Simpler Syntax (henceforth SS) seeks to specify the role of syntax in linguistic theory in such a way as to achieve maximum overall explanatory power. The Simpler Syntax Hypothesis is formulated as follows in Culicover and Jackendoff 2005:

**Simpler Syntax Hypothesis (SSH):** The most explanatory syntactic theory is one that imputes the minimum syntactic structure necessary to mediate between phonology and meaning.

SSH calls for the rigorous application of Occam’s Razor to syntactic analysis. It hypothesizes that syntax per se is severely restricted in the sorts of phenomena it can account for, especially in comparison to more conventional Chomskyan syntactic theories (Chomsky 1965; 1973; 1977; 1981; 1986).²

SS adopts the Parallel Architecture perspective of Jackendoff 2002, in which phonological, syntactic and semantic structures are subject to their own well-formedness conditions, and are related to one another through correspondence (or interface) rules. Individual words are treated as small-scale interface rules that map pieces of phonology
to pieces of syntax and pieces of meaning. SS also countenances meaningful constructions (in the sense of Construction Grammar), defined in terms of similar correspondences, but at a phrasal level. Hence phrasal syntactic structures correspond to larger pieces of meaning, but not necessarily in one-to-one Fregean fashion, since aspects of phrasal meaning can be specified by particular constructions. For instance, the meaning of the comparative correlative construction (*the more ..., the more*) is to some extent a property of the entire construction and cannot be localized in any of its words (Culicover 2013).

SS assumes no abstract syntactic structure (i.e. no functional heads, no massive binary branching, etc.), no movement, no invisible constituents (except A’ trace), and no (or limited) UG island constraints. We do not assume the stipulations of GB theory and Principles and Parameters theory such as the Theta Criterion, the Projection Principle, the Extended Projection Principle, and so on. To the extent that SS is on the right track, the phenomena that fall under these various devices must find explanation outside of syntactic theory proper, either in semantic well-formedness conditions, in the interface between syntax and semantics, or in processing complexity.

2. **SSH and elliptical construction**

To see the consequences of SSH with respect to elliptical constructions, consider Bare Argument Ellipsis (BAE), illustrated in B’s reply to A in example (1).

(1) A: Ozzie says that Harriet’s been drinking.

    B: Yeah, scotch.


B’s reply can convey the same meaning as sentence (2), thus going beyond the meanings of *yeah* and *scotch*.

(2) B: Yeah, Harriet’s been drinking scotch.

There are two basic approaches to explaining how the meaning in (2) is conveyed. One is that (1B) is a complete sentence, with covert syntactic structure matched to the portion of (1A) that gets the interpretation ‘Harriet’s been drinking *x*’; and *scotch* is substituted for *x*. The other is that the syntax of (1B) is simply *Yeah, scotch*, and the meaning in (2) is computed by matching *scotch* with the unexpressed argument of *drinking* in the interpretation of (1A). Both approaches have a long and distinguished history, and are well-represented in the chapters of this volume.

Other things being equal, SS leads us to prefer the second analysis, because it does not posit invisible syntactic structure. If an account in terms of invisible syntactic structure and one in terms of interpretive rules were empirically equivalent, it could be argued that this preference is simply an aesthetic one. However, they are not empirically equivalent: the two accounts diverge in explanatory power with respect to the full range of phenomena. Specifically, the relation between the elliptical utterance and its antecedent depends not on syntactic identity, but rather on the interpretation of the antecedent. We illustrate with four cases.

First, there is no syntactic difference among A’s utterances in (1) and (3), but the interpretation of the antecedent is clearly different.
(3)  a.  A: Ozzie fantasizes that Harriet’s been drinking.
    B: Yeah, scotch. ['Ozzie fantasizes that Harriet’s been drinking scotch’, not
    ‘Harriet’s been drinking scotch’]

   b.  A: Ozzie doubts that Harriet’s been drinking.
    B: #Yeah, scotch. [no plausible interpretation]

These differences cannot be explained by an approach to ellipsis that depends only on
syntactic structure. And if such an account sorts out the interpretations of Yeah, scotch in
various contexts by relying on additional rules of pragmatic inference, we would argue
that the latter sort of rule, whatever it may be, is sufficient to account for the facts.

Second, as is well-known, the putative hidden syntactic forms for many examples of
ellipsis either are ungrammatical (4Bi and 5Bi) or diverge wildly from the form of the
antecedent (4Bii and 5Bii).

(4)  A: John met a guy who speaks a very unusual language.
    B: Which language?
    i.  *Which language did John meet a guy who speaks?
    ii. Which language does the guy who John met speak?

(5)  A: Would you like a drink?
    B: Yeah, how about scotch.
    i.  *Yeah, how about would you like scotch.
    ii. Yeah, how about you giving me scotch.
Third, the antecedent can extend over more than one sentence, so the ellipsis cannot straightforwardly be derived from a covert syntactic clause.

(6) It seems we stood and talked like this before. We looked at each other in the same way then. But I can’t remember where or when. [Rodgers and Hart, 1937]

Fourth, as seen in (7), the antecedent can be a nonlinguistic situation in the environment, in which case there is no linguistic context at all to motivate deletion of elliptic syntactic material.

(7)

![Cartoon](image)

The claim of SSH, then, is that rules of interpretation and inference are required to account for the full range of ellipsis phenomena. By Occam’s Razor (and SSH), if the crucial cases require rules of interpretation and inference, and if these rules are sufficient for the uncontroversial cases, then there is no need to posit invisible syntactic structure as well.

The rest of this chapter sketches a very general approach to elliptical constructions within an interpretive framework, developed in more detail in Culicover and Jackendoff
2012. In anticipation of the analysis, we summarize our stance on the three major issues in ellipsis sketched in chapter 1:

- **Structure:** Following the SSH, we assume that for most types of ellipsis, the ellipsis site itself has no hidden structure. For instance, the syntactic structure of *Yeah, scotch* in (1) is essentially just that.

- **Recoverability:** As we have seen in (1)-(5), the interpretation of the elliptical expression is based in part on the interpretation of its antecedent, with syntax often playing a secondary role. What we take to be most novel in our approach is that the interpretation invokes a domain-general cognitive relation which we call **SAME-EXCEPT**, to be introduced in section 2.

- **Licensing:** We take a constructional approach to the licensing of elliptical expressions. Licensing is not a matter of specifying what can be deleted or what structure can be empty. Rather, each elliptical construction (BAE, VPE, Gapping, etc.) specifies a particular type of syntactic fragment that can serve as an elliptical expression, along with a specification of how it is to be interpreted in terms of the **SAME-EXCEPT** relation.

Sections 3 and 4 show how the **SAME-EXCEPT** relation is expressed in syntactic structure in a variety of elliptical constructions (including Bare Argument Ellipsis), and section 5 shows how it also can be expressed by syntactic constructions not normally thought of as elliptical. Section 6 discusses some phenomena that have been adduced as evidence for hidden syntactic structure, and section 7 summarizes.
3. The framework: SAME-EXCEPT

The SAME-EXCEPT relation is a domain-general cognitive mechanism. It spontaneously evaluates similar objects, extracting the properties that they share (the SAME) and those that they do not (EXCEPT). Fig. 7.1 illustrates two basic cases, pointed out by William James (1890), which we call contrast and elaboration.

![Contrast and Elaboration](image)

In the left-hand pair, the two wugs are immediately seen as (nearly) the SAME, EXCEPT for their contrasting head decorations – which stand out as a result. In the right-hand pair, they are seen as (nearly) the SAME, EXCEPT for the presence of a head decoration in the second one. This same relation can be experienced not only with objects, but also with actions, musical motives, and even food.³

Our hypothesis is that this SAME-EXCEPT relation appears in natural language semantics as well as in all these nonlinguistic domains, and it can be expressed in language in a variety of ways, one of which is with the words same and except and their synonyms (see section 5).⁴ When two juxtaposed constituents are sufficiently similar, their interpretations are taken to be the same, except for the part that is overtly different. One of the two juxtaposed expressions (usually the second) may be elliptical, in which case its interpretation is the SAME as the other expression – the antecedent – EXCEPT for

---

³ When two juxtaposed constituents are sufficiently similar, their interpretations are taken to be the same, except for the part that is overtly different.

⁴ When two juxtaposed constituents are sufficiently similar, their interpretations are taken to be the same, except for the part that is overtly different.
the part that contrasts with the antecedent. For example, in (1), B’s response is taken to
express an assertion that is the same as A’s assertion *Harriet’s been drinking*, but with
the elaboration *scotch*. That is, *scotch* plays a role parallel to the head decoration on the
rightmost wug in Fig. 7.1.

An immediate virtue of this analysis is that the semantics associated with ellipsis is
not specifically linguistic: it follows from a general property of human cognition.

Before turning to ellipsis in more detail, it is useful first to examine the marking of
contrast by stress. Consider (8). Contrastive accent is marked in caps.

(8) FRED likes fish, and SUE likes fish.

The two expressions *Fred likes fish* and *Sue likes fish* are understood as the SAME,
EXCEPT for the pair Fred/Sue. In effect, *SUE likes fish* means exactly the SAME thing as
*Fred likes fish*, EXCEPT that *SUE likes fish* is about SUE. Note that *Fred* and *Sue* are
syntactically parallel.

Notice also that the contrastive accent marks the elements that are interpreted as
participating in the EXCEPT part of the relation. Sentences like (9) violate this condition.

(9) a. *FRED likes fish, and Sue likes FISH.*

b. *FRED likes fish, and FRED likes soup.*

Here the phonologically contrasted expressions do not support a semantic contrast. That
is, *Sue likes FISH* does not mean the same as *Fred likes fish EXCEPT for fish*, and *FRED
likes soup* does not mean the same as *Fred likes fish EXCEPT for Fred.*
To keep track of the relationships that hold between the two expressions, we employ the notational device of a tableau, as in (10).\(^5\)

(10) FRED likes fish, and SUE likes fish.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<tbody>
<tr>
<td>SAME</td>
<td>[FRED LIKES FISH]</td>
<td>[SUE LIKES FISH]</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>FRED</td>
<td>SUE</td>
</tr>
</tbody>
</table>

More generally, the form of a tableau is shown in (11).

(11)

<table>
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<tr>
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<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAME</td>
<td>E1</td>
<td>E2</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>P1</td>
<td>P2</td>
</tr>
</tbody>
</table>

E1 and E2 are the Entities judged to be the same, e.g. the wugs in Fig. 7.1; P1 and P2 are the respective Parts of E1 and E2 that contrast, e.g. the head decorations on the left-hand pair of wugs in Fig. 7.1. In the alternative configuration, elaboration, P1 is null and P2 adds a new part, as in the right-hand pair of Fig. 7.1.

In order to establish a SAME-EXCEPT relation, the two entities to be related must be identified. In the case of Fig. 7.1, the items in question are adjacent. In the linguistic case, the constituents expressing the two entities in question are typically adjacent or nearby. For instance, in (8), the two clauses are the entities that are SAME. We use the
informal term **find** for the computational operation that identifies the two entities to be related as SAME.

A second operation, which we informally call **align**, involves finding the relevant features of the entities and the correspondences between them – picking out visual parallelisms or, in the linguistic case, identifying parallel thematic roles and the like. Finally, in order to compute **EXCEPT**, there must be an operation of **identify differences** that picks out the **aligned** parts that are different. For instance, in (8), Fred and Sue are aligned, and different from each other.

The most typical environment for linguistic juxtaposition is coordination, as in (8). Coordination offers about the simplest parallelism of structure, making it straightforward to **find** entities to compare. However, many other syntactic environments also count as ‘juxtaposed,’ such as a main and a subordinate clause (12a) and relative clauses within the subject and object of the same verb (12b).

(12) a. If FRED likes fish, then SUE must like fish.
    b. People who WHISPER resent people who SHOUT.

4. Licensing Bare Argument Ellipsis

Returning to ellipsis: Again, the basic idea behind our account is that ellipsis constructions express a **SAME-EXCEPT** relation, in which the antecedent of ellipsis expresses E1, and the elliptical expression itself expresses P2 – the part of E2 that is different from E1. The rest of E2 is unexpressed, but it can be inferred from its **SAME**ness to E1. The interpretation of the ellipsis is recovered by matching the structure and
interpretation of the elliptical expression with that of the antecedent, along the lines summarized in the preceding section.

We illustrate the approach by applying it to bare argument ellipsis (BAE), as in (13), elaborating the account presented in section 2.

(13)  a.  A: I hear Ozzie’s drinking vodka again.
       B: No, scotch.

   b.  A: I hear Ozzie’s drinking again.
       B: Yeah, scotch.

In order to formalize the BAE construction, we have to decide on its syntactic structure. Culicover and Jackendoff 2005 argue that BAE is not a clause in the usual sense, because it does not embed freely (*Harriet realizes (that) scotch, etc.). For convenience, we assign it to the category Utterance (of which S is a particular type), dominating a phrase of any syntactic category (XP).6

Simpler Syntax posits that the ellipsis site for BAE has no further syntactic structure aside from the bare XP. Under this account of the syntax, the BAE construction can be characterized as (14), an interface rule correlating syntax and semantics. The coindex 1 matches the syntactic Utterance to the E2 cell in the semantic tableau, and the coindex 2 matches the XP constituent to the P2 cell. The underlining in the E1 and P1 cells indicates that these pieces of the meaning are to be found in the antecedent.
(14) **Bare Argument Ellipsis**

Syntax: \([\text{Utterance } \text{XP}_2]_1\)

Semantics:

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<tbody>
<tr>
<td>SAME</td>
<td>E1</td>
<td>SITUATION(_1)</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>Ø/P1</td>
<td>P(_2)</td>
</tr>
</tbody>
</table>

(14) can be thought of as a meaningful construction of English in the sense of Construction Grammar: it licenses a connection between a particular syntactic structure and a particular semantic interpretation, going beyond the meanings of the words in the syntax.

Let us see how this construction derives the interpretation of *scotch* in (13aB).

First, the coindexation in (14) is applied to derive (15).

(15) Phonology/Syntax: \([\text{Utterance } \text{NP scotch}]_1\)

Semantic:

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<tr>
<td>SAME</td>
<td>E1</td>
<td>SITUATION(_1)</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>Ø/P1</td>
<td>SCOTCH(_2)</td>
</tr>
</tbody>
</table>

Next, E1 and P1 must be found and aligned. In this case they are found in the preceding sentence, but in other cases they might instead come from a nonlinguistic situation. The result is (16).
It remains to specify E2. Informally, we need to **subtract** P1 (VODKA) from E1 and **add** P2 in its place. We can notate this operation as the equation (17a), and the resulting tableau as (17b).

(17) a. \[ E2 \approx \text{OZZIE DRINK VODKA} (\neg \text{VODKA} + \text{SCOTCH}) = \text{OZZIE DRINK SCOTCH} \]

b. Phonology/Syntax: \([\text{Utterance} \ [NP \text{scotch}]_2 ]_1 \]

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</tr>
</thead>
<tbody>
<tr>
<td>SAME</td>
<td>OZZIE DRINK VODKA</td>
<td>SITUATION\textsubscript{1}</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>VODKA</td>
<td>SCOTCH\textsubscript{2}</td>
</tr>
</tbody>
</table>

This derivation illustrates the ‘contrast’ case of SAME-EXCEPT, in that scotch contrasts with vodka. The other pattern, elaboration, appears in (13b): the elliptical expression supplies an argument (or adjunct) that does not correspond to anything in the antecedent.

In this case P1 is null; hence in deriving E2, P2 is simply **added** without any **subtract** step.\(^7\)

Every part of these derivations has counterparts in other theories. In a syntactic theory of ellipsis, the syntactic antecedent must also be located and aligned with the elliptical expression. More importantly, our informal process of **subtracting** and **adding**
can be instantiated more formally in terms of lambda abstraction of P1 and application of
the resulting property to P2. Subtracting P1 is equivalent to lambda-abstraction, while
adding P2 is equivalent to applying the lambda-abstract to P2. The same basic
mechanism has also been used in standard accounts of the semantics of focus and ellipsis
(e.g. Culicover and Jackendoff 2005; Merchant 2001). It is based in turn on the earlier
approaches of Kraak 1967, Chomsky 1971, Akmajian 1973 and Jackendoff 1972 and
developed formally by e.g. Rooth 1992, Dalrymple et al. 1991 and Lappin 2005. In fact,
all approaches to focus and ellipsis that we are aware of assume procedures along the
lines of find, identify differences, align, subtract and add; they differ only in terms of
the particular level of representation that the procedures apply to: syntax, LF, or
semantics.

An important semantic constraint on BAE follows from the character of SAME-
EXCEPT. Consider the minimal pair in (18).

(18) A: Ozzie drank the scotch in five minutes.
B: a. Yeah, in the kitchen.
   b. *No, in the kitchen.

The difference in acceptability between B’s two replies follows from the discourse
relations, which are crucial to the interpretation. As before, B’s yeah in (18a) indicates
that the following utterance is understood as assenting to and elaborating A’s statement.
On the other hand, B’s no in (18Bb) marks the utterance as a contrast, and SAME-EXCEPT
stipulates that the contrast must be found in P1. But no part of A’s statement can serve as
P1, since the time period *in five minutes* does not bear the same semantic relation to E1 as the location *in the kitchen* does to E2. Hence there is a failure of align, and the intended reading of (18Bb) is ill-formed. Notice, though, that the two adjuncts are syntactically parallel; it is only in the semantics that alignment fails. This result speaks in favor of a semantically based account of ellipsis.

Notice also that the same effect occurs with contrast signaled by words like *but* and contrastive stress, as our account predicts.

(19)  *Ozzie drank the scotch in 5 MINUTES, but Harriet drank it in the KITCHEN.*

The E2 cell of a tableau for BAE specifies that the Utterance has the semantics of a Situation (i.e. a State or Event), even though the syntax specifies only one of its constituents, namely XP. Since illocutionary force can be assigned to expressions of Situations, BAE may act semantically as an interrogative or an imperative, as well as a declarative. (Similar arguments appear in Stainton 2006.)

(20)  a. A: I’ll pour you some vodka.  
      B: No, scotch!  [Imperative]

   b. A: Hey, look! Ozzie’s drinking something!  
      B: Scotch?  [Interrogative]
5. Licensing other cases of ellipsis

In this section we show how the SAME-EXCEPT mechanism licenses and renders recoverable a range of familiar types of ellipsis discussed in the literature: sluicing, gapping, VP-ellipsis, and pseudo-gapping. Sluicing and gapping are like BAE in that they involve the interpretation of one or more fragments, while VP-ellipsis and pseudogapping involve a bit more complication. We also mention VP anaphora, which is strictly speaking not ellipsis, but appears to employ the same interpretive mechanisms.

5.1 Sluicing

Sluicing involves a bare wh-phrase in a position that licenses an indirect question.

(21)  a. Ozzie drank the scotch in five minutes, but I can’t tell you where.
     b. A: Ozzie’s drinking again. B: Yeah, but I don’t know what.
     c. Abby speaks the same language that some guy in this class speaks, but I’m not sure who.

(21a,b) are instances of elaboration, like (13b); these cases are called ‘sprouting’ in the sluicing literature (Chung et al. 1995). (21c) is an instance of contrast, where who contrasts with some guy in this class; this case is referred to as ‘matching’ in the sluicing literature.

Sluicing is a wh-interrogative counterpart to BAE. We assume as before that the ellipsis site per se has no hidden structure. An important clue to the nature of sluicing is
the fact that any type of phrase that can occur in sluicing can also occur in BAE (e.g. parallel to (20b), A: *Ozzie’s drinking again. B: *What?). Hence an account of sluicing should be parallel to that of BAE insofar as possible.

There are however two differences. First, the single phrase in sluicing must be a wh-phrase. Second, this phrase counts syntactically as a clause rather than as an Utterance: it appears in positions characteristic of clauses, such as extraposed position (22a); and, like a clause, it conditions singular agreement even when the wh-phrase is plural (22b).

(22)  

a. We were supposed to do some problems for tomorrow, but it isn’t clear which problems. [cf. *…but it isn’t clear the answers]

b. We were supposed to do some problems for tomorrow, but which problems isn’t/*aren’t clear. [cf. … but the answers aren’t/*isn’t clear]

The structure of the sluicing construction is given in (23), licensing an interpretation of a sentence consisting only of a wh-phrase.

(22) **Sluicing**

Syntax:  \[s \text{ wh-phrase}_2 \]_1

Semantics:

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<tbody>
<tr>
<td>SAME</td>
<td>E₁</td>
<td>SITUATION₁</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>Ø/P₁</td>
<td>P₂₂</td>
</tr>
</tbody>
</table>
The Syntax part of (23) captures the clausal nature of the sluiced phrase by stipulating that it is an S that contains (only) a wh-phrase. This is where sluicing differs from BAE.

Aside from this syntactic specification, the two constructions are identical and should follow from the same principles. Given that there are BAE examples such as (4), (5), and (6) that have no conceivable syntactic source, we therefore conclude that sluicing cannot be accounted for in syntactic terms, without losing the fundamental parallelism between it and BAE.

Derivational accounts of sluicing assume either that this syntactic structure is derived by deleting the rest of the S (e.g. Ross 1969), or that the wh-phrase is the visible part of a complete clausal structure (e.g. Merchant 2001). Both approaches appear to be at least as stipulative as the constructional one proposed here, since both have to say what is deleted/invisible, and what can be left behind. The present account, however, is not focused on describing what can be left out. Rather, it describes in positive terms the surface configuration and what it means. (See section 7 for more discussion of these accounts.)

5.2. Gapping

Culicover and Jackendoff (2005; 2012) analyze gapping as essentially double BAE: SAME-EXCEPT with two contrasting sites, as in (24a). As in the case of BAE and sluicing, the ellipsis site has no hidden structure. Gapping works the same way as full sentences with double contrastive stress such as (24b), except that the non-contrastive parts are left out.

(24) a. FRED likes FISH, and SUE, SOUP.
b. FRED likes FISH, and SUE likes SOUP.

In (24a), Fred and Sue constitute one contrast, and fish and soup another, as in the tableau (25), which has two EXCEPT rows.

(25) Phonology: Sue₂ soup₃

Syntax: [Utterance NP₂ NP₃]₁

Semantics:

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<tr>
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</thead>
<tbody>
<tr>
<td>SAME</td>
<td>FRED LIKE FISH</td>
<td>SITUATION₁</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>FRED</td>
<td>SUE₂</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>FISH</td>
<td>SOUP₃</td>
</tr>
</tbody>
</table>

The general form of the gapping construction appears in (26). Given that only the contrast case is possible, there is no option for null P₁ and Q₁, as there was in BAE and sluicing.

(26) **Gapping**

Syntax: [ₘ XP₂ YP₃]₁

Semantics:

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</tr>
</thead>
<tbody>
<tr>
<td>SAME</td>
<td>E₁</td>
<td>SITUATION₁</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>P₁</td>
<td>P₂₂</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>Q₁</td>
<td>Q₂₃</td>
</tr>
</tbody>
</table>
After **finding** the antecedents for E1, P1, and Q1, this yields (25) for the structure of *Sue soup* in (24a). As in previous cases, *Sue soup* is understood as ‘Sue likes soup’ by virtue of “solving for E2” in (25), using the inferential steps **subtract** and **add**.

(27) \[ E2 \approx FRED \text{ LIKE FISH } (\lnot FRED + SUE) (\lnot FISH + SOUP) = SUE \text{ LIKE SOUP} \]

We note that gapping is syntactically more constrained than prosodic contrast and BAE. For example, in a subordinate clause it is possible to have contrast, but not gapping, as shown by (28a,b); and it is not possible to have gapping in the typical BAE position as an isolated Utterance (28c,d).

(28) a. **Contrast in subordinate clause:**
   
   FRED likes FISH, and I think that SUE likes SOUP.

b. **Gapping into subordinate clause:**

   *FRED likes FISH, and I think that SUE, SOUP.*

c. **BAE as isolated Utterance:**
   

d. **Gapping as isolated Utterance**


These contrasts can be thought of as stemming from a difference in where **find** looks for an antecedent. In gapping, it looks within a quite constrained range: preceding conjuncts and a very small number of other environments. This difference could be a stipulation of
individual elliptical constructions, or it could follow from independent principles. We have no evidence one way or the other. We note however that any theory of ellipsis has to make the same distinctions.

5.3. VP-ellipsis

VP-ellipsis (VPE) is the best-studied variety of ellipsis. The literature on VPE offers many options for the syntax, including VP deletion under syntactic identity (Sag 1979), a pro-VP (Hardt 1993; Lobeck 1995), a fully structured but phonologically empty VP (Wasow 1972; 1979), and no VP (Culicover and Jackendoff 2005). Because VPE allows nonlinguistic antecedents (as in our cartoon in (7)), we can immediately rule out deletion under identity. For convenience, we adopt the pro-VP option here, represented in our notation as a phonologically null VP (though we recognize that other things being equal, the SSH would favor a solution with no VP at all, thereby minimizing syntactic structure). A first approximation of the rule is (29).

\[(29) \quad VP \text{ Ellipsis} \]

| Phonology: | Ø₁ |
| Syntax: | VP₁ |
| Semantics: | \begin{tabular}{c|c} SAME | E₁ | SITUATION₁ \end{tabular} |

That is, the interpretation of the pro-VP is the same as that of the antecedent; contrasting EXCEPT constituents may present, but need not be, as in \textit{A: Mary called. B: Yes, she did.}

Example (30) illustrates the construction in a case where the subjects contrast and the auxiliaries contrast in polarity, hence a double contrast.
(30) Phonology/Syntax: Joe didn’t sneeze, but Bill did \[\text{VP } \emptyset_1.\]

Semantics:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAME</td>
<td>\text{NEG JOE SNEEZE}</td>
<td>\text{SITUATION}_1</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>JOE</td>
<td>BILL</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>\text{NEG}</td>
<td>POS</td>
</tr>
</tbody>
</table>

\[\text{E2 } \approx \text{NEG JOE SNEEZE } (\sim \text{JOE } + \text{BILL}) (\sim \text{NEG } + \text{POS})\]

\[\approx \text{POS BILL SNEEZE}\]

To flesh out this analysis, of course, many questions need to be resolved about how VPE in various syntactic environments is mapped into tableaux, and about the degree to which align depends on syntactic configuration. The specifics of the analysis ultimately depend on a number of assumptions about the syntax of VPE, control, raising, and expletive subjects. To pursue all these issues in detail would take us far beyond the scope of the present treatment. Some of them are discussed in Culicover and Jackendoff 2005, Chapter 8.

Here we mention just two such issues. First, a longstanding problem is “vehicle change”, where the interpretation of the missing VP cannot be derived by copying over the syntax of the antecedent. (31) presents six typical cases.

(31) a. John has always enjoyed running, but I’ve never wanted to (*running).
b. John likes those pictures of himself, but I don’t (*like those pictures of himself).
c. John doesn’t have any bananas, but Bill does (*have any bananas).
d. These issues should be discussed further, but we won’t (*be discussed further).

e. We should discuss these issues, but they probably won’t be (*discuss).

f. Mubarak’s survival is impossible to predict and, even if he does ‘survive’, his plan to make his son his heir apparent is now in serious jeopardy. [COCA: CBS Evening News. Cited from Miller and Hemforth 2013]

Such examples are problematic for a theory of VPE that requires syntactic identity. Within the present approach, the question is how much syntactic parallelism is required in order to establish semantic alignment; these cases show that alignment cannot always require syntactic identity. We leave this question open.

Another puzzle for VPE is the “missing antecedents” problem posed by Grinder and Postal 1971.

(32) John doesn’t have a gorilla, but Bill does, and it smells.

The antecedent of it cannot be the overt NP a gorilla, because if but Bill does is omitted, (32) is ill-formed. Rather, it clearly refers to the gorilla Bill has, not to the gorilla John doesn’t have. But this antecedent is not expressed in (32). Grinder and Postal use this observation to argue that the underlying form of Bill does is Bill has a gorilla, which then undergoes deletion of the VP.

In the present approach, Bill’s gorilla emerges in the semantics:
When we “solve” for E2, we get the meaning ‘Bill has a gorilla,’ in which the gorilla is asserted to exist. And this gorilla, derived through the inferential process of “solving for” the ellipsis, is what it refers to.

Setting these syntactic issues aside, the main point we have tried to establish in this section is that the semantics of VPE can be represented in terms of SAME-EXCEPT. We believe that the difficulties the construction poses are primarily with how its syntax maps into the tableau.

3.4. VP anaphora

It is instructive to compare our account of VPE with VP anaphora (do it or do that), as in (34). There is one difference in the semantics: VPE can denote any Situation – an Event or a State; whereas do it has to denote an Action on the part of the subject.
(34) (You took a nap yesterday?)

Phonology/Syntax: I₂ [did that [last \textit{week}₃]₁ .

Semantics:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textsc{same} \hspace{0.5cm} \text{YOU TAKE NAP YESTERDAY}</td>
<td>[I ACT LAST \textsc{week}₁]₁</td>
<td></td>
</tr>
<tr>
<td>\textsc{except} \hspace{0.5cm} \text{YOU}</td>
<td>I₂</td>
<td></td>
</tr>
<tr>
<td>\textsc{except} \hspace{0.5cm} \text{YESTERDAY}</td>
<td>\text{LAST \textsc{week}₃}</td>
<td></td>
</tr>
</tbody>
</table>

Note that in this construction, E₁ can be an entity in the visual environment rather than in a previous sentence. (The notation \{\} indicates meaning that is derived from the nonlinguistic context.)

(35) [Addressee is spreading peanut butter with a knife:]

Phonology/Syntax Can [you do that using [a spoon]₂ ]₁?

b.  

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textsc{same} \hspace{0.5cm} \text{YOU SPREAD PEANUT BUTTER WITH KNIFE}</td>
<td>[YOU ACT WITH SPOON]₁</td>
<td></td>
</tr>
<tr>
<td>\textsc{except} \hspace{0.5cm} \text{KNIFE}</td>
<td>\text{SPOON}₂</td>
<td></td>
</tr>
</tbody>
</table>

We thus take \textit{do it} anaphora to be an expression of \textsc{same}.  

25
(36) **Do It Anaphora**

Phonology: \( \text{do}_4 \text{it}_5 \)

Syntax: \([\text{VP} \ V_4 \ \text{NP}_5]_1\)

Semantics:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAME</td>
<td>E1</td>
<td>X ACT(_1)</td>
</tr>
</tbody>
</table>

Informally, (36) says that *do it* means ‘X performs an action that is the same as E1,’ where X is the external argument of ACT (either an overt or a controlled subject), and E1 is either expressed by an antecedent VP or observed in the nonlinguistic context.

Comparing (36) with the VPE construction (29), we see that they are essentially the same, except for two critical differences. First, (36) is stated in terms of a VP with the phonological form *do it* and corresponding syntactic structure, while VPE is stated in terms of a phonologically and syntactically empty VP. Second, *do it* anaphora is restricted to an ACT interpretation, while VPE is not.

5.5. **Pseudogapping**

Consider finally pseudogapping, illustrated in (37).\(^9\)

(37) That may not bother you, but it does me.

In this construction, the main verb is absent, but the auxiliary is overt. In this respect, pseudogapping is similar to VPE (Hoeksema 2006:336). The difference is that pseudogapping includes an argument of the missing verb.
Culicover and Jackendoff (2005:295) observe, following Levin 1980, Hoeksema 2006, Merchant 2008 among others, that pseudogapping is somewhat less restrictive than gapping. For instance, pseudogapping is marginally possible when the antecedent is in a preceding subordinate clause (38a,b), while gapping is not (38c,d).

(38)  
\textbf{Pseudogapping:}
\begin{itemize}
  \item[a.] ?Whenever/Because Robin speaks French, Leslie does German.
  \item[b.] ?Leslie will not speak German, because Robin does French.
\end{itemize}

\textbf{Gapping:}
\begin{itemize}
  \item[c.] *Whenever/Because Robin speaks French, Leslie, German.
  \item[d.] *Leslie will not speak German, because Robin, French.
\end{itemize}

Pseudogapping typically has a stranded NP complement, but it also allows a stranded PP (39a) or S (39b) complement. Moreover, the antecedent of the stranded complement need not be VP-final, as seen in (39c).

(39)  
\begin{itemize}
  \item[a.] Sandy will smile at Terry, and Terry will [‘smile’] at Sandy.
  \item[b.] Sandy claimed that it would rain, and Terry did [‘claim’] that it would snow.
  \item[c.] Sandy put a case of beer in the fridge, and Terry did [‘put’] a can of Coke [‘in the fridge’].
\end{itemize}
Examples such as these suggest a formulation of pseudogapping that incorporates properties of VPE and gapping. (40) offers two possible formulations. They differ in whether the remnant XP is embedded under an otherwise empty VP (40a), or whether it is simply dominated by S, concatenated after the Aux (40b). (SSH favors (40b), because it has less structure, but we have no empirical evidence to decide between them.)

(40) Pseudogapping

Syntax: a. \([S \text{ NP Aux } [VP \text{ XP}_2]]_1\)

\textit{or}

b. \([S \text{ NP Aux } \text{ XP}_2]_1\)

Semantics:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAME</td>
<td>E1</td>
<td>SITUATION$_1$</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>P1</td>
<td>P$_2$</td>
</tr>
</tbody>
</table>

(39c) will then have an interpretation equivalent to ‘Sandy put a case of beer in the fridge and Terry did the same, except that it was a can of Coke’.

Pseudogapping is most felicitous when there is a further contrast in the sentence, either the subject, the auxiliary, or both. This could be stipulated in rule (40) by adding further EXCEPT rows, or it might follow from, say, principles of information structure. We leave the question open. The main point is that the semantics follows the same pattern as all the other elliptical constructions; the differences lie in the specification of the syntax that can be linked with this semantics.  

10
6. Other SAME-EXCEPT constructions, not normally considered elliptical

Our account of ellipsis rests on the semantics of the SAME-EXCEPT relation, and on the operations find, align, identify differences, subtract and add that are invoked in filling out a tableau. As it turns out, these operations are invoked in the interpretation of non-ellipsis constructions as well, which lends them more motivation than just their utility in an account of ellipsis. This section briefly presents three cases where there is no possibility of positing an invisible constituent.

6.1. Anaphora

Consider the interpretation of a definite pronoun such as he, she, or it.

(41) John₁ called, and he₁ was angry.

The pronoun expresses complete identity — there is no EXCEPT. The standard coindexation notation in (41) is the usual way of showing this SAME relation. In our tableau notation, the lexical entry of the pronoun can be notated as in (42).

(42) he

Phonology: he₁

Syntax: NP.SG.NOM₁

Semantics:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAME</td>
<td>E₁</td>
</tr>
</tbody>
</table>
This stipulates that the reference of the pronoun must be in the same relation with its antecedent. To derive the reading of the pronoun in (41), the underlined E1 says that he has to **find** an antecedent. When the antecedent *John* is found, its meaning is plugged into the E1 cell to yield (43).

(43) Phonology/Syntax: \([_{NP \, he}]_{1}\)

<table>
<thead>
<tr>
<th>Semantics:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAME 1</td>
</tr>
<tr>
<td>JOHN [DEF.SG.MALE]_{1}</td>
</tr>
</tbody>
</table>

The standard binding principles A, B, C (or their counterparts in other theories) can be interpreted as constraints on **find**.

A definite pronoun usually denotes token-identity. This distinguishes it from the indefinite pronoun *one*, which normally expresses identity of sense, i.e. ‘same type’, as in (44a). However, *one* with a definite determiner, e.g. (44b), can signify token-identity to a nonlinguistic antecedent.

(44) a. See that wug? I used to have one.

b. I want that one. [accompanied by pointing]

Parallel to *he*, *one* has the lexical representation in (45).
(45) **One-Anaphora**

Phonology: \(\text{one}_2\)

Syntax: \([\text{NP} \ldots \text{N}_2 \ldots]_1\)

Semantics:

\[
\begin{array}{|c|c|}
\hline
\text{SAME} & \text{E}_1 & \text{[COUNT.SG]}_1 \\
\hline
\end{array}
\]

The NP headed by *one* corresponds to a count individual in the semantics that serves as E2 in the tableau. (The feature COUNT is necessary to rule out mass antecedents, as in *John drank wine, and Bill drank one too.*) As in the case of definite pronouns, the antecedent \(\text{E}_1\) is supplied by **find**.

Unlike definite pronouns, *one* allows EXCEPT-constituents – differences among tokens of the same type. One way to express EXCEPT is as a modifier of *one*, as in (46).

(46) a. Pat ordered a pizza with olives, but Sam wanted one with pepperoni.

b. Pat ordered a small onion pizza. We really needed a large one with mushrooms.

In such cases, *one* sets up a SAME-EXCEPT relation, which initiates **find**, **align**, and **identify differences**. The contrasting modifiers result in EXCEPT rows being added to the tableau, producing a tableau like (47) for (46b).

(47)

\[
\begin{array}{|c|c|c|}
\hline
\text{SAME} & \text{SMALL ONION PIZZA} & \text{LARGE PIZZA WITH MUSHROOMS} \\
\text{EXCEPT} & \text{SMALL} & \text{LARGE} \\
\text{EXCEPT} & \text{ONION} & \text{MUSHROOM} \\
\hline
\end{array}
\]
Notice that the contrasting modifiers require contrastive stress, as discussed in section 3. Notice also that \textit{align} connects the prenominal modifier \textit{onion} with the postnominal modifier \textit{with mushrooms}. This shows that \textit{align} relies on semantic rather than (or in addition to) syntactic parallelism. (See Culicover and Jackendoff 2012 for more details.)

We claim, then, that definite and indefinite anaphora also fall within the ambit of \textit{SAME-EXCEPT} relations. This reflects back on the ellipsis constructions discussed in sections 4 and 5: there should be a uniform account of all of them. Not since the earliest days of generative grammar have definite pronouns been generally considered to be the product of syntactic deletion.\textsuperscript{12} Thus we conclude that ellipsis constructions should not be either.

\textbf{6.2. Vice versa}


(48) Kim likes Pat, and vice versa.

\textit{Vice versa} requires an antecedent clause. Within the antecedent, there are two constituents whose places are exchanged in the interpretation of \textit{vice versa} (hence the synonymous \textit{the other way round}). The general case looks like (49). Syntactically, it differs from everything we have seen so far, in that all the \textit{EXCEPT} constituents are
anaphoric and are filled in from the antecedents. Yet the semantics is a variation on the same theme.

(49)  *Vice Versa*

| Phonology: | [vice versa]₁ |
| Syntax: | Utterance₁ |
| Semantics: | |
| | \begin{tabular}{l|c|c|}
| & 1 & 2 \\
| SAME & E₁ & SITUATION₁ \\
| EXCEPT & P₁ & Q₁ \\
| EXCEPT & Q₁ & P₁ |
| \end{tabular} |

The semantics of (49) says that the meaning of *vice versa* is the same as that of its antecedent E₁, except that two parts of the meaning of the antecedent are substituted for one another.

Consider how it applies to (48). **Find** locates the antecedent of *vice versa*: *Kim likes Pat*. **Align** and **identify differences** match KIM with PAT and PAT with KIM. Solving for E₂, by **subtracting** KIM and PAT from KIM LIKE PAT and **adding** them back in according to the **alignment**, yields the interpretation ‘Pat likes Kim.’

(50)  \[ E₂ ≈ \text{KIM LIKE PAT} (\neg \text{KIM} + \text{PAT}) (\neg \text{PAT} + \text{KIM}) = \text{PAT LIKE KIM} \]
(51) Phonology/Syntax: (Kim likes Pat, and) vice versa

Semantics:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAME</td>
<td>KIM LIKE PAT</td>
<td>[PAT LIKE KIM]</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>KIM</td>
<td>PAT</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>PAT</td>
<td>KIM</td>
</tr>
</tbody>
</table>

Note the similarity of (49) to gapping, for instance in (52), which has the same interpretation as (48).

(52) Kim likes Pat, and Pat, Kim.

The difference is that in gapping, P2 and Q2 (here the Utterance Pat, Kim) are overt, whereas in vice versa they are identified as copies of the contrasting constituents in the antecedent clause.

Again, not since the earliest days of generative grammar has anyone considered vice versa to be transformationally derived from a partial syntactic copy of its antecedent. The fact that it fits naturally into the SAME-EXCEPT analysis is, we think, important evidence for our approach.

6.3. *The same, except, and their paraphrases*

Finally, consider the lexical items *the same, except*, and their variants, as mentioned in section 2.

(53) a. This wug is the same as/identical to/similar to/like that wug,

   i. except for/aside from/apart from the crest on its head instead of a curl.
ii. only this one has a crest on its head instead of a curl.

b. Gapping works the same way as full sentences with double contrastive stress, except that it leaves the non-contrastive parts out.

A tableau for (53a) is shown in (54).

(54)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAME</td>
<td>THAT WUG</td>
<td>THIS WUG</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>THAT</td>
<td>THIS</td>
</tr>
<tr>
<td>EXCEPT</td>
<td>CURL</td>
<td>CREST</td>
</tr>
</tbody>
</table>

Informally (see Culicover and Jackendoff 2012 for more detail), *same* and its variants set up a *SAME* row in a tableau, in which the subject (in (53a), *this wug*) occupies the E2 cell and the entity to which it is being compared (*that wug*) occupies the E1 cell. The complements of *except* and its variants (*this* and *crest*) supply the P2 cell(s); and if present, the complements of *instead* (here, *that* and *curl*) supply the P1 cell(s).

There are numerous syntactic variants. *The same* can act like a symmetrical predicate, with both E1 and E2 in its subject (55a); *the same* and *except* can have plural arguments (55b); they can compare three or more entities (55c) (resulting in multiple columns in the tableau); and *the same* and *instead* can be anaphoric, using *find* to locate their antecedent (55d,e).

(55) a. Gapping and *vice versa* are the same, except that in gapping P2 and Q2 are overt.

b. In Fig. 1, the two wugs are immediately seen as the same, except for/aside from their contrasting head decorations.
c. All of these rules are the same except for the way they map semantics to syntax.

d. (53) maps the complements of the same and instead into E1 and P1 in the tableau in (54). This sentence works the same way, except that E1 and P1 are found in the previous sentence instead.

e. The cops don't need you and man they expect the same. [Bob Dylan] [the same is actually interpreted as vice versa.]

Again, nobody to our knowledge has proposed a syntactic account of these constructions that accounts for their interpretation. Yet they share their semantics with all varieties of ellipsis. We take the possibility of capturing these generalizations as strong evidence for our approach.

7. Structure in the ellipsis site?

We have argued that the interpretation of ellipsis constructions does not require invisible syntactic structure: interface rules of a type independently needed for the constructions in section 3 and 4 will suffice. This means that ellipsis constructions such as BAE and sluicing are syntactically ‘WYSIWYG’, albeit with different syntactic properties and mappings into semantics. Likewise, our analysis of VPE posits an empty VP with no internal structure, which facilitates statement of the interpretation (and we do not rule out an account lacking a VP altogether).

This said, we must still address arguments in the literature for invisible structure in ellipsis, based not on interpretation, but on syntactic distribution.13 These arguments
date back to Ross 1969, who argues against a semantically based theory of sluicing; and they have been extended more recently by e.g. Merchant 2001; 2004.

The arguments are all based on the same principle: the syntactic form of an elliptical construction is subject to those constraints that would have been placed on it, if it had been in a full sentence whose syntax was a copy of the antecedent. Moreover, inasmuch as these constraints are sentence-level constraints, they must be imposed before deleting the elided material. The derivation thus involves movement of a copy of the visible material to a peripheral position in the structure, and deletion of the entire remnant under identity with an antecedent.

For instance, consider (56), the simplest example of so-called connectivity effects.

(56)  A: John, likes someone a lot.

B: i. Yeah, himself.

ii. *Yeah, him.

The proper form of B’s BAE response is determined by the fact that it has to be bound to John. But reflexive pronouns are normally bound intrasententially, not across discourse. So the only way to accomplish this binding, it is argued, is to provide an underlying form for B’s reply that contains an antecedent for the reflexive, e.g. himself; John likes t a lot, where the material struck out is either deleted in syntax or not pronounced in PF.

A similar argument involves case-marking, where a BAE fragment carries the case demanded by the verb of which it is understood as the complement. (57), one of Ross’s original examples, illustrates this phenomenon in German.
(57) a. A: Wem folgt Hans?

\textit{who}_{\text{DAT}} \textit{follows} Hans

‘Who is Hans following?’

B: Dem Lehrer.

\textit{the}_{\text{DAT}} \textit{teacher}

‘The teacher.’

b. A: Wen sucht Hans?

\textit{who}_{\text{ACC}} \textit{seeks} Hans?

‘Who is Hans looking for?’

B: Den Lehrer.

\textit{the}_{\text{ACC}} \textit{teacher}

‘The teacher.’

Merchant 2004 adduces similar examples in Korean, Hebrew, Greek, Russian, and Urdu. Again, the argument is that the case marking of the overt material must be governed by an invisible or deleted verb.

Similar examples in English involve the prepositions governed by verbs, as in (58) (from Culicover and Jackendoff 2005: 249).

(58) a. A: I hear Harriet has been flirting again.

B: i. Yeah, with Ozzie.

ii. *Yeah, Ozzie.
b. A: John is very proud.
   B: Yeah, of/*in his stamp collection.  [cf. proud of/*in NP]

c. A: John has a lot of pride.
   B: Yeah, in/*of his stamp collection.  [cf. pride in/*of NP]

The verb flirt requires the ‘flirtee’ to be marked by the preposition with. This requirement is apparently responsible for the necessity of the preposition in B’s response in (58a). The very close paraphrases (58b,c) push the point home further: they differ only in that proud requires its complement to use the preposition of, while pride idiosyncratically requires in. The replies, using BAE, conform to these syntactic requirements, just as if the whole sentence were there.

If the antecedent includes the relevant preposition, though, the ellipted expression does not need it.

(59)  a. A: Harriet is flirting with someone.
   B: Yeah, (with) Ozzie.

   b. A: John is very proud of something.
   B: Yeah, (of) his stamp collection.

   c. A: John has a lot of pride in something.
   B: Yeah, (in) his stamp collection.

In contrast, German requires the preposition even when it is present in the antecedent.
Merchant 2006 presents evidence that this difference correlates cross-linguistically with the ability to strand prepositions: languages that can strand prepositions behave like English, and those that cannot strand behave like German. Thus his explanation of (60) is that B’s reply is derived from a full sentence that has undergone topicalization, which in German must pied-pipe the preposition.

Culicover and Jackendoff 2005 propose an alternative approach to this problem called Indirect Licensing (IL). The general idea is that an item related to an antecedent can be syntactically licensed, not by the sentence it is itself in, but via its semantic role in relation to the antecedent.

IL can be seen in constructions like topicalization and pseudocleft, for example in (61).

(61) a. Himself, John likes ti.

b. The one who John likes ti is himself.

Consider first (61a). Topicalization is standardly analyzed as ‘movement’, where himself is licensed before movement takes place. Alternatively, though, the licensing of himself can be explained without movement if we can implement the following: (i) John binds
the direct object argument, (ii) the direct object argument is a gap, (iii) the topicalized constituent is identified with the gap, (iv) therefore John indirectly binds himself, (v) therefore the reflexive is indirectly licensed. (This is a variant of what has been called ‘reconstruction’.)

Now consider (61b). There is no plausible movement account in this case. But himself can be licensed by the same mechanism envisioned for topicalization: (i) John binds the direct object argument, (ii) the direct object argument is a gap, (iii) who is identified with the gap, (iv) himself is identified with who across the copula, (v) therefore John indirectly binds himself.

In both cases, the critical step that permits IL is the identification of the reflexive with a particular constituent of the sentence, here the gap in the direct object. From this it is a minor step to extend IL to the interpretation of ellipsis. On this view, IL permits a phrase XP to be syntactically licensed indirectly through a SAME-EXCEPT relation. The conditions on such licensing are (i) there is an antecedent sentence S that can serve as E1; (ii) XP aligns with the interpretation of some part YP of S, so that XP serves as P2 and YP serves as P1; and (iii) the rest of E2 is implicit. In such a configuration, IL says that the syntactic properties of XP are those appropriate for its semantic role in E1.

To be more specific, we consider three cases of IL, which differ in how XP (= P2) is related to P1. The first case is Contrast, in which P1 is expressed by YP, a constituent of S, as in (62).

Here IL says that XP, in this case *scotch*, must have the syntactic features appropriate to the position of YP(= P1), here *vodka*. This case also includes the German examples in (57): *dem Lehrer* is P2, so by **align** it receives the semantic role of the individual being followed, *wem* (=P1). That role is expressed as the object of *folgt*. Since *folgt* licenses dative case on its object, Indirect Licensing says that dative case is licensed for *dem Lehrer* as well.

Binding connectivity (56) works in much the same way. *Himself* in (55B.i) plays the role of P2, and *someone*, the direct object of *like*, plays the role of P1. *Someone* is locally c-commanded by the subject *John*, so IL says that *himself* also counts as locally c-commanded by *John*, and hence can be coreferential with *John*. Similarly, the pronoun *him* in (56B.ii) counts as locally c-commanded by *John*, and therefore cannot be coreferential with *John*.

The second case of IL is where P1 is an implicit argument, that is, it is present in the semantics but not in the syntax, as in (63).


Here *John drinks* has an implicit object argument INDEF, not present in the syntax, that serves as P1. B’s response *scotch* (= P2) **aligns** in the semantics with INDEF. IL therefore says that *scotch* acquires syntactic properties appropriate to this role – that is, those of an overt direct object of *drink*. This case also includes the examples in (58). Intransitive *flirt* in (58a.A) has an implicit ‘flirtee’ (= P1), and this role **aligns** with *OZZIE* (= P2). IL therefore says that *Ozzie* must satisfy the subcategorization
requirements of the verb *flirt*. When *flirt* has an overt ‘flirtee’, it requires the governed preposition *with*, and therefore we must have *with Ozzie* and not simply *Ozzie*.

The third case of IL is elaboration, where P1 is semantically as well as syntactically null, for instance in (64).

(64)  A: John drinks scotch.  B: Yeah, every day.

Because *every day* (=P2) is a time expression, A’s statement (=E1) has no counterpart, syntactically or semantically, that can serve as P1. Hence A’s statement imposes no syntactic licensing conditions on *every day* – just semantic conditions such as compatibility with tense and aspect. Therefore, we predict that elaboration is possible when XP is interpreted as an adjunct to S: the syntactic properties of adjuncts, unlike those of arguments, are determined entirely by their semantic role. Based on the evidence in Culicover and Jackendoff 2005 (Chapters 7 and 8), we think this is a correct result.

8. Conclusion

We have argued that there are two types of ellipsis, neither of which involves hidden syntactic structure. One type, exemplified by BAE, interprets a fragment as being the same as that of an antecedent, except for the part of the interpretation associated with the fragment. A second type, exemplified by VPE, assigns an interpretation to a sentence with a pro-VP in much the same way: the meaning of the sentence is the same as that of
the antecedent, **EXCEPT** for the part of the interpretation associated with the overt material.

This analysis fits well with the constructional, interpretive framework called for by the Parallel Architecture and Simpler Syntax, in that the syntactic structure of elliptical utterances is as minimal as possible. Each elliptical construction licenses its own mapping between the **SAME-EXCEPT** semantics and a stipulated syntactic configuration. These mappings not only license the syntactic structure but also enable the hearer to recover the full intended semantic content.

We have shown in addition that this choice of framework is not merely aesthetic: it allows us to express empirical generalizations not available in other approaches. The interpretation of both types of ellipsis can be seen as elaborations of the interpretation of anaphora, and also as sharing semantics with non-elliptical constructions such as contrastive stress and with lexical items such as *the same, except*, and *instead*. Moreover, this semantic structure is not proprietary to language: it is responsible for judgments in every modality of perception. We take these to be important and unexpected generalizations both within the language faculty and in human cognition as a whole.

We recognize that at this point many aspects of our analysis are quite informal. In particular, the tableau notation, the inferential processes **find, align, identify differences, add**, and **subtract**, and the mechanism of Indirect Licensing need to be fleshed out in considerably greater detail. However, we have observed that on one hand these correspond to parallel notions in other theories of ellipsis, and on the other hand, they need to be sufficiently general to apply to nonlinguistic as well as linguistic situations. We take this as a challenge for the field.
References


Hardt, Daniel 1993. Verb phrase ellipsis: Form, meaning, and processing. Graduate School of Arts and Sciences, University of Pennsylvania dissertation.


Endnotes

1 Most of this chapter is adapted from Culicover and Jackendoff 2005, which analyzes in more detail each of the cases discussed here. The wug image is used with permission of Jean Berko Gleason. We are grateful to Neil Cohn for the wug variants and the cartoon in (7).

2 We exclude the Minimalist Program (Chomsky 1995), which appears in some respects to converge on SS.

3 A reader suggests the following locution as an explication of the same-except relation: “judged to be overall similar in virtue of identity of all attributes other than the points of contrast.”

4 To see how ubiquitous such expressions are, readers are invited to count the number of times in this chapter that we use locutions such as \( X \) is the same as \( Y \), except for \( Z \).

5 In an early incarnation of this work, we attempted to implement a formalism along the lines of lambda-abstraction, which in some respects does the sort of work we want. However, we eventually set this formalization aside for two reasons. First, it rapidly became unwieldy, to the point of obscuring the overarching generalizations we were trying to express. Second, SAME-EXCEPT is a domain-general relation, and it is hard to see how to apply lambda-abstraction to nonlinguistic phenomena such as wugs, melodies, and soups. We therefore have settled on the relatively informal tableau.
notation, which we find more revealing; it provides a conceptual basis from which more precise formalisms can be developed.

Similarly, we initially tried to lay out our semantic representations in terms of a more standard predicate-argument sort of notation, of the sort in Jackendoff 1990; 2002. Again, we found that insisting on detailed formalization got in the way of the basic insights, and so we have represented the semantics very informally.

6 Not all nonsentential Utterances are elliptical. For instance, words like hello, ouch, and abracadabra can stand on their own and do not embed. Other nonsentential Utterance types have argument structure, such as How about XP?, What about XP, and P with NP! (e.g. Off with his head!).

7 Culicover and Jackendoff 2012 make a further distinction between “elaboration” and “specification” which we will not pursue here.

8 The idea of gapping as multiple contrast goes back at least to Pesetsky (1982).

9 For a comprehensive derivational treatment of pseudogapping, see Lasnik 1999.

10 There is no question that this description is largely ad hoc, and we have omitted many interesting details. But under any account, it is necessary to stipulate that it is just the verb and perhaps a complement that is pseudogapped, and not a larger structure. For instance, pseudogapping may not apply to a sequence of verbs, leaving just the inflected AUX.

(i) a. *Terry will refuse to speak French, and Sandy will [‘refuse to speak’] German.

b. *Terry will be speaking French, and Sandy will [‘be speaking’] German.
c. *Terry would have spoken French and Sandy would [‘have spoken’] German.

An account that assumes movement of the stranded XP and deletion of the remaining VP (e.g. Lasnik 1999) cannot delete too broadly or strand non-complements, or it will end up deriving ungrammatical sentences like (ii).

(ii) a. *Terry will claim that I speak French, and Sandy will [‘claim that I speak’] German.
   b. *You probably just feel relieved, but I do [‘feel’] jubilant. [Lasnik 1999: 142]

However, for corpus evidence that pseudogapping is freer than is typically claimed, see Miller 2014.

A still more complex construction is comparative ellipsis, which has cases resembling many others type of ellipsis and then some, e.g.:

(iii) a. Terry has more beans than Sandy. [like BAE]
    b. Terry has more beans than Sandy, cookies. [like Gapping]
    c. Terry has more beans than Sandy does. [like VPE]
    d. Terry has more beans than Sandy does cookies. [like Pseudo-gapping]
    e. Terry is more stingy than Sandy is generous. [sui generis]
While the semantics in terms of \texttt{SAME-EXCEPT} is fairly clear, the mapping to syntax, and in particular the variety of available ellipses, proves far less so.

11 We are abstracting away here from exactly what counts as ‘identity’, given the complex issues surrounding the distinction between discourse anaphora and binding of pronouns, strict and sloppy identity, etc. In particular, discourse pronouns such as that in (41) convey token identity, while in sloppy identity, a definite pronoun conveys type identity.

12 A notable exception is Elbourne (2001; 2015).

13 Here we are recapitulating points made in Culicover and Jackendoff (2005; 2012).

14 Culicover and Jackendoff 2005 used the terminology ‘antecedent’ for E1, ‘indirectly licensed’ (IL) for E2, ‘target’ for P1, and ‘orphan’ for P2.