

Expanding the taxonomy of parenthetical 'as'-clauses

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Potts (2002) divides parenthetical *as*-clauses into those with a CP gap (1a) and those with a VP gap (1b). I argue that this distinction should be crossed with a second dimension of variation, *viz.*, whether the *as*-clause adjoins to a focus-marked constituent (the *host*). The test cases are *as*-clauses that premodify the focus-marked second conjunct of a DP coordination (2) (for conciseness, in what follows I only provide examples of CP gaps, but the argumentation extends to VP gaps). Note that, beyond necessarily bearing a pitch accent, the host may not be Given (3).

- (1) a. Ames was a spy, [as the FBI discovered [CP__]].
b. Ames stole secret documents, [as the FBI said he had [VP__]].
- (2) a. [DP Ames and, [as the FBI discovered [CP__]], [F BOONE]], were spies.
b. [DP Ames and, [as the FBI said he had [VP__]], [F BOONE]], stole secret documents.
- (3) A: What did Ames and Boone steal?
B: Ames and (*, [as the FBI suspected [__]],) [G Boone] stole [F secret Documents].

Data & problems: Conjunction-internal *as*-clauses exhibit many of the properties of regular *as*-clauses documented in Potts (2002): (i) there are island effects internal to the *as*-clause (4), which indicate movement of a null operator \emptyset ; (ii) there is a sisterhood effect, where the meaning of the gap is contingent on the meaning of the host (5); (iii) the gap corresponds to a propositional object, as it is licit in exclusively propositional positions (complement of *be aware*) and illicit in exclusively individual-type positions (complement of *be aware of*) (6); (iv) *as*-clauses are opaque to external operators (data not shown); and (v) they are truth-conditionally independent (data not shown). These parallelisms suggest a common analysis for both types.

- (4) a. * Durians are delicious, [as Nina spoke with a grocer who claimed [__]].
b. * Durians and, [as Nina spoke with a grocer who claimed [__]], [F YAMS] are delicious.
- (5) a. That space has four dimensions is widely known, [as they announced [__]].
As-clause = they announced that it's widely known that space has four dimensions.
As-clause \neq they announced that space has four dimensions.
b. Ames and, [as the FBI discovered [__]], [F BOONE] were spies.
As-clause = the FBI discovered that Boone was a spy.
As-clause \neq the FBI discovered that Ames and Boone were spies.
- (6) a. The Earth is round, [as we are well aware (* of) [__]].
b. The Earth and, [as we are well aware (* of) [__]], [F the MOON] are round.

Regular *as*-clauses (1a) are defined as containing a variable over propositions inside the complement P of *as*. The function of *as* (7) is to apply $P_{\langle(st)t\rangle}$ to the propositional host of adjunction $p_{\langle st \rangle}$: if $P(p)$ expresses a truth, the semantics of p is passed on unmodified. The other properties of *as*-clauses also follow from this analysis (see Potts 2002 for details).

$$(7) \text{ as}_{CP} = \lambda P \in D_{\langle(st)t\rangle} [\lambda p \in D_{\langle st \rangle} : P(p) \text{ is true } [p]] \quad [\text{Potts 2002:654}]$$

However, because (7) requires the host to be propositional, it can't be directly extended to (2a), where the host is an individual. Raising the host DP to a propositional type (Schein 1992) requires giving up compositionality entirely (Winter 2001). A reanalysis in terms of reduced clausal conjunction (so that the *as*-clause adjoins to an elliptical proposition) fails to predict that *as*-clauses pattern with DP conjunctions, and differently from clausal conjunctions, in their (i) ability to trigger cumulative plural agreement (8); (ii) collective/distributive ambiguity (9); (iii) binding/scope possibilities (data not shown); and (iv) DP-like distribution (data not shown).

- (8) a. Ames and, [as the FBI discovered [__]], [F BOONE] { \checkmark were spies / * was a spy }.
b. Ames { * were spies / \checkmark was a spy }, and Boone { * were (spies) / \checkmark was (a spy) } too.
- (9) a. Rudy and, [as Edna pointed out [__]], [F ALAN] lifted a piano. [\checkmark coll. / \checkmark distr.]
b. Rudy lifted a piano, and Alan did (lift a piano) too. [* coll. / \checkmark distr.]

Analysis The solution requires creating an individual variable in the *as*-clause, so that to enable composition with the individual host. This can't be done by extracting an $\langle e \rangle$ -type operator from within the gap, given that gaps are deep anaphors without internal structure (Potts 2002). Instead, I propose to exploit the fact that creation of the relevant variable requires an application of Predicate Abstraction (PA) independent from the one necessary to handle movement of \emptyset (Potts 2002). I model \emptyset as anaphoric to a salient discourse antecedent (typically the host clause, but not necessarily so: see (12)), crucially including the latter's focus-background articulation (here I use Structured Meanings, but nothing depends on this). If PA abstracts over the entire content of \emptyset , it creates a variable over propositions, and a regular *as*-clause obtains; but if it abstracts over just the focus component of \emptyset , it creates a variable over the type of the focus (in this case, individuals), and the *as*-clause can compose with an individual host. This application of PA is consistent with Heim and Kratzer's (1998) implementation, which only requires coindexation of the abstractor and the abstractee. Note that this derivation requires defining the separate lexical entry (11) for *as*, but this falls within Potts's limits of *as* polysemy: its first argument contains a variable over some type σ , and its second argument is itself of type σ .

(10) [as [Op_i the FBI discovered t_i]] = $\lambda q_{\langle e \rangle} : \text{discover}(\langle \lambda z.\text{spy}(z), q \rangle)(\text{FBI}) \text{ is true } [q]$

(11) $\text{as}_{DP} = \lambda Q \in D_{\langle et \rangle} [\lambda q \in D_{\langle e \rangle} : Q(q) \text{ is true } [q]]$

This analysis preserves Potts' characterization of *as*-clauses as partial identity functions, where the difference between the subtypes of *as*-clauses reduces to the kind of semantic objects that they are partial identity functions on (i.e., full propositions/properties vs. the foci thereof). It also preserves Potts' explanation of locality effects ((4), by movement of \emptyset), as well as sisterhood effects (5), opacity effects, and truth-conditional independence (which depend on *as*/*as_F* having lexical entries along the lines discussed above). Finally, the restriction of the gap to propositional positions follows from the propositional nature of \emptyset .

Extensions: Because \emptyset is anaphoric to a discourse antecedent, its Given content can be retrieved from a proposition other than the one that the *as*-clause is contained in, so long as it is sufficiently salient.

(12) *Context: Rudy and Alan are playing Trivial Pursuit; Edna overhears their conversation:*

R: Orthodox Jews can't wear garments that combine which two fabrics?

A: I know that wool is one of those fabrics, but I can't remember the other one.

E: (*leaning over to Alan*) Psst! The other fabric is [_F LInen]!

A: That's it! Orthodox Jews can't wear garments that combine wool and [as Edna just reminded me []], [_F LInen].

As-clause = Edna just reminded me that the other fabric is linen.

As-clause \neq Edna just reminded be that Orthodox Jews can't wear linen.

Additionally, since the type of the variable created by \emptyset depends on the focus of the antecedent proposition, the host of adjunction is not restricted to being a DP —cf. the adjectival host (13a), the VP host (13b), and the PP host (13c). Such examples require modifying (11) to accommodate hosts of different types, but this is still in well in line with the analysis defined above.

(13) a. This new and, [as Edna remarked []], [_F dIStURbing] report will ruin Ames' career.

b. Exercising regularly and, [as many doctors nowadays agree []], [_F eating a plant-based DIET] are essential components of a healthy lifestyle.

c. After lunch and [as Edna likes to point out []], [_F right before a SEMinar] are both good times to get a cup of strong coffee.

References Heim & Kratzer 98 *Semantics in Generative Grammar*, Blackwell Potts 02 The syntax and semantics of *as*-parentheticals. NLLT 20. Schein 92 Conjunction reduction redux. Ms., USC. Winter 01 *Flexibility principles in Boolean semantics*, MIT Press.