CLAIM. Mirative evidentials encode a learning event (LE) in their *evidential* contribution, rather than illocutionary contribution, contra Rett & Murray (2013). Revising R&M's analysis along this line produces the correct empirical coverage: it explains mirative evidentials involving DIRECT and NON-VOLITIONAL EGOPHORIC evidence (Lhasa Tibetan), rather than just INDIRECT evidence, and it correctly predicts anti-mirativity for VOLITIONAL EGOPHORIC evidentials.

BACKGROUND. Two points about mirative evidentials are well-established: (i) as miratives, they mark the speaker's learning an unexpected proposition *p*, and (ii) as evidentials, they indicate evidence type. Aikhenvald (2004, ch.6) infers (i) as an "extension" of (ii) based on typological tendencies for evidentials marking "non-first-hand information" or "speaker's lack of control" to have mirative uses. Rett and Murray (2013) formalize the "non-first-hand information" tendency by identifying all mirative evidentials as INDIRECT (INFERENTIAL or REPORTATIVE) evidentials. The connection from (ii) to (i), then, is analyzed as the dual role of a set of speaker expectations E both as the INDIRECT evidential base and as the base for calculating the illocutionary E-FORCE (Rett 2011). E is restricted by an inferring or hearsay LE – at the illocutionary force level – to not include the learned proposition *p* at the time of the LE.

PROBLEMS. 1. R&M's analysis entirely misses mirative evidentials of the "speaker's lack of control" type, which in fact involve non-INDIRECT evidence types. In (1a), DIRECT (perceptual) evidence in Lhasa Tibetan is a strong mirative when used with the "origo" first person (cf. Garrett 2001). More strikingly, even an EGOPHORIC (cf. Garrett 2001, Floyd et al. 2018) evidential may be a strong mirative, if the evidential base is explicitly NON-VOLITIONAL (1b).

(1) a. Lhasa Tib.: DIR mirative[1]
   (Fumbles in pocket; finds money)
   *nga=la   dngul **'dug!**   / yod.*
   1SG=LOC money exist.**DIR**[2] exist.**EGO**
   'I have money (on me)! / I have money.'

  b. Lhasa Tib.: EGO-VOL mirative
   (Ate ice-cream and got sick yesterday;
   realizes the causal connection today)
   *nga.rang=gis nga na-pa   bzos **byung**!*
   I.myself=ERG 1SG be.ill-NM make EGO-VOL
   '(Gosh,) I made myself sick!'

It is unclear how R&M's expectation base E would relate the at-issue proposition to a DIR or EGO-VOL evidential base the way it relates to an INDIRECT evidential base.

2. Analyzing LE-encoding as part of the illocutionary force calculation incorrectly predicts that LEs will pattern with the mirative illocutionary force in not surviving tests for evidential propositions. LEs can participate in interrogative flip (2a), and it can be indirectly challenged but not directly challenged (2b) – both independently of mirative force.

(2) a. Lhasa Tib.: interrogative flip with LE
   (Sees, or saw earlier, the hearer fumbling for money)
   rang=la dngul 'dug   gas? / # yod   pas?
   2SG=LOC money exist.DIR   Q   exist.**EGO** Q
   '(Given that there is/was an LE of money-possession) Do you have money?'

  b. Lhasa Tib.: #direct challenge but ☺ indirect challenge with LE
   A: *nga=la   dngul 'dug.*
      1SG=LOG money exist.**DIR**
   A: 'I have money on me (as I found out).'
   B: *#mi 'dug.   dngul khyer yod-pa de rang snga.sa.nas ha.go.gi.yod.*
      NEG exist.**DIR** money bring PF-NM DEM 2SG from.early.on know.IMPFV.EGO
   B: (Intended) #'That's not true. You know all along that you've brought money.'

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[1] Emphatically, LE-encoding in (1a) is *not* a conversational implicature from a Quantity violation (contra Peterson 2010): it is contextually invariable, and no calculation of non-literal meaning from maxim flouting is felt to exist.
[2] This is in fact Rett and Murray's (2013) own example, where the evidential is incorrectly glossed as INDIRECT.

B: *ga.re byas song? dngul khyer dgos-pa de rang=gis dran.pa ma red pas?*
  what happen DIR.PFV money bring must-NM DEM 2SG=ERG remember.NM NEG COP Q
B: 'What's the matter? Wasn't it you who remembered to bring money?'

PROPOSAL. Mirative evidentials encode an LE as part of the *not-at-issue* evidential proposition, following Murray (2010, 2014). I revise R&M's semantics for mirative evidentials as in (3), proposing a learning event e_l during which the speaker's evidential base *EV* undergoes an update such that *EV* does not entail *p* before the LE but entails *p* after the LE.

(3) Revised semantics for mirative evidentials

a. *At-issue proposition*	p
b. *Not-at-issue restriction*[3]	$\exists e_{l.sp.}\ [\tau(e_{l,sp}) \leq t_{speech} \wedge$ $\forall t \leq \tau(e_{l,sp})\ [p \notin EV_{t,sp}] \wedge \forall t > \tau(e_{l,sp})\ [p \in EV_{t,sp}]]$ $\hfill e_{l,sp}$=spkr's learning event, $EV_{t,sp}$=spkr's ev. base at t
c. *Illocutionary relation*	Propose to add p to CG $\hfill E^t_{sp}$= speaker's $\tau(e_l) \subseteq RECENT(t_{speech}) \wedge \forall t \leq \tau(e_l)\ [p \notin E^t_{sp}]$ $\hfill$ expectations at t

EMPIRICAL DISCUSSION. 1. (3c) is present in mirative use and absent in non-mirative use. In the mirative, the LE in (3b) participates further in forming the mirative force; in non-mirative use, it nevertheless remains in the not-at-issue restriction. This successfully captures (2a-b).

2. R&M's expectation base *E* in (3c) is separated from the evidential base *EV* in (3b), which is not specified for evidence type. The only condition for (3b) to be satisfied is simply an update to *EV* during the LE that entails *p*. This eliminates the undesirable association of mirative evidentials with a particular evidence type. Moreover, a type-unspecified *EV* predicts a wider range of possibilities for *EV* to evolve over the LE:

(i) $EV_{t<\tau(LE)}$ and $EV_{t>\tau(LE)}$ involve different evidence types;
(ii) $EV_{t<\tau(LE)}$ and $EV_{t>\tau(LE)}$ involve the same evidence type, but the latter is enlarged due to the speaker's late mobilization of homo-typal evidence not in $EV_{t<\tau(LE)}$.

(i) subsumes INDIRECT mirative evidentials, as well as (1a): there, $EV_{t<\tau(LE)}$ involves a set of non-*p*-entailing EGOPHORIC evidence while $EV_{t>\tau(LE)}$ included a piece of *p*-entailing DIRECT evidence.

(1b) is a crucial overt realization of (ii): with differential lexicalization of NON-VOLITIONAL EGOPHORIC evidentials in Lhasa Tibetan, overtly marking a transitive, origo-first-person-subject sentence like (1b) with just the NON-VOLITIONAL subset of EGOPHORIC evidence allows $EV_{t<\tau(LE)}$ to undergo an update which mobilizes a piece of VOLITIONAL EGOPHORIC evidence ("I ate ice-cream yesterday, as I intended") and identifies as its result a piece of NON-VOLITIONAL EGOPHORIC evidence ("I got sick, as I felt the symptoms").

3. (3b) also predicts that VOLITIONAL EGOPHORIC evidentials should be anti-mirative. VOLITIONAL EGOPHORIC evidence ("I intend that *p*") always violates the existential condition for the LE condition because it is by nature learned as soon as the volition arises. Also, since volition is always prior to the actual event no matter the event time, anti-mirativity should hold regardless of the tense feature of the at-issue assertion. This prediction is borne out by Lhasa Tibetan (4).

(4) a. Lhasa Tib.: EGO+VOL anti-mirative
    (Realizes she broke the bowl afterward)
    # *nga=s phor.bo bcag**.pa.yin** /   bcag**.gi.yod**   /bcag**.gi.yin** !*
    1SG=ERG bowl break.PFV. EGO+VOL /break.PFV.EGO+VOL / break.PFV.EGO+VOL
    Intended: '(Gosh,) I broke/break/will break the bowl (as I intended)!'

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[3] This is in the same spirit as Koev's (2017) denotation for the Bulgarian evidential; my formulation here further reduces his *learn* to a *p*-entailing update to the evidential base EV at the time of the LE.

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