is captured/expressed/reflected by this theory

(ii)   *Languages do (not) have, as is captured/expressed/reflected by this theory,
          the sort of verb in question.

However, observation in many cases fails to agree with these judgments. In contrast to (i)a, we find the attested utterances in (iii). Since Postal's judgments are widely reflected in the literature on so-called *wager*-type verbs (Postal cites Grimshaw (1982), Dowty and Jacobson (1988: 103), Hukari and Levine (1991: 116-117), Jacobson (1992) and Postal (1998: 108-114), we beg the reader's indulgence for presenting an unusually large number of attested counterexamples.

(iii)   a.   She even expressed that it was not a big deal that everything could be fixed on the phone.
         b.   If my lawyers have expressed that they feel my class action is not feasible due to certification
                 hookup, can I file for dismissal…
         c.   Since the creator has expressed that they do not want these re-uploaded and distributed. You
                 will have to retrieve them from the site itself.
         d.   ... the fact that someone expressed that they care about me …
         e.   They were dead center in the social and academic life of a Christian school each day, but their
                 attitudes and actions reflected that they were walking contradictions of the school's values.
         f.   Such *actions reflected that* he had not practiced engineering in a careful and diligent manner.
         g.   My *actions reflected that* I did not agree with them.
         h.   Your comments really *captured that every* child should have the best start in life, have
                 everything they need and always be protected.
         i.   However, the Reserved Bank's quarterly economic report captured that domestic debt
                 increased to close the second quarter of this calendar year at K426.9 billion which is 18.6
                 percent of GDP...

SI.3.3 The Complementizer Effect (CE)

While arguing that the preponderance of evidence points in the direction of a null expletive subject in PI -- a theoretical possibility not available in SBCG[51] -- Postal nevertheless cites a pattern that provides evidence for another subject property of

j.   It is disturbing that the media *report captured that* auditors use their own money to run auditing assignments.

It is possible that genuine interpersonal variation is at work with regard to these verbs. There may be speakers who not only would never produce a sentence like those in (iii) but who upon hearing one would never extract its meaning without conscious reflection on its ungrammaticality. But we believe such a claim needs to be based on empirical evidence, especially since speakers normally command a considerable range of genres and registers.

Similarly, in contrast to (ii) we find the attested tokens of (iv):

(iv)   a.   Establishing a new tradition and a wider scope of the conference as is reflected by the new name is a challenging task for the organizers of MSB'2006.

        b.   Our emphasis, as is reflected by the title of this work, is on the feasibility aspect of the problem, that is, of taking a large system and keeping it operational.

        c.   The major issue most are missing as is reflected by the WCAB decisions and sanctions, is the concept and requirements by the WCAB…

        d.   The region of Suva Planina Mts, as is reflected by its name (suva – dry), is one of the warmest highlands in Serbia with 11.6 °C annual main temperature.

        e.   AlGhazali's stance, as is captured by the poem, is to avoid excessive adornment of the recitation.

        f.   So, the net effect of idiosyncratic and covariate shock, as is captured by γ and δ, is given by subtracting [10] from [9].

        g.   If I understand correctly, the problem is that the data, as is captured by file names, is not 'big enough' to make hadoop assign enough map jobs ...

        h.   The uniformity of all products for all people caused by industrialization — as is expressed by the lexical term "ready made" — is only a preliminary stage towards a globally synchronized perception of a "radio-made" experience world.

        i.   Spinoza argues rather like this: given that we speak of "substance" as being "independent" (as is expressed by his definition), there must be only one completely independent substance...

        j.   ... and so he wishes to either be consumed by nature, as is expressed by his wishing that his "too, too solid flesh would melt, Thaw and resolve itself into a dew" (129-130, Act 1, Scene 2), which also can be thought of as wishing for death ...

[51] Bresnan suggests that, even if one grants the cross-language possibility of null expletive subjects, in several relevant regards English patterns with the Germanic languages that lack null expletive subjects:

A third problem [with the null expletive subject analysis of PI] is that the hypothesis of a null expletive subject in English is typologically implausible. No other properties of English point to the presence of such null 'pro' subjects. (i) Null expletive subjects in Romance languages are a consequence of pro-drop (see Jaeggli & Safir 1989 for a review), but English is not a pro-drop language. (ii) Among those Germanic languages for which null expletives have been hypothesized, such as German (Safir 1985a), Dutch (Maling & Zaenen 1978, Perlmutter & Zaenen 1984), Icelandic and Faroese (Platzack 1987), expletive subjects are optional or lacking with extrapositions, existentials, and impersonal passives. But in English, expletive subjects are obligatory in these cases. (iii) In the same Germanic languages, the subject is not fixed in a single structural position; but in English it is. (iv) In the same languages, subject extractions are not restricted by the presence of an adjacent complementizer; but in English they are. In all these respects, English typologically resembles the Germanic languages without null expletive subjects, such as Swedish and Norwegian (Bresnan 1994: 102).

The force of this argument is possibly weakened by the fact that Engdahl (2012) describes the existence of "*topic drop,* i.e.[no overt realization of] a topic in a context where the referent is highly accessible,... in spoken informal Swedish, as well as in blogs and SMS communications."

the fronted constituent in PI. Postal (2004: 21) terms the *complementizer effect* the long-noted fact that in relative clauses the ACE is in effect reversed, requiring, rather than excluding, the presence of *that*. He points out that this effect holds for PI, supporting the hypothesis that the fronted expression in PI exhibits subject properties (Postal 2004: 21, ex. 15; Bruening 2010: 53, ex. 42).

(A.29) a.   It was those towns that/Ø he studied.
        b.   It was those towns that/*Ø were studied.
        c.   It was those towns that/Ø she talked about.
        d.   It was in those towns that/Ø she learned the best techniques for drying fruit.
        e.   It was in those towns that/*Ø were learned the best techniques for drying fruit.

Bruening, however, presents judgments by which he seeks to undermine the CE for PI. He writes (2010: 53):

> Something else seems to be going on here, however. Locative-inversion sentences still require an overt *that* even when something other than the fronted PP has been extracted.
>
>   (44) a. It was last year *(that) from that great conflict arose a new humanity.
>   b. It was by sword *(that) for that perverted cause were slain thousands of
>   innocents.
>   c. It was only from the elders *(that) in those towns could be
>   learned an impressive array of fruit-drying techniques.
>
> Here the fronted PP is not the one that has been extracted, but *that* is still required. Contrast non-locative-inversion counterparts of these sentences, where *that* can be omitted.
>
>   (45) a. It was last year (that) a new humanity arose from that great conflict.
>   b. It was by sword (that) thousands of innocents were slain for that
>   perverted cause.
>   c. It was only from the elders (that) an impressive array of
>   fruit-drying techniques could be learned in those towns.
>
> ... what is important is that *that* must be pronounced in relative clauses involving locative inversion, whether or not it is the PP that is extracted. The complementizer effect, therefore, does NOT indicate that the fronted PP is the subject (emphasis in original).

We agree that the *that*-less versions in Bruening's (44) suffer in acceptability relative to the alternative versions with *that*, though perhaps not so much as to receive a star of absolute ungrammaticality. Nor do we find a relative preference for *that* being present entirely lacking in Bruening's examples (45).[52] From these observations Bruening concludes that the most likely generalization is that "there is some other constraint that requires *that* in locative inversion" (p. 53). However, consideration of a wider range of data suggests that the relative preference for overt *that* in his examples (44) and (46) [also = our **Error! Reference source not found.**] is probably not about PI (locative inversion) but rather about the presence of an extracted PP focus preceding a PP subject in a cleft sentence.

(1.30) a.   It was last year *(that) from that great conflict there arose a new humanity.
        b   It was by sword *(that) for that perverted cause there were slain thousands of innocents.
        c.   It was only from the elders *(that) in those towns there could be learned an impressive
             array of fruit-drying techniques.

For example, when the doubled PPs result from extraction of an adjunct PP, not from PI but from a PP-subject sentence like

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Postal (2004) presents his argument against the ACE as subject extraction — based on subjectless *as* paratheticals, as we have seen – as also a counterargument to Bresnan's argument from typology. If it fails, as we have argued above, with respect to the ACE, it fails for the same reason with respect to typology.

[52] Bruening notes further that similar sentences with *there* also exhibit the property of requiring *that*, as shown in **Error! Reference source not found.**.

those in (A.31), we see in (A.32) and (A.33) about the same preference for overt *that* as in the PI cases of Bruening's (44).

(A.31)   a.   By the kitchen window is the best place to cool your pie. (invented ex.)
          b.   Before the annual meeting would be the best time to chat. (invented ex.)

(A.32)   a.   ??It's in the morning by the kitchen window is the best place to cool your pie.
          b.   It's in the morning that by the kitchen window is the best place to cool your pie. (invented ex.)

(A.33)   a.   ??It's not until next year before the annual meeting would be the best time to chat.
          b.   It's not until next year that before the annual meeting would be the best time to chat.

The a versions of (A.32) and (A.33) sound to us no more acceptable than Buening's PI examples in his (44). The pattern may not be restricted to pairs of PPs.

(A.34)   a.   ??It's not just when Mom's away behind the sofa is the best place to hide.
          b.   It's not just when Mom's away that behind the sofa is the best place to hide. (invented ex.)

We see that the somewhat loose requirement that *that* separate extracted PP focus constituents from PP subjects in clefts is not conditioned by PI specifically. Rather, it appears that Bruening's relatively unacceptable PI examples with multiple PPs – intended to undermine Postal's claim that the strong acceptability contrasts in (A.29) support the hypothesis of a subject property for PI – are not degraded in acceptability because they contain PI clauses. Rather they are degraded in acceptability because they have extracted PP foci immediately preceding the PP-subjects of clefts.[53] We conclude that Postal's proposal that the CE provides evidence for a subject property of PI stands unchallenged.

SI.3.4 Do support

Bresnan (1994: 102f) observes that *do* support is not required when PI is questioned, citing this fact as a further subject property of the initial element in PI.

(A.35)   a.   On which wall hung a portrait of the artist? (Bresnan 1994:102, ex. 85a)
          b.   *On which wall did hang a portrait of the artist? (Bresnan 1994:102, ex. 85b)

This behavior contrasts with that of P-*there* in comparable circumstances.

(A.36)   a.   Which portrait of the artist hung on the wall? (Bresnan 1994:102, ex. 86a)
          b.   *Which portrait of the artist did hang on the wall? (Bresnan 1994:102, ex. 86b)
          c.   *On which wall there hung a portrait of the artist? (Bresnan 1994:102, ex. 87a)
          d.   On which wall did there hang a portrait of the artist? (Bresnan 1994:102, ex. 87b)

Postal objects on the grounds that in the same questioned PI contexts emphatic *do* is also ruled out, weakening the argument from support *do* as negatively associated with subject extraction.

(A.37)   a.   On which wall HUNG a portrait of the artist? (Postal 2004:41, ex. 87a)
          b.   *On which wall (must we conclude) DID hang a portrait of the artist?
                   (Postal 2004:41, ex. 87a)

However, it is less than clear that the single invented example proffered by Postal is empirically representative.

(A.38)   a.   But in that case, from which language did come the ones we could not understand?
          b.   Out of what urban practice does emerge today's image of Sarajevo?
          c.   I would have a question for you: from which AEF set did come the crew bags?

Bruening takes the Postal argument further, claiming that emphatic *do* is impossible in PI generally.

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[53] Which in turn is likely due to some more general considerations regarding ease of processing.

(A.39)   a.   On the wall hung a portrait of the artist. (Bruening 2010:56, ex. 60a)
         b.   *On the wall DID hang a portrait of the artist. (Bruening 2010:56, ex. 60b)
         c.   On the wall there DID hang a portrait of the artist. (Bruening 2010:56, ex. 60c)

However, these judgments also fail to match observed usage.

(A.40)   a.   Out of these controversies, however, did arise a better knowledge of the true meaning of religion...
         b.   But out of the crisis did come cooperatives...
         c.   Nevertheless, out of the perusal of these letters does emerge a picture of a period: little side lights on its literary ethics, on the tastes of the times. ...
         d.   Out of the upheaval did eventually emerge a fairer, better society.
         e.   and there was a brief frenzy of measuring the shapes and sounds of concert halls, from which did emerge a set of serviceable rules as to how to get it right. Or at least not terribly wrong.
         f.   Out of this milieu did emerge a distinctive voice in film, that of Margaret Tait.
         g.   *But from the ashes did emerge* a lone mage.
         h.   *but from that study did emerge* some very favorable response data, ...
         i   As you mentioned, many of the wild horse breeds died out, *but from where did they emerge* in the first place?

We conclude that Bresnan's claim that the absence of *do* support in PI questions is empirically justified and supports her claim of a subject property for the setting phrase in PI.

SI.3.5 Summary of arguments for and against subject properties of the setting constituent in PI

First, with respect to raising, we acknowledge that if one accepts a null expletive subject analysis, raising provides no evidence for the initial element's possessing subject properties, since the inaudible expletive can itself be conceived of as raised. We nonetheless take the raising potential of the initial PP in PI as evidence of its possession of a subject property (1) on the admittedly theory-internal grounds that SBCG does not countenance empty categories (let alone meaningless ones that move), (2) by noting the typological facts introduced by Bresnan (See footnote 15) that argue against a null expletive subject analysis of PI in English in particular, and (3) on the grounds that a theory that accounts for a range of facts without postulating unobservable entities is preferable to a theory that relies on unobservable entities to cover no greater range of facts. Second, with regard to the ACE ('that trace') effect, we believe we have shown that Postal's arguments against the PP having a subject property based on the behavior of certain passive verbs in *as*-parentheticals (and elsewhere) does not stand up against the evidence that in the PI examples in question these words may be analyzed as adjectives rather than passive participles. Hence we conclude with Bresnan that the ACE data support attribution of a subject property to the initial phrase of PI. Third, in the case of the 'Complementizer Effect' we reject Bruening's argument that a fairly loose requirement that *that* must introduce a PI relative clause when it is preceded by a PP undermines Postal's claim that the CE supports a subject property for the initial PP of a PI clause. Bruening's argument fails, in our view, because it appears more likely that the (relatively weak) requirement for *that* in the relevant examples reflects, not that the relative clause represents PI, but that PPs preceding a relative clause beginning with a PP are in general of degraded acceptability, probably for reasons of processing complexity. Fourth, with regard to the 'Parallelism Constraint' on XAB extraction, we find that it cannot support the attribution of a subject property to the initial constituent in PI because the factual existence of the alleged constraint is dubious. Fifth, we consider the objections raised by Postal and Bruening to Bresnan's claim that absence of *do* support in PI questions argues for a subject property of the PP. We find these objections to be based on intuitive judgments that do not conform to observed usage and conclude that the *do* support facts argue in favor of a subject property.