1 Introduction

The notion of mirativity refers to expressions of surprise or exceeded expectation. (i.e. DeLancey 1997; Peterson 2010; Rett 2011; Rett and Murray 2013)

Independent manifestations: express mirativity through dedicated means, e.g. prosody.

Dependent manifestations: express mirativity through linguistic markers that are also responsible for encoding other, seemingly unrelated functions.

Dependent mirativity common with evidentials (e.g., Turkish: Slobin and Aksu 1982; Peterson 2010).1

(1) Kemal gel-miş.
Kemal came.
Reading 1: The speaker sees Kemal’s coat hanging in the closet and infers he has arrived.
Reading 2: The speaker sees Kemal arrive but was not expecting for him to attend.

The English particle *like* shows a parallel polysemy between a mirative (2b) and hedging use (2a).

(2) a. They were like 20 dollars or something.2
b. I just realized I’ve been eating chips that are 5 months old but they’re like… really good.3

Proposal: Both uses of *like* widen the size of a contextually restricted set, admitting elements that were previously excluded.

Outline:

§2 Overview of the data
§3 Diagnosing mirative from hedging *like*
§4 Uniting these uses in a single proposal
§5 Situating mirative *like* in a broader context

2 Overview of the data

The hedging use indicates a lowered state of commitment to the exactness of the predicate: (Dinkin 2016; Shariﬁan and Malcom 2003; Siegel 2002; Jucker and Smith 1998; Schourup 1985)

(3) a. One of them was called *like* Prophecy or something like that. Jucker & Smith (1998: 186)
b. There’s a foreign boy in my group and he’s *like* European or something.4
c. They had *like* scraped her. D’Arcy (2007: 171)

Typical behavior of discourse particles: *like* modulates an aspect of the relationship between the speaker and the proposition, signaling that the speaker has a weakened degree of commitment to the assertion.

It has been suggested that *like* signals:

− “a possible minor nonequivalence of what is said and what is meant” (Schourup 1985: 42);
− “that the closeness of fit between the utterance and the thought it represents is looser than the hearer may otherwise have expected.” (Jucker and Smith 1998: 185); and
− “that the phrase it modifies is detached from commitment to a literal reading” (Dinkin 2017: 238).

The mirative use of *like* is undocumented, in contrast to its better-studied hedging use.

Commonly used when the speaker finds the embedded proposition surprising or unexpected.

(4) a. Never thought I would say this, but Lil Wayne, is *like*…smart.5
b. My friend I used to hang out with is *like*…rich now. WHOA!6
c. Whoa! I *like*…totally won again!7

Also occurs without any other markers of surprise:

(5) a. I just realized I’ve been eating chips that are 5 months but they’re *like*…really good8
b. not to alarm anyone but his hand is *like*…really fast.9
c. Yeah it was some dude who was a janitor at a school. Hes *like*…a millionaire now.10

The contribution of *like* closely resembles the one attributed to mirative evidentials in the literature:

− signalling a lack of “psychological preparation” on the part of the speaker (DeLancey 1997: 35);
− marking “a more or less spontaneous reaction to a new, salient, often surprising event” (Aikhenvald 2004: 197).

However! Mirative *like* is both speaker and hearer-oriented:

− the speaker must find the proposition surprising, and
− the speaker must believe that the hearer will also find p surprising.
First, *like*, but not an exclamative, is felicitous if the hearer will find *p* surprising.

(6) **Context**: Sue sees her old high school friend Bill pull up in a fancy car. Three weeks later she runs into John, who just got back to town after spending a month abroad. Sue has reason to believe that John has never seen Bill in his fancy car.
   a. Sue, to John: # (Wow,) Bill is rich now!
   b. Sue, to John: ✓ Bill is *like* ... rich now.

Second, *like* is infelicitous when the speaker knows that the hearer does not find *p* surprising.

(7) **Context**: John has long been telling Sue that their old high school friend Bill has become rich. Sue never believed him, though. One day, Bills pulls up in a fancy car in front of both of them.
   a. Sue, to John: ✓ (Wow,) Bill is rich now!
   b. Sue, to John: # Bill is *like* ... rich now.

Third, the mirative use of *like* is odd in contexts without an addressee, unlike other markers:

(8) **Context**: Sue is walking alone on the street and sees her old high school friend Bill pull up in a fancy car. Taken aback by what she sees, she utters:
   a. Sue, alone: ✓ (Wow,) Bill is rich now!
   b. Sue, alone: # Bill is *like* ... rich now.

⇒ The hearer-orientedness of the surprise effects conveyed by *like* will motivate an analysis that treats the particle as operating over the Common Set of the conversation, that is, a shared conversational space.

### 3 Diagnosing mirative from hedging *like*

They two uses share a core similarity: both are non-at-issue.

First, both hedging and mirative *like* fail to interact with logical operators such as negation or modals.

− similar to what has been observed for presuppositions and conventional implicatures
  
  (Potts 2005 among others)

(9) **Interaction with negation**
   a. Mary’s shoes didn’t cost, *like*, twenty dollars.
      
      **Intended**: # It is not the case that the speaker is hedging the claim that M’s shoes cost 20 dollars.
      **Intended**: ✓ It is not the case that M’s shoes cost twenty dollars, but the speaker is hedging this claim.
      
      Intended: # It is not the case that the friend they used to hang out with is no longer rich.
      **Intended**: ✓ It is not the case that the friend the speaker used to hang out with is rich, and the speaker is surprised.

Second, *like* cannot be challenged via direct denials, but only via constructions that question the felicity conditions of the utterance (e.g., ‘Hey, wait a minute!’ response, Shanon 1976; von Fintel 2004).

(10) **Interaction with negation**
   a. A: Mary’s shoes cost *like* twenty dollars.
      B: # No, that’s false! They cost exactly twenty. Why do you sound so tentative?
      B: ✓ Hey, wait a minute. They cost exactly twenty. Why do you sound so tentative?
   b. A: My friend I used to hang out with might be *like* ... rich now.
      B: # No, that’s false! This is very plausible.
      B: ✓ Hey, wait a minute. This is very plausible. Why do you suggest this is surprising?

⇒ Hedging and mirative *like* are not part of the at-issue content.

We now turn to the major differences between mirative and hedging *like*.

### 3.1 Prosodic differences

Hedging *like* does not present a specific intonational profile.

− Siegel (2002): can be surrounded by pauses, appositive-like.

− also possible to find cases in which hedging *like* is prosodically integrated.

Mirative *like* is necessarily followed by a longer pause, represented (henceforth) with ellipses.

⇒ While a hedging interpretation is normally available when *like* is prosodically integrated, a mirative reading becomes unavailable if there is no pause following *like*, as shown by the examples below.

(11) a. ✓ Mary’s shoes only cost, like, twenty dollars. ...Pause, hedging
    b. ✓ Mary’s shoes only cost *like* twenty dollars. ...Prosodically integrated, hedging

(12) a. ✓ My friend I used to hang out with is *like* ... rich now. ...Pause, mirative
    b. # My friend I used to hang out with is like ... rich now. ...Prosodically integrated, mirative

Representative examples from *Lambada* transcript of the Santa Barbara Corpus of Spoken American English (SBCSAE) (Bois et al. 2000).

Both utterances from a single speaker, from the same section of the transcript.

(13) **Context**: Miles is telling his friends about a recent experience at a dance club.
   a. ...but then *like ten minutes later* she and her friend are over at their table.
   b. ...twenty minutes later, they were kinda *like* .. all over each other.

In (13a), *like* is observed on its hedging use.

As (14) shows, its use is prosodically integrated:11

11Prosodic contours extracted using Praat (Boersma and Weenink 2017).
(14) ...but then like ten minutes later she and her friend are over at their table.

This can be contrasted with the mirative use in (13b), where like is followed by a long pause.

(15) ...twenty minutes later, they were kinda like .. all over each other.

3.2 Compatibility with other modifiers

Only mirative like is felicitous with markers that indicate full commitment to the proposition.

(16) a. # Mary’s shoes only cost like {totally/definitely} twenty dollars. Hedging

b. ✓ Whoa! I, like, totally won again! Mirative

3.3 Reportative predicates

In mirative uses, the surprise effect contributed by like must exclusively be ascribed to the speaker.

(17) a. John said that Mary’s shoes cost like twenty dollars. Anchor: ✓ John; ✓ Speaker

b. John said that his friend is like . . . rich now. Anchor: # John; ✓ Speaker

3.4 Truth-conditional effects

Hedging like can have an effect on the truth conditions of the sentence (Siegel 2002).

(18) A: Mary’s shoes only cost, like, twenty dollars. B: No, they cost 17 dollars. A: ✓ Well, I said like.

This is not true of mirative like:

(19) A: Whoa! My friend I used to hang out with is like . . . rich now. B: No! He isn’t actually that rich! A: # Well, I said like.

3.5 Illocutionary force

Mirative like is constrained by type of speech act:

(20) a. Imperatives

# Be like . . . smart now!

b. Questions

# Who is like . . . smart now?

Hedging like is not subject to the same restrictions:

(21) a. Bring me like 20 dollars!

b. How like much did the shoes cost?

3.6 Denial and contradiction

Mirative and hedging like engender different types of unacceptability when their content is denied (similar to indirect vs mirative evidentials in Cheyenne, Murray 2010).

(22) Contradiction

a. # It’s raining, and it’s not raining

b. # The shoes are like 20 dollars and they are exactly 20 dollars.

(23) Moore’s Paradox

a. # It’s raining, but I don’t believe it’s raining.

b. # My friend I used to hang out with is like . . . rich now, and this is not surprising.

<table>
<thead>
<tr>
<th>Use</th>
<th>Commitment markers</th>
<th>Shifts to Subj.</th>
<th>Affects TC</th>
<th>Quest/Imp</th>
<th>Denying produces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hedge</td>
<td>#</td>
<td>✓</td>
<td>Yes</td>
<td>✓</td>
<td>Contradiction</td>
</tr>
<tr>
<td>Mirative</td>
<td>✓</td>
<td>#</td>
<td>No</td>
<td>#</td>
<td>Moore’s Paradox</td>
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</table>
The two central questions:

- What is the common core shared by these two uses? → Section 4
- How does this core speak to other cases of dependent mirativity? → Section 5

4 Analysis

4.1 Hedging *like*: widening pragmatic halos

In a nutshell:

- Hedging *like* widens the halo of the expression it applies to (≈ Siegel 2002), increasing the acceptable degree of deviation from its literal meaning in a particular communicative situation.
- This mechanism derives the intuition that the speaker isn’t fully committed to the proposition.

The proposal:

- Most natural language expressions come with a pragmatic halo – a set of objects of the same denotation type, which differ only in “pragmatically ignorable” ways (Lasersohn 1999).
- Various authors have offered different perspectives on the proper treatment of halos (i.e. Krifka 2006; Sassoon and Zevakhina 2012; Lauer 2012).
- Today: Morzycki’s (2011) proposal to treat halos as sets of alternative denotations
- Halo members bear a context-dependent degree of resemblance to the original denotation.
- Resemblance modeled via a cross-categorial “approximativeness” relation ≈, which holds between two objects if they are similar to at least degree d in context C.

(24) a. \([\alpha]^{d,C} = \{\beta; \; \beta \approx_{d,C} \alpha\}\)
    b. \(\beta \approx_{d,C} \alpha\) iff, given the ordering imposed by the context C, \(\beta\) resembles \(\alpha\) to (at least) degree \(d\) and \(\alpha\) and \(\beta\) are of the same type.

Those shoes cost $20.

(26) a. Casual student: \([\$20]^{0.7,C} = \{\$17, \$18, \$19, \$20, \$21, \$22, \$23\}\)
    b. Frequent customer: \([\$20]^{0.9,C} = \{\$19, \$20, \$21\}\)
    c. Shop attendant: \([\$20]^{1.0,C} = \{\$20\}\)

(27) \([\text{like}]([\alpha]^{d,C}) = \{\beta; \; \beta \approx_{d,C} \alpha \land \alpha < \text{d} \}\)

- Similarity criterion: phonological resemblance to “Prophecy”

Similar to Siegel’s (2002) analysis. But halos assumed to be always there regardless of *like*.

(30) a. One of them was called like Prophecy or something like that.
    b. Similarity criterion: phonological resemblance to “Prophecy”

4.2 Mirative *like*: widening Context Sets

In a nutshell:

- *Like* operates over the Context Set of the conversation: the set of possible worlds that are considered by the speakers as candidates for the actual world.
- *Like* signals that worlds that were previously held out of consideration due to their outlandishness should instead be considered.
- The use of the particle facilitates acceptance of propositions that are likely to undergo scrutiny.

4.2.1 Preliminaries: Context Sets and Plausibility

Context Sets

- Conversation is a collective endeavor to discard candidate worlds that are not compatible with the current one.
- The Context Set (Stalnaker 1978, 2002): The worlds that are recognized by the speakers to be the candidates for the actual world
- Set of doxastic alternatives \(CS_{w,G}\), where \(G = \text{group of participants, and } w = \text{actual world}\)

(32) \(CS_{G,w} = \{w'; \; \text{it is compatible with what } G \text{ believe for } w' \text{ to be } w\}\)

Plausibility

- When reasoning about possible worlds, we tend to rule out outlandish worlds – that is, worlds that are very distant from the current one, even if they are in principle compatible with it.

(33) Alice: I want to go outside, but I don’t want to get wet.
    Bryan: You have to wear the raincoat.
    Alice: # No, I don’t have to. I could cover every inch of my skin in duct tape.

(34) a. At a Science Olympiad:
    In order to get the ball across this gap, we have to lay down a bridge. True
    b. At a Rube Goldberg device-building olympiad:
    In order to get the ball across this gap, we have to lay down a bridge. False

- The practice of excluding outlandish worlds is deeply engrained in communication.
4.2.3 Mirative

Like assertions can be represented through a multi-layered structure, which encodes two components:

1. ST, an operator that applies to two worlds \( v \) and \( w \) and returns the degree of stereotypicality of \( v \) given what we know in \( w \)
2. \( \theta \), representing the minimum threshold of stereotypicality that a world must have (with respect to the evaluation world) to count as plausible

\[
\text{CS}^0_{G,w} = \{ w' : (i) \text{ it is compatible with what } G \text{ believe in } w \text{ for } w \text{ to be } w' ; \\
(ii) \text{ ST}(w')(w) \geq \theta \}
\]

**4.2.2 Updating with outlandish worlds**

By accepting a proposition we eliminate assertions proposing counter-expectational updates are very likely to undergo special scrutiny before \( p \) becomes common knowledge.

For example: they trigger double-checking moves (Romero and Han 2004):

\[
\begin{align*}
\text{(41)} & \quad \text{a. Sue: My friend I used to hang out with is rich now.} \\
& \quad \text{b. Sue asserts } p. \\
& \quad \text{c. John accepts the assertion.} \\
& \quad \text{d. New state: } CS_0 = \{ w_11, w_22, w_33, w_44 \} \\
& \quad \text{0.1.} \\
& \quad G,w_1 = \{ w_11, w_22 \} \cap \{ w_33, w_44 \} = \emptyset \\
\end{align*}
\]

---

Outlandish assertion

\[
\begin{align*}
(38) & \quad p = \text{A friend that I used to hang out with is rich now.} \\
& \quad a. \quad p(w_{11}) = 1; \, \text{ST}(w)(w_{11}) = 0.08 \\
& \quad b. \quad p(w_{22}) = 1; \, \text{ST}(w)(w_{22}) = 0.07 \\
& \quad c. \quad p(w_{33}) = 0; \, \text{ST}(w)(w_{33}) = 0.7 \\
& \quad d. \quad p(w_{44}) = 0; \, \text{ST}(w)(w_{44}) = 0.8 \\
\end{align*}
\]

---

Imagine the following is true in \( w \): The person in question comes from a low-income family; they were very unsuccessful at school; they had a merely average work ethic; they were rather unambitious.

\[
\begin{align*}
(39) & \quad a. \quad p(w_{11}) = 1; \, \text{ST}(w)(w_{11}) = 0.08 \\
& \quad b. \quad p(w_{22}) = 1; \, \text{ST}(w)(w_{22}) = 0.07 \\
& \quad c. \quad p(w_{33}) = 0; \, \text{ST}(w)(w_{33}) = 0.7 \\
& \quad d. \quad p(w_{44}) = 0; \, \text{ST}(w)(w_{44}) = 0.8 \\
\end{align*}
\]

**4.2.3 Mirative Like: Addressing scrutiny, expanding Context Sets**

Assertions are functions that take a proposition and an input conversational state as argument, and return an output conversational state (Kritka 2001).

Assertions can be represented through a multi-layered structure, which encodes two components:

1. The proposition \( p \)
2. The illocutionary content, i.e. A proposal to add \( p \) to the CG.

\[
\begin{align*}
(42) & \quad \text{A friend that I used to hang out with is rich now.} \\
& \quad \text{\hspace{1cm} Input Proposition: } p = \lambda w. \text{“A friend \ldots rich now” is true in } w. \\
& \quad \text{\hspace{1cm} Input CS: } \text{CS}^0_{G,w} = \{ w' : \text{ST}(w')(w) \geq \theta \} \\
& \quad \text{\hspace{1cm} Illocutionary content: } \text{CS}^0_{G,w} \cap \{ p \} \\
& \quad \text{By using like, the speaker specifies that the } p-\text{update operation ought to be carried out not with respect to the Input CS, but to } CS^+. \\
& \quad a. \quad \text{CS}^0_{G,w} = \{ w': \text{ST}(w')(w) \geq \theta \} \\
& \quad b. \quad \text{CS}^+_{G,w} = \{ w': \text{ST}(w')(w) \geq \theta' \land \theta' < \theta \} \\
& \quad \text{Assertions modified by like make use of } CS^+ \text{ in the illocutionary proposal, as opposed to } CS. \\
\end{align*}
\]

\[
\begin{align*}
(43) & \quad \text{A friend that I used to hang out with is like\ldots rich now.} \\
& \quad \text{\hspace{1cm} Input Proposition: } p = \lambda w. \text{“A friend \ldots rich now” is true in } w. \\
& \quad \text{\hspace{1cm} Input CS: } \text{CS}^0_{G,w} = \{ w': \text{ST}(w')(w) \geq \theta \} \\
& \quad \text{\hspace{1cm} Expanded Input CS: } \text{CS}^+_{G,w} = \{ w': \text{ST}(w')(w) \geq \theta' \land \theta' < \theta \} \\
& \quad \text{\hspace{1cm} Illocutionary content: } \text{CS}^+_{G,w} \cap \{ p \} \\
\end{align*}
\]
This move crucially puts the listener in a better condition to accept the proposal.

- **Compositionally**: It expands the pool of candidate worlds, ensuring that the worlds in which \( p \) is true are in contention.
- **Pragmatically**: It speaks to the speaker’s cooperativeness, showing that they are willing to go our of their way to make sure that the update goes through.
- Regardless of *like*, whether the proposal is accepted is up to the addressee

Two final observations:
- The association between *like* and surprise is indirect.
- By targeting a *shared* space in the conversation the effect of particle crucially involves both inter-locutors (→ hearer-oriented effects).

### 4.3 The common core behind hedging and mirative effects

In both uses, *like* expands a pragmatically restricted set.

- **Hedging use**: a Halo
- **Mirative use**: a Context Set

Different effects grounded in the interaction between widening and the such a set.

- Expanding Halos → More distant denotations considered → Hedging + Weakening
- Expanding Context Sets → More distant worlds considered → Surprise + Strengthening

Open question: how does the hedging/mirative polysemy of *like* relate to the the other pragmatic and syntactic functions that this form can have in English?

- D’Arcy (2005): as many as nine separate functions, including:
  
  \[ (44) \]
  
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<tbody>
<tr>
<td>a. Mary feels <em>like</em> she’s going to succeed.</td>
<td>conjunction</td>
<td></td>
</tr>
<tr>
<td>b. The doll was child-<em>like</em>.</td>
<td>suffix</td>
<td></td>
</tr>
<tr>
<td>c. Mary was <em>like</em>, “why not?”</td>
<td>quotative complementizer</td>
<td></td>
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</tbody>
</table>

The notion of relaxing a standard of similarity seems to be relevant to these uses (see also use of *like* in similitatives, Rett 2013):

- Similarity between two individuals for the conjunction use,
- Similarity between two adjectives for the suffixal use,
- Similarity between two speech events for the quotative use (see Davidson 2015)

### 5 Mirativity: the cross-linguistic picture

What semantic/pragmatic property(ies) construe(s) *like* and narrative/indirect evidentials as a suitable natural class for the expression of speaker’s surprise?

Difficult to directly compare Rett & Murray 2013’s proposal with *like*.

However, two commonalities:

- In both cases, mirativity arises through a structurally similar mechanism to the one that yielded the other reading.
- In both accounts mirativity is modeled as a speech act phenomenon.
  \[ \rightarrow \text{Is mirativity inherently encoded at the illocutionary level?} \]

More general pattern: in both hedging *like* and indirect evidentials the speaker leaves open the possibility that things might be otherwise.

Both hedging and indirect evidentiality leave room for a \( \neg p \) option that would have been instead unavailable in the case of non-hedged statements or assertions backed up by direct evidence.

Notably, the underlying presence of a \( \neg p \) option is also present in the expression of surprise.

- Backer (1970), cited in Giannakidou and Mari 2016: “we say that a certain fact is odd or strange if it seems counter to our view of what is logical.”
- Variety of proposals that explore the link between surprise and negation (Giorgi and Pianesi 1997; Giannakidou 2015; Giannakidou and Mari 2016).\(^{12}\)

**Emerging generalization:**

- Constructions that independently leave room for \( \neg p \) worlds are suitable linguistic forms to express the category of mirativity;
- The specific semantic/pragmatic mechanism through which surprise is expressed depends on how each form makes \( \neg p \) available.

Subjunctive mood in Italian: lack of commitment to the (public) truth of \( p \), or scope of predicates that express emotion/surprise (Mari 2016; Giannakidou and Mari 2016).

### 6 Conclusion

In this talk, we’ve aimed to:

- shed light on a previously undocumented use of *like* as a mirative particle.
- show that mirative and hedging effects share common reference to a set widening operation.
- raise a number of issues that could improve our understanding of how surprise is linguistically conveyed and encoded across a wide variety of different languages and constructions.

**References**


\[^{12}\]Crucially, the association of surprise with a negative proposition is empirically substantiated by several independent properties, e.g. NPI licensing. See Giannakidou (1999) for further discussion.
von Fintel, K. (2004). Would you believe it? The King of France is back! (Presuppositions and truth-Syntax and Semantics: 9
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Slobin, D. and A. Aksu (1982). Tense, aspect and modality in the use of the turkish evidential. In 
Slobin, D. and A. Aksu (1982). Tense, aspect and modality in the use of the turkish evidential. In 