Talking about sources
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Adverbials like according to $X$, given $X$, in view of $X$ are traditionally considered guides to the intended flavor of modal expressions. Kratzer (henceforth K) notes that they fall into two classes depending on how $X$ (the *basis*) affects the interpretation of a matrix-clause modal. We develop a compositional account that builds on her insights but looks beyond the adverbials’ interaction with modals.

**Introducing sources.** The adverbials in (1) affect their main clauses differently (K 2012):

1. a. Given the article in the Hampshire Gazette, Mary must have been re-elected.
   
   ‘According to the article in the HG, Mary was reportedly re-elected.’ (German)

2. ...but I wouldn’t be surprised if she wasn’t. The Gazette always reads too much into exit polls.

K notes that (2) can follow (1b) but not (1a). She traces the difference to the conversational backgrounds introduced by the adverbials (and relevant for the modals): (1b) is true iff the article entails that Mary was re-elected; (1a) is true iff Mary was re-elected in all (normal) worlds containing a counterpart of the article (matching its content and origin). K suggests that adverbials like the one in (1b) (henceforth $A$-adverbials, AAs) contribute informational backgrounds suitable for reportative evidentials, whereas those as in (1a) ($G$-adverbials, GAs) contribute realistic backgrounds mapping each world $w$ to a set of propositions true at $w$; hence, (1a) does, and (1b) does not, commit the speaker to the article’s content. Building on K’s insights, we offer an analysis of AAs and GAs that takes into account (i) further contexts of use for GAs, (ii) the internal make-up of AAs and GAs, and (iii) different main clauses they occur in.

**Commitment reconsidered.** K 2012 claims that “an assertion of (1a) would commit [the speaker] to the truth of what the article says” (p. 21), so that “[the speaker] shouldn’t assert (1a) unless [they] believed the evidence for the Gazette report to be highly reliable” (p. 22). But this is just an implication that typically arises when the matrix prejacent is entailed by the article’s content. In fact, (1a) is true whenever (by the speaker’s lights) the article is grounds for the modal judgment in the main clause, for whatever reason. Suppose the Gazette’s editorial board is known to oppose Mary and the article (falsely) claims there to have been widespread voter fraud. If this constitutes good evidence that Mary was re-elected, (1a) is true and felicitous. Thus *pace* K’s claim about (1a) but in line with her observation that a report *qua* fact can serve as evidence “even if it is packed with lies” (p. 34), we conclude that (1a) commits the speaker to the matrix clause, but neither to the article’s content nor to its source’s being reliable.

**Internal make-up and main clauses.** AAs and GAs differ not only in how they impact modals when the basis names a repository of information (ROI – i.e., DP like the article/rumor or free relative like what $X$ said). First, they differ in what the *basis* can be and what readings they generate for it. (a) AAs but not GAs can have a proper noun as basis (according to John / *given John*). (b) Both can have non-ROI denoting definite descriptions as basis, but these are interpreted differently (given John’s lawyer ≈ ‘given who John’s lawyer is’ or ‘given that John has a lawyer’ vs. according to John’s lawyer ≈ ‘according to what John’s lawyer said’). (c) The basis for GAs but not AAs can be that-clauses, fact denoting expressions (given the fact that $p$ / *according to (the fact) that $p$*) and interrogatives (given who won the race / *according to who won the race*). The contrast between proper nouns and definite descriptions suggests that the basis-position of GAs (but not AAs) is intensional and similar to Concealed Questions (CQs, e.g. Heim, 1979; Frana, 2017):

- John told me {the president of Canada/#Justin Trudeau}.
- given {the president of C/#Trudeau}.

But GAs and CQs differ at least as follows: (i) CQs allow only for specification identity questions (Nathan, 2006), not existential polar questions (3) whereas GAs allow both (4); (ii) Quantifiers can be CQs but not GA bases (know {a/every/three/most} president(s) vs. *given {a/every/three/most} president(s)}; (iii) CQs don’t allow for fact-denoting nominals (*know the fact that*). Second, K assumes that AAs and GAs
introduce conversational backgrounds for (epistemic or evidential) modals, but both can occur without such modals. AAs can appear in plain declaratives (5), GAs in main clauses with root modals (6a), explicit performatives (6b), (slightly marginally) plain declaratives (6c), and non-declaratives (6d).

(5) According to Mary, John is home already.

AAs and GAs interact differently with matrix clauses, be they modalized or not.

(6a) ≈ If Mary has a certain income, which she does, her son has to pay the highest tuition.

(6c) ≈ If an article has the particular content and properties that this one does, she has lost her mind.

(6d) ≈ She took P_1, …, P_n (as we know); if she took these, what STD is she likely to have?

**Analysis.** We treat AAs as signaling the main-clause’s dependence on the content of the basis, modeled as universal quantification over worlds compatible with that content (7a). Overt reportative modals in the main clause can receive harmonic interpretations, similarly to those in speech reports and analyzeable along similar lines (e.g. Schenner 2008, K 2006, Moltmann t.a.; (7a) to be adjusted as needed):

(7) a. \[ \langle \text{according to } \rangle (x_e)(p_{(x,e)})(w) \text{ is defined only if } \text{Content}_w(x) \text{ is defined.} \]

\[ \text{If defined, it is true iff } \forall w' \in \text{Content}_w(x)[p(w')] \]

b. Peter behauptet dass Maria im Büro sein soll.

‘Peter claims that Mary in the office be modal.

‘Peter claims that Mary is in the office.’

GAs don’t affect speaker commitments to the main clause, but name a fact (denotational type associated with true propositions by Fact) that crucially motivates the associated speech act. Qua relevant fact, it is part of any realistic conversational background a matrix-clause modal may be sensitive to. In providing grounds for a speech act by the same speaker, GAs resemble relevance topics (also non-quantificational); however, their role is to offer (what the speaker considers) epistemic justification rather than to ensure coherence. We follow Repp’s (2011) account of relevance topics, modeling speech acts as operations on commitment states (Krifka 2014; (8a)). The parallel to if-clauses is due to their role as relevance topics in bictuss conditions (Ebert et al., 2014) and as modal-base restrictors in hypothetical conditions (K 2012). The basis can refer to a fact directly (the fact that), via a fact denoting complementizer (that_F as in factive predicates, Kip&Kip 1970; K 2006, Schueler 2016), or via shift from an individual concept as in CQs (e.g. Frana, 2017). Both shifters give rise to trivial meanings with constant individual concepts, predicting the infelicity of proper nouns as basis.

(8) a. \[ \langle \text{given} \rangle w' \lambda F_{\text{Fact}}.\lambda A_{\text{SpeechAct}}.\lambda s.\lambda s'.s' \in A(s) \& \text{Commit}_s(Speaking} (\text{EpistJustif}(F, A, s))(s') \]

b. \[ \langle \text{FACT1} \rangle w = \lambda f_{(s,e)}.\lambda F_{\text{Fact}} (F = \text{Fact}(A_{\text{w'}}, f(w) = f(w'))) \]

(c) \[ \langle \text{FACT2} \rangle w = \lambda f_{(s,e)}.\lambda F_{\text{Fact}} (F = \text{Fact}(A_{\text{w'}}, 3)(f'(w') = x)) \]

**Conclusion and outlook.** AAs and GAs interact differently with matrix clauses, be they modalized or not. GAs provide evidence that facts play a role not only at the sentential compositional level, but also at the level of discourse management. Investigating AAs vs. GAs also promises insights into richer evidential systems (e.g., Japanese: AAs require main clause marking with reportative soo da, GAs inferential yoo da).