An amalgam and its puzzles*

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Lakoff (1974) brought to the attention of the linguistic community a construction that seems to have triggered surprisingly little interest in the subsequent literature. The construction at issue exhibits constituents with the superficial appearance of root sentences in positions that are normally filled by DPs, APs or PPs (functioning as arguments, adjuncts, or predicates), and presumably for this reason, was dubbed by Lakoff an 'amalgam.' We will refer to this construction as an Andrews Amalgam (AA) (since Lakoff credits Avery Andrews with its discovery), and to the apparent root sentences in it as AAI(nsert)s. In this brief essay, I will highlight a number of *prima facie* puzzles associated with this construction, offering solutions to some of them, and indicating those that remain to be addressed.

An AA with multiple AAIs is shown in (1).

(1) John invited [you'll never *guess* [$_{DP}$ **how many people**]] to [you can *imagine* [$_{DP}$ **what kind of a party**]] at [it should *be obvious* [$_{DP}$ **which place**]] with [God only *knows* [$_{DP}$ **what purpose in mind**]], although he was [you can *guess* {[$_{AP}$ **how tired**, [$_{PP}$ **under what kind of pressure**]}].

In order not to prejudge the category of AAIs, I place them in (1) within an unlabelled pair of brackets. Observe that each such pair properly includes a labeled pair of brackets, and that the label indicates the category that the corresponding AAI 'ought to' have. To account for this 'matching' effect, it seems natural to assume that AAIs are in fact complex XPs homo-categorial with the boldfaced constituent within them, rather than merely 'bare' IPs. Pre-theoretically, the boldfaced phrase can be called an 'internal head' (IH), on a par with the IHs of the so-called 'internally-headed relatives' (IHRs) of, e.g., Lakhota, Japanese, Korean, Quechua, and Navajo, as well as with the wh-phrases of Free Relatives (FRs). The theoretical analysis of this matching effect remains, of course, open, and at least two analyses can in principle be envisaged: (i) AAIs are headed by a null category that needs to be related in some way to the IH, or (ii) the IH is 'grafted' unto the matrix and 'pronounced' there (van Riemsdijk, to appear). We will consider below the possibility of a choice between these two options.

The similarity with IHRs and FRs just noted notwithstanding, it needs to be pointed out that the internal make-up of AAIs differs significantly from that of both FRs and 'internally-headed' relatives. In particular, their IH is invariably the remnant of a sluiced interrogative clause that serves as complement to some predicate. That we are dealing with some form of Sluicing is strongly suggested by at least two facts: (i) predicates like those italicized in (1) all select interrogative complements, and (ii) the IH may exhibit the preposition-stranding effect, called 'Swiping' in Merchant (2002), which is found in 'standard Sluicing constructions' (SSCs), as noted in Ross (1969) (see (2a-b)). By 'SSC' I mean data like (2a), in which the ellipsis and its 'antecedent' occur in distinct sentences; AAIs, as can be gathered from (1) and (2b), are constitutive sub-elements of the matrix, in particular, arguments, adjuncts, or predicates.

(2) a. I heard John is involved with someone, and I wonder **who with**.
    b. Bill has been involved [$_{PP}$ you will never guess **who with**] since August.

The structural distinction between AAs and standard Sluicing constructions correlates with a number of intriguing differences, to which I turn directly. I begin with a contrast which also reveals an intriguing distinction between AAIs and FRs.

Ross observed that SSCs appear to be sensitive to whether P-stranding is independently allowed or not. His examples were based on English intra-linguistic contrasts, but considerable cross-linguistic evidence is provided in Merchant (2006, section 3.2.2). A contrast based on English and Romanian data (the latter, a language that disallows P-stranding in general) is provided in (3)-(4).

(3) Bill wants to play poker with someone, but I am not sure **who**.
(4) ?*Ion a reuşit datorită cuiva, dar n-am să-ţi spun **cui**.
    Ion has succeeded thanks-to someone.Dat but not-have.1 Subj.Prt.-you.Sg.Dat tell who.Dat
    'Ion succeeded thanks to someone, but I won't tell you who.'

The contrast seems to be traceable to the fact that the ellipsis in (3) can be replaced by *he wants to play poker with,* while that in (4) cannot be replaced with **a reuşit Ion datorită*; rather, to render (4) grammatical, it is necessary to add a token of *datorită* before *cui*. All this seems to show that Sluicing is a deletion process, and that the grammaticality of its output depends on the grammaticality of pre-deletion representations. If this is so, the acceptability of (5) is surprising, since the string that induces deviance in (4) causes no problems in (5).

(5) Ion a   reuşit   datorită [ştii   tu   **cui**]   la examenul de ieri.
    Ion has succeeded thanks-to know.2.Sg you.Sg who.Dat at exam-the of yesterday
    'Ion succeeded thanks to [you know who] at yesterday's examination.'

Turning now to a comparison with FRs, it is well-known from both the traditional and the generative literature that there exist matching effects in Case and category between FRs and the wh-phrase within them, and also that these effects may be cross-linguistically relaxed to varying extents; in particular, Romanian is a language in which certain deviations from strict matching are allowed in FRs (for illustration, see, e.g., Grosu 1994, Chapter 4, and pertinent references therein). Now, matching effects also exist between AAIs and the wh-phrase they properly contain. In (5), for example, the AAI is assigned Dative Case by the preposition *datorită*, and the interrogative pronoun is necessarily Dative as well. In (6), on the other hand, the AAI is a pre- or post-verbal subject, and the wh-pronoun is correspondingly necessarily Nominative.

(6) a. Vrea (cu adevărat) [ştii   tu   **cine**] să   mă omoare?
    wants with truth   know.2.Sg you.Sg who Subj.Prt. me kill
    'Does [you know who] (really) want to kill me?'
   b. Vrea (cu adevărat) să   te   omoare [ştii   tu   **cine**].
    wants with truth   Subj.Prt.you.Sg kill   know.2.Sg you.Sg who
    '[You know who] (really) wants to kill you.'[1]

However, to the extent I was able to check the situation, the Case-matching effects found in AAIs are strict and not subject to cross-linguistic variation. The same seems to be true of the matching effects in category. For example, the essential import of (5) can also be expressed as in (7a), where both the AAI and the wh-phrase are PPs, but not as in (7b), where the AAI is a DP and the wh-phrase, a PP[2].

(7) a. Ion a reuşit [ştii tu **datorită cui**] la examenul de ieri.
   b.*Ion a reuşit datorită [ştii tu **datorită cui**] la examenul de ieri.

Returning now to SSCs, there seems to be a further interesting difference between them and AAIs. The issue of which anaphoric processes need to be syntactically controlled and which can be pragmatically controlled has been a much debated one in the earlier literature. Hankamer & Sag (1976), echoing arguments in Ross (1969), took the position that Sluicing belongs in the former category, together with other processes, in particular, VP-ellipsis. At the same time, following a challenge by Schachter (1977) concerning the status of VP-ellipsis, Hankamer (1978) suggested that pragmatic control is possible only under special circumstances, in particular, when the containing utterance has certain kinds of non-declarative illocutionary force. As far as Sluicing is concerned, it is possible to imagine situations in which the ellipsis is reconstructible from the pragmatic context, e.g., someone who discovers a murdered relative, may exclaim 'my God, who?', which is consistent with Hankamer's suggestion. Be this as it may, pragmatic control must definitely be allowed in AAIs. This can clearly be appreciated in relation to both examples in (6), where the ellipsis is clearly not construed as 'wants to kill me/you' (if it were, the entire AA would

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[1] The string corresponding to the English translation of this example (but not the Romanian original) also allows the irrelevant bracketing in (i), in which *you know* belongs to the matrix.
  (i) You know [who (really) wants to kill you].

[2] The string corresponding to (7b) has an irrelevant alternative construal; see the remarks in the text following example (12).

presumably be tautological), but rather as essentially '(is the person) I am thinking of.' A similar point can be made in relation to the English examples in (8).

(8) a. Bob sent something to his mother as well, but I won't tell you what.
    b. Bob sent [you can easily guess **what**] to his mother as well.

In the SSC in (8a), the antecedent of the ellipsis is the entire leftmost IP, including *as well*. In (8b), however, the ellipsis is most naturally construed as *he sent*, rather than as *he sent to his mother as well*, since *as well* implies that the identity of the recipient constitutes novel information for the addressee, and this would not be the case if *to his mother as well* were part of the ellipsis.

    In fact, the deviation from SSCs seems to go even further. Thus, not only does a pragmatically controlled ellipsis seem to be the normal, rather than the exceptional, state of affairs, but (this kind of) ellipsis seems to be the only option. That is to say, the ellipsis cannot be replaced by a semantically and pragmatically appropriate string. To see this, consider the deviant status of the full versions of the following examples.

(9) a. Does [you know **who** (*I have in mind)] want to kill me?
    b. Bob sent [you can easily guess **what** (*he sent)] to his mother as well.

To avoid confusion, an important caveat is in order here. AAIs need to receive the 'continuous' prosodic contour that is appropriate for arguments in particular and for constitutive parts of larger sentences in general. The asterisk assigned to the full versions of (9) is confined to this kind of intonation and interpretation. This needs to be clearly understood, because the strings corresponding to these full versions also allow a different kind of intonation and interpretation, under which they are acceptable, and which I try to bring out by means of punctuation in (10).

(10) a. Does …, *you know who I have in mind*, want to kill me?
     b. Bob sent …, *you can easily guess what he sent*, to his mother as well.

In (10), the speaker refrains from uttering the argument indicated by '…', either because (s)he is not certain what to say or because (s)he is unwilling to say it explicitly, and inserts a parenthetical hedge instead. Constructions analogous to (10) are, incidentally, also discussed by Lakoff (1974), who attributes them to Larry Horn, and views them as a distinct kind of amalgam; following van Riemsdijk (to appear), we will call them H(orn) A(malgam)s. An important difference between (9) and (10) is that the italicized sequences in the latter, unlike the bracketed ones in the former, do not fill an argument position in the matrix. Rather, the argument position is left unfilled, and the matrix is incomplete. Correlatively, HAs are not complex XPs, but simply what they seem to be, i.e., IPs. This characterization of HAs is supported by a number of observations, which I briefly outline.

    We may expect an unfilled slot to be recognizable as such only is it is preceded by some material within its utterance, but not if it is utterance-initial. This prediction is confirmed by the contrast in (11)[3], and, importantly for us, by the one in (12). In the absence of a possible alternative realization as an HA, the full version of (12) is deviant, and shows that the ellipsis is obligatory, as I claimed it is.

(11) a. Bill is flying to …, is it Chicago? – on Friday.
     b.*Is it Chicago? – is a great city.
(12) [You know who (*I am thinking of)] wants to kill you.

The claim that HAs are not complex XPs is also brought out by the complete absence of Case and/or category matching effects. For example, (7b), which is unacceptable as an AA, becomes

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[3] Van Riemsdijk (to appear) attributes the deviance of data like (11b) to a garden-path effect, induced by the fact that the insert has the superficial appearance of a root sentence. This cannot be right, for two reasons. First, garden-path effects disappear, once they are recognized, and the deviance of (11b) is robust. Second, the AAI in the reduced version of (12) also looks like a possible root sentence, but does not induce recalcitrant unacceptability. If anything, it may be misconstrued as having an irrelevant bracketing (see footnote 1), which can however easily be excluded by prosodic means.

acceptable with HA prosody, in which case it also allows an overt realization of the ellipsis. – In sum, the claim that AAIs **must** exhibit an elliptical interrogative IP seems to be well supported.

That the Sluicing ellipsis of AAIs allows pragmatic control is perhaps not too surprising in the light of certain proposals made in Hankamer (1978), to the effect that pragmatic control of anaphors which normally require syntactic control is allowed only in "(certain) illocutionary charged utterances", being "possible only in modes other than those that are concerned in a straightforward way with the transmission of information." Undoubtedly, AAIs do not purport to convey information in a straightforward way. While their overall force seems to be that of an indefinite expression, their *raison d'être* is, I submit, precisely to veil information that may lead to the identification of the intended denotatum, by indicating or hinting at knowledge that certain individuals (most commonly, the speaker and/or the hearer) may (or may not) have. This can be seen by noting that AAIs are infelicitous unless they can be construed as pragmatically implying something about the state of knowledge of certain 'relevant' individuals. To illustrate, consider the (in)felicity of the following utterances in out-of-the-blue situations.

(13) a. Ed is marrying [I won't tell you **who**] next week.
    b.#Ed is marrying [Bill doesn't know **who**] next week.
(14)   Ed is marrying [#(even) God doesn't know **who**] next week.
(15)   Ed is marrying [Bill {#knows, KNOWS} **who**] next week.

(13a) transparently suggests that the speaker possesses the relevant information, and is unsurprisingly felicitous. (13b) does not obviously imply anything about anyone else's state of knowledge, and is thus infelicitous out-of-the-blue; however, if it is assumed that Bill is the speaker's only source of information about Ed's plans, (13b) becomes felicitous, in virtue of the pragmatic implication that the speaker doesn't know, either. Similarly, the reduced version of (14) is strange for the same reason that (13b) is, but the full version is felicitous, because *even* suggests that God is the most likely being to possess the relevant information, so that if He doesn't have it, the speaker doesn't have it, either. Finally, (15) is OK with emphatic stress on *knows* because it suggests a prior assumption that Bill doesn't know, and thus makes Bill's state of knowledge contextually relevant.

What is less clear is why ellipsis is the only option. In particular, it is not obvious that Hankamer's account of pragmatic control in VP-ellipsis can be generalized to account for the obligatoriness of ellipsis in AAI. For example, Hankamer observes that the reduced version of (16) can be naturally used by Mary if, e.g., John has just presented her with some extravagant gift, but not if, e.g., he has just used her hairbrush to stir paint, in which case the full version is the appropriate one.

(16) John, you shouldn't have (done that).

However, it also seems possible to use the full version of (16) in the former situation, in contrast to the full version of, say, (12), which seems to be robustly deviant in any kind of situation[4]. – Another fact which suggests that the ellipsis of AAIs is at least in part different from that found in the data addressed by Hankamer is that the latter appear to form a (relatively small) finite set (in fact, Hankamer proposes that expressions like *you shouldn't (have), don't, shall we,* etc., should be listed in the lexicon). In the case of AAIs, however, lexical listing does not appear to be an option, since not only the imaginable AAIs themselves, but even the wh-phrases they admit, seem to belong to an open set.

At the moment, I do not know whether the obligatory status of AAI ellipsis can be derived from something else or needs to be stipulated, and leave this as an open issue. But however this issue is

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[4] At the same time, the kind of pragmatic restriction noted by Hankamer in relation to (16) (and other VP-ellipsis remnants) appears to be shared by AAs, which tend to be used when veiling information is in some sense contextually important or surprising, rather than trivial and fully expected. For example, it would be strange to utter (i) if John regularly leaves his home at 8 am, if this is a perfectly normal time for going to work, if he has just done precisely that, and if the speaker has no intention of being ironical.

(i) John left [I won't tell you when].

ultimately resolved, I wish to note that the obligatory status of ellipsis provides an account of two of the puzzles noted earlier.

The first is the acceptability of data like (5), in which P-stranding seems to have occurred in a language that disallows it. If the sister of the wh-phrase is necessarily a base-generated null anaphor, P-stranding never has a chance to occur, and the interpretation of the anaphor is a purely semantic matter, which is presumably insensitive to language-specific syntactic constraints.

The second puzzle is the invariant matching effects in Case and category exhibited by AAIs, in contrast to the laxer effects found in FRs. Note that in FRs, there is an incontrovertible potential conflict between the requirements of the matrix and those of the relative clause, and individual languages typically deal with conflicts in different ways. But if the interrogative IP of AAIs is base-generated, there can be no comparable conflict, since the IP cannot possibly assign any categorial, Case, or other syntactic or semantic properties to the wh-phrase. Thus, the requirements of the matrix are the only ones that bear on the matter, hence, the invariant matching effects.

It remains to propose an analysis of the fact that matrix requirements affect the wh-phrase. As alluded to at the beginning of this essay, at least two approaches can be envisaged. One is to assume that AAIs have a null external head which obligatorily agrees with the wh-phrase; obligatory agreement makes sense, since the wh-phrase needs to be freely base-generated, and some constraints on the output of free generation is in general necessary in linguistic constructions. Another possible approach is to assume that the wh-phrase is grafted unto the matrix (this is what van Riemsdijk, to appear, suggests). This approach might seems to have an advantage over the preceding one in automatically imposing matrix requirements on the graft, which, in van Riemsdijk's view, is the token that gets 'pronounced.' However, this advantage is illusory, since grafting is also assumed for FRs, where the wh-phrase typically reflects the requirements of the subordinate clause (unless Case-Attraction applies). Furthermore, grafting also has empirical and conceptual disadvantages. In particular, sentences like (2b) constitute an empirical embarrassment, since Swiping is in general not allowed in *in-situ* wh-phrases, as illustrated in (17a) and (17b) (the latter, an 'examination-type' question).

(17) a.*Who spoke who with yesterday?
     b.*Napoleon shouted who at before the battle of Austerlitz?

Furthermore, grafting is in general not a conceptually innocuous device, *pace* van Riemsdijk (to appear), in that it can take place before the immediately containing phase is completed, and thus makes it in principle possible for the grammar to circumvent cyclic and island constraints on movement by resorting to an alternative grafting derivation (note that grafting is, in effect, nothing other than 'movement' out of the bi-dimensional containing tree). For these reasons, I favour the null-head approach over a grafting one.

As a parting shot, I wish to note that however one analyzes the external head of AAIs, the assumption that these constructions are complex XPs can shed light on an additional contrast between SSCs and AAIs. Thus, SSCs seem to tolerate multiple wh-phrases (at least in some languages and/or idiolects). Thus, a number of German speakers I consulted found both versions of (18a) acceptable (see also Merchant 2006, section 4.1). In contrast, the same speakers rejected the full version of (18b). If AAIs are complex XPs, such judgments are expected, since the XPs would need to have multiple heads, something that is in general disallowed.

(18) a. Er ist mit jemandem irgendwohin   gegangen, du wirst aber nie erraten
        he is with someone   somewhere-to gone   you will but never guess
        mit wem (wohin).
        with whom where-to
        'He went somewhere with someone, but you will never guess (where) with whom.'
     b. Er ist [du kannst dir einfach nicht vorstellen **mit wem** (*****wohin***)] gegangen.
        he is you can Self simply not   represent with whom where-to gone
        'He went [you can't even imagine (*where) with whom] (right now[5]).'

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[5] This parenthesized addendum, which is not part of the German version, might be necessary, in combination with the continuous prosodic contour noted above in the text, to bring out the deviance of the full version, that is to say, to prevent an irrelevant construal of the rightmost wh-phrase as an afterthought.

In conclusion, I hope to have eliminated at least some of the puzzles that surround AAs. However, a number of puzzles, or at least unsolved problems, remain. I conclude this brief essay by enumerating them.

A first issue on which a decision would be highly desirable is whether the obligatory status of AA ellipsis is derivable or not. If one concludes that the latter is correct, it will be necessary to make precise how exactly this property, together with other inherent properties of AAs (e.g., their special pragmatic requirements), can be formally represented in a maximally economical way.

A second issue concerns the fact that the conditions under which Swiping is allowed in AAIs seem to be precisely the conditions under which it is allowed in SSCs. It thus needs to be checked whether past accounts of Swiping can be extended to AAIs, given the assumption that the interrogative IP of AAIs is null from the outset, or whether the entire analysis of this process needs to be re-thought.

A third issue that needs to be addressed is the question of what exactly the semantics needs to say about AAIs; in particular, which aspects of their meaning concern the formal (compositional) semantics, and which are best left to the pragmatics.

I sincerely hope that this brief essay will stimulate renewed interest in these and other aspects of Lakoff's fascinating amalgams.

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E P I L O G U E
[subsequent to, and thus not part of, the Festschrift for Manfred Krifka]

I wish to offer some tentative conjectures concerning the puzzles noted in the conclusion to this essay.

Concerning the obligatory status of the ellipsis, two observations may shed light on this matter.

First, compare the two sub-cases of (19).

(19) a. Bob swallowed [I won't tell anybody **what**] on Sunday.
    b. Bob swallowed [I won't reveal **what** *to anybody (in this world)*] on Sunday.

(19a) can certainly function as an AA, but (19b) seems to be limited to an HA construal. Importantly, the interrogative IP is here fully elliptical, since the italicized constituent is a complement of *reveal*. This suggests that a condition for AA interpretation is that the wh-phrase be strictly final within the AA insert; if this is so, ellipsis is a necessary, albeit not a sufficient condition for AA status.

A second observation is that the following variant of (1) yields at best a sequence of independent sentences, but not one sentence with AAs.

(20) John invited [you'll never *guess* [_DP_ **how many people**]] [you can *imagine* [_PP_ **to what kind of a party**]] [it should *be obvious* [_PP_ **at which place**]] [God only *knows* [_PP_ **with what purpose in mind**]].

(20) differs from (1) in that the various inserts are not separated from each other by any elements of the matrix.

My first conjecture is that the inability of (19b) and (20) to sustain AA construals is traceable to a common source, namely, a need for AAs to be set off from the surrounding context with sufficient saliency, lest they should be construed as mere sentences (as HAs are). Elements of the matrix separating AAs from each other and final position (usually accompanied by stress) of the wh-phrase arguably serve this purpose. If this conjecture is on the right track, the obligatory status of ellipsis falls out as a necessary condition for satisfying the boundary-signaling requirement.

My second conjecture concerns the semantics of AAs. Under the null-headed analysis I suggested, it would seem that the wh-phrase should be locally bound by existential quantification in just the way interrogative wh-phrases in general are, and the matching null head should be independently bound by a (non-interrogative) existential operator.

The remaining 'puzzles' noted in the text are left open for the time being.