

Parentetical *as**

(and movement paradoxes)

0 Disclaimer

The title and subtitle perhaps should be reversed, so as to make this seem like a more coherent presentation. In any case, we will start with movement paradoxes and then move on to see how *as* exhibits such paradoxical behavior, and finally move on to other uses of *as*. Think of the presentation as a radial category.

1 Movement Paradoxes

The grammatical sentences in (1–2) exhibit what has been called in the **Lexical-Functional Grammar** (LFG) literature **movement paradoxes** (e.g., Bresnan, 2001:18–24).¹

- (1) a. [That Achilles will never catch up to the tortoise]_{CP}, we could talk about ______{NP} for hours on end.
b. * We could talk about that Achilles will never catch up to the tortoise for hours on end.²
c. [That arrows don't move in midair]_{CP} is captured ______{NP} by this theory.
d. * This theory captures that arrows don't move in midair.
e. They warned me the paperwork would kill me, and [kill]_{V-inf} me it has ______{V-pl}.
f. * The paperwork has indeed kill me.
- (2) a. Aren't I the greatest?
b. * I aren't the greatest.
- (3) a. The paradoxes had to be solved, and so I did / decided to.
b. * I did ⟨the paradoxes⟩ (be) solved ⟨the paradoxes⟩. I decided to ⟨the paradoxes⟩ (be) solved ⟨the paradoxes⟩.

Assuming that what we have is movement of the bracketed material from the indicated gap, then there is an inconsistency between the category of the overt (fronted) phrase and the selectional properties of the predicate on which it is dependent.

*Thanks especially to Michael Ellsworth, Line Mikkelsen, Eve Sweetser, and anyone else I accost with questions about this little morpheme.

¹See also the Wikipedia article at http://en.wikipedia.org/wiki/Movement_paradox.

²Compare *We could talk about [how Achilles is a slow runner] for hours on end*.

(Note: The agreement mismatch in 2 is truly strange, though not necessarily a paradox of *movement*, since we also have *I wonder why I aren't getting my subscription yet*, and in general *aren't* standing in for *am not* (see Hudson, 2000).)

1.1 LFG

LFG has a few solutions for this sort of problem. Bresnan (2001:117) takes the case of *that arrows don't move is captured by this theory*. But first, the basic architecture of LFG. Sentences are represented by three structures: **a(rgument)-structures**, **c(onstituency)-structures**, and **f(unctional)-structures**. Auxiliary notions like thematic hierarchies, and constraints on structures and links are also in operation. Now the solution:

- By definition non-nominals cannot appear in subject or object positions (i.e., Spec,IP and sister to V) so the initial CP must be adjoined to the sentence.
- This adjoined position is required to have some unspecified **discourse function** (a consequence of basic principles of LFG)
- The f-structure associated with the entire sentence will thus have a value TOP associated with the the CP's f-structure.
- The requirement for a subject (specified by *be*) goes unsatisfied in the c-structure (i.e, the syntax). Instead (by universal principles) the topic is identified with the subject.
- Alternatively, there is an **empty category** in subject position with the specification $((x \uparrow)_{\text{TOP}} = \uparrow)$, which specifies that you should “identify my mother (\uparrow) with the value of TOP that exists in some arbitrarily higher f-structure, which must also have a path that leads to my mother.”

For topicalized CPs that are “underlyingly” objects of prepositions, we require an empty category that projects an NP and is annotated with $((x \uparrow)_{\text{TOP}} = \uparrow)$.³ The same sort of analysis (i.e., with an empty category) may be needed for the topicalized non-finite VP in *kill me they have* (cf. Birner 1992(?)) on a tendency for non-finiteness in all cases of verb preposing). In general, then, there is *no mismatch* in the syntax.

1.2 Non-LFG

This contrasts with a potential account of topicalized *that*-clauses in HPSG, in which a subtype of *gap-ss* (gapped synsem) is specified as follows:

³I believe this to be the case. Bresnan does not go over this, or any other case of paradox, in her textbook.

$$(4) \left[\begin{array}{ll} \text{LOCAL} & NP \\ \text{SLASH} & \{S\} \end{array} \right]$$

Then a preposition like *about* can specify that its object is something which locally is of type NP but which specifies a **slash** value of S (= sentence). Then when the entire VP/S *we could talk about for hours* will have a slash member S, and the adjacent *that*-clause will satisfy that slash requirement.

There are three approaches (mentioned by Bresnan) to this phenomenon in the GB tradition. They are (i) movement of both the topicalized phrase and an empty category (Postal, 1994), (ii) movement of a null operator (Chomsky, 1977), and (iii) category-changing movement operations (Webelhuth, 1992).

Arguments against (ii), which seems to be a common account, are given by Müller and Sternefeld (1994), who demonstrate asymmetries in *wh*-movement and topicalization in various Germanic languages (however, they do not address the issue of these movement paradoxes). Some, such as (Bošković, 1994) feel that they are ungrammatical anyway.

The possibility of (iii) has been called into question especially given the **copy theory** of movement, which forces identity (of some sort) between the head and tails of the movement chain; this as opposed to a **trace theory**, where perhaps some non-identity can be tolerated.

Finally, a suggestion from a posting to LinguistList⁴.

Carson Schutze proposes the following solution of the movement paradox:

“I think there’s a pretty simple story to be told here, which I however haven’t seen in the literature: prepositions are unpronounced when they precede a clause. (Cf. the fact that in some languages, case markers are unpronounced on a DP adjacent to a verb, but obligatory if the DP is moved; or the fact that in English, infinitival complements to verbs like ‘want’ must be introduced by ‘for’ except when that complement is adjacent to the verb.) I.e., this is a fairly ‘superficial’ PF fact about English.”

[...]

I suggest to take also the following (perhaps even simpler) story into account: It can be assumed that the sources of (1b, 2b) are not those in which *of* and *about* take a *that*-clause as complement, but a [the fact that ...]-DP:

- (5) a. He didn’t think of [the fact that he might be wrong]. > [the fact that he might be wrong] he didn’t think of *t*
- b. We talked about [the fact that he was sick for days] > [the fact that he was sick] we talked about *t* for days.

⁴<http://listserv.linguistlist.org/cgi-bin/wa?A2=ind0111d&L=linguist&P=7245>

The string *the fact* can then be assumed to be deleted in the phonological component of the grammar or, perhaps preferably, during phonetic processing in performance.

Note that Schutze’s account would mean that movement paradoxes pattern opposite to those examples he discusses. That is, when *want*’s complement VP is adjacent to the verb, it does not need the marker *for*, but it does when extracted; on the other hand, when the proposition-denoting phrase is adjacent to the P it must have a marker *the fact*, but when extracted, the marker is optional.

2 Paradoxical *as*

2.1 A quick-and-dirty introduction

A more detailed introduction can be found in Potts, 2002a, 2002b.

Parenthetical *as* comes in at least three flavors. In each case it introduces a clause with a gap. The gap can either be (what would normally be) a predicate (6), a *that*-clause (7), or a name (8).⁵ For now, pay attention to the ones in 8.

- (6) a. **As** most people do ____, she probably initially thought that it would be easy.
- b. The next day, although I sprayed the pests, **as** I knew I must ____, I stood at arm’s length from the compost heap and wore jeans and high-rise trainers.
- c. The hunters have almost all been exposed to it, **as** have ____ most of their wives and children.
- (7) a. **As** I say ____, this problem has yet to receive a comprehensive treatment.
- b. Mrs Venables cake was—**as** she had said ____—a perfect coffee gateau, smoothly frosted in caramel, with three cherries on the top.
- c. **As** is often the case ____, most people don’t understand the important issues.
- (8) a. In other words, unless Ralph Nader builds that mass movement pretty quick, thereby breaking the two-party duopoly **as** he calls it ____, look out America – more beer riots are on the way!
- b. This misapprehension is called Avidya, which causes desire, or Trishna **as** it is called ____ in Sanskrit.
- c. A former Disneyland employee, Rosenthal’s outfit would make Mickey Mouse blush and run afoul of the “dictatorship’s,” **as** she calls it ____, dress code.

⁵The “name” is most often what looks like a DP, though Potts (2002b:659fn) gives evidence that they are not; exactly what they are is not clear. In addition to DPs and VP-ing, PPs can also appear: *he showed that to be “in Christ,” or “in the spirit” as he otherwise calls it, was to be in the condition of trance.*

- d. His work focuses on physical processes and aquatic chemistry in treating waste and remediating contaminated sediment, or, ***as*** he calls it ____, “making the bay safe for fish and humans.”

The interpretation of the gaps in these clauses is taken directly from the matrix clause to which it is adjoined. So in 8, the gaps are interpreted as *(a) two-party duopoly, Trishna, (a) dictatorship*, and so on. Call the material in the main clause that provides that meaning the **anchor**.

Parenthetical *as* has a discourse pragmatic function of providing **background information**. In particular the *that*-clause and naming uses can be used to attribute various claims and linguistic habits to others (and thus can take on various rhetorical and hedging uses).⁶

2.2 A Paradox?

Actually, two sorts of paradoxes. The first regards the syntax and semantics of the gap. The second regards the syntax and semantics of the anchor.

2.2.1 The case of the missing *as*

- (9) a. The kha-nyou, ***as*** it is known ____, locally, was trapped by an expedition in May.
- b. Melissa, or ChildOfBabylon ***as*** I know her ____, is one of my old online journal friends.
- c. They were “switched,” ***as*** dealership salespeople refer to it ____.
- d. Perceiving the truth has always been a challenge to mankind, but in the information age (or ***as*** I think of it ____, the disinformation age) it takes on a special urgency and importance.

Recall from the examples in 8 that the “name” argument of ***call*** was missing, due to the presence of an *as*. However, the verbs ***refer***, ***know***, and ***think*** select for PPs headed by *as*. If this is the same *as* that is in effect, then we have a sort of paradox: somehow the *as* that is selected for by *refer*, etc., is not required just in case there is a parenthetical *as* in the matrix clause. This is a movement paradox if we believe movement is involved.

It in fact seems clear that a **long-distance dependency** is involved. Parenthetical *as* clauses show island effects, so either *as* itself fills the lower gap (my current theory) or a null operator does (Potts, 2002a, 2002b).

⁶Potts (2005) models these as **conventional implicatures**: assertions that appear embedded anywhere in the sentence but that are associated with the speaker of the entire utterance. However, he does not agree that they provide backgrounded information. See Pullum and Huddleston (2002:1148) for arguments that the *as*-clause must introduce backgrounded information

How can we get out of this? In either analysis, the gap has a particular semantics associated with it. Say that *as* is the extractee. So either there are two different lexical items (with one denoting “names,” and the other denoting whatever PP-*as* denotes) or its semantics is broad enough to cover both “names” and [*as*+“name”].

Another piece of data:

- (10) a. Logical addresses, or IP addresses ***as*** they are known as in the computer world, are destined to be hacked.
 b. Their lives revolve around defending the area and watching or playing football, or ***as*** Americans refer to it as ____, soccer.

The (marginal) optionality of a stranded *as* may lend credence to the idea that the semantics of the bare “name” and PP-*as* are in fact close enough in semantic type to be covered by a single parenthetical *as*. However, it does not rule out a polysemy analysis either.

A prediction: given that topicalized phrases that should have had a “the fact that” prepended ended up being good, maybe this means that a fronted PP-*as* will actually end up being just an NP. What say you: (*as*) a ***pizza pie***, I refer to it (*as*).

2.2.2 Mention or use?

Note that name-*as* commonly appears commonly after *or*. This makes for a nice composition of semantics, because you can introduce a new XP that denotes a name. The *as* then hooks up with the name-denoting XP. However, the extra XP isn’t always there:

- (11) a. The kha-nyou, ***as*** it is known locally, was trapped by an expedition in May.
 b. In October, MK, ***as*** her friends call her, took a leave of absence from NYU and moved back to Los Angeles to pursue her acting career.
 c. Life was tough for Omar, ***as*** his friends call him, when his family immigrated to New York from Bangladesh 10 years ago.
 d. But even among the most ardent supporters of “Jessi,” ***as*** she is known in town, there is an unsettling sense that

The underlined phrases act as regular referring expressions with regard to the matrix clause, but are construed as names with respect to the subordinate verbs (***know***, ***call***).

2.3 As we were talking about. . .

This is not limited to naming-*as*. A similar sort of mismatch can be seen for proposition-*as* (Potts’s (2002b) CP-*as*). In fact there are two sorts of mismatches. The first:

- (12)
- a. Cats have built a flying machine to catch birds. **As** you are aware, catching birds is a cat’s highest priority.
 - b. But, of course, **as** you must be aware of by this time, perhaps all the economic statistics like G.D.P. etc., are not
 - c. **As** most are aware of by now, on Thursday, June 23, 2005, the U.S. Supreme Court ruled 5-4 in favor of the Connecticut city of New London
 - d. **As** you probably have heard in the news, the Iraqi army is moving missiles and artillery to the Kuwaiti border.
 - e. **As** you may have heard about in news stories, GAO recently released its new high-risk report, which deals primarily with the here and now.
 - f. **As** you may have heard us talking about all evening, we’ve had a major computer worm affect systems here at CNN, as well as other industries throughout the country.

I earlier said that this sort of *as* co-occurred with proposition-denoting gap. Here we have predicators (*aware*, *hear*) that can take either *that*-clauses or PPs. As with the original cases of movement paradoxes, we have something that we expect to denote a proposition that seems to be filling a slot reserved for nouns.

An important fact to note is that sometimes, “stranding” a preposition sounds really bad: **in February, as most people are aware of, the federal government issued the following announcement*. In fact, adding an adverbial after the preposition makes things sound much better (feel free to test this by removing the post-preposition material in the sentences in 12)

To throw a minor wrench in the operation: a verb like *say*, in the sense of ‘utter,’ can take what are clearly entity-denoting nominal arguments: *he said three words*. But *as* cannot take the place of this nominal argument: **“year,” “strengths,” and “irreverent,” as our subject said, in particular seemed much harder for him to pronounce after the operation* (on the reading where the speaker claims that the informant uttered those three words). Compare this to . . . *which our informant said*, where *which* must denote a nominal entity.

Mismatch the second:

- (13)
- a. **As** was initially the case in the 19th century with the pasteurization of milk, food irradiation has raised public concerns about the safety of the process.
 - b. However, **as** is the practice at this site, we have reproduced the original system of transcription as closely as possible.
 - c. I offered him a share, **as** was the custom in those days.

Proposition-*as* can also fill the proposition role of nouns that select for them, like *case*. However, words like *practice* and *way* basically select a VP-to, not a *that*-clause. Thus if *as* is in the same semantic class as the missing item, we have another mismatch problem. (The

problem also arises Potts since his lexical denotation for *as* also determines the semantics of the gap).

3 A medley of *as*

Choose your own adventure topic:

- What evidence exists that *as* (rather than an operator) is the gap-filler, and in fact is a relative proform? And did you know that English actually exhibits both head+relative and relative+head orders?
- What is one of the strangest uses of subject-auxiliary inversion in English, and why does it exist only with predicate-*as*? And did you know that it's not really SAI—but only Pullum and Huddleston (2002) and a few select others realize this fact?
- What is the relationship between proposition-*as* and abstract nouns, in particular their denotation and inherent topic/focus specifications? And did you know that this relationship is revealed in copular clauses introduced by proposition-*as* as well as extraposition constructions?

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