

Change in the syntax and semantics of *be like* quotatives

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1. Introduction

This paper focuses on change in the syntax and event semantics of *be like* quotative constructions, as illustrated in (1).

- (1) Aaron was like “Ok, fine.”
a. ‘Aaron thought/felt like saying “Ok, fine.”’
b. ‘Aaron said, “Ok, fine.”’

Be like as an introducer of quoted speech is innovative in many contemporary varieties of English. Recent corpus-based work on *be like* has suggested that as it has continued to spread, it has undergone syntactic and semantic change: *be like* predicates, originally used exclusively to describe states of individuals via reported thought as in (1a), have taken on an additional guise as descriptors of saying events as in (1b) (Tagliamonte & Hudson 1999, Buchstaller 2004). This paper reports on two judgement experiments with speakers of American English intended to further explore claims of syntactic and semantic change in *be like* quotatives. Our experimental results suggest that the direct speech and reported thought readings of *be like* are diffusing into American English at a similar rate. From the perspective of Kroch’s (1989) seminal constant rate proposal, this result is consistent with a view of these two guises of *be like* as different environments in a single abstract process of change. In particular, we relate the ambiguity between direct speech and reported thought *be like* in (1) to the availability of copula *be* in active contexts as in (2) and (3) (Partee 1977, Dowty 1979, Parsons 1990, Rothstein 1999).

- (2) John forced him to be quiet.
(3) Jane is being polite.

We extend Rothstein’s (1999) proposal for adjectival predicates under copula *be* to the variation between reported thought and direct speech interpretations of *be like* quotatives in (1a) and (1b) respectively. In particular, we propose that copula *be* always selects for an adjectival (stative) argument, and that the availability of eventive readings as in (1b), (2) and (3) is attributable to a semantic coercion mechanismⁱ, akin to operations that make count readings out of mass nouns in the nominal domain. Adapting Haddican and Zweig’s (2012) analysis of *be like* quotatives, we furthermore argue that a range of exceptional properties of *be like* as a quote introducer in English reflect the presence of a null *something* quantifier in such constructions, as originally suggested by Kayne (2007). In describing the relationship between tense and agreement morphology and event semantic interpretation as cues to the phonetically null lexical material involved to this change, our

analysis contributes to theme of this volume, focussing on the interaction of these phenomena in syntactic change.

The paper is organised as follows. In section two, we report on an experiment to measure the correlation between speaker age and acceptability of eventive and stative interpretations of *be like*. Section three describes a second experiment that examines main verb properties of the *be* in *be like* constructions. Section four develops a syntactic and semantic analysis of innovative uses of *be like*. In section five, we discuss the evolution of agentive, direct speech interpretations of *be like* quotatives.

2. Experiment 1: Direct speech and reported thought interpretations of *be like* quotatives

Be like as an introducer of quotes was first described in diachronic and sociolinguistic literature on American English in the 1980's and since has been reported in many other varieties of English worldwide (Blyth, Recktenwald and Wang 1990, Macaulay 2001, Cukor-Avila 2002, Buchstaller & D'Arcy 2009, Bakht 2010). Early work on *be like* described it not as an introducer of direct speech, but rather exclusively as an introducer of reported thought (Butters 1982). Much subsequent corpus-based work on *be like* however has reported that quotes introduced by *be like* can describe not just states of individuals as in (1a), but also saying eventualities as in (1b). A disadvantage of usage corpora for analysing semantic variation of this kind is that the speaker's intended reading can be difficult to identify from the speech context. The following discussion therefore describes an experiment, first reported on in Durham et al. (2012), that is intended to examine cross-speaker differences in the availability of speech and non-speech readings of *be like* using a different technique, a controlled judgement experiment, that compares acceptability scores across conditions contextually biasing these different readings.

2.1 Method.

Subjects. The participants were 121 self-described native speakers of American English aged 18-73 (M=31.3, SD=11.6)—71 women and 50 men. All had at least some university education. Participants were recruited online through the contacts of the researchers and were not paid for their participation.

Materials. The experiment examined acceptability of matched *be like* and *say* sentences in six environments. First, we created a baseline context with no stativity/eventivity bias, as in (1). To compare acceptability of *be like* and *say* with eventive readings, we used four additional constructions, standardly used to bias such readings —progressives, imperatives, *force...to* complements, and pseudoclefts with *do*. All are contexts in which eventive predicates are fine, but true states are poor (Dowty

1979). We illustrate this in (4)-(7), which compare stative *have* \$100 with eventive *spend* \$100 in each environment.

- (4) She was *having \$100/spending \$100. (progressives)
- (5) Just *have \$100/spend \$100. (imperatives)
- (6) Tim forced him to *have \$100/spend \$100. (*force...to*)
- (7) What she needs to do is *have \$100/spend \$100. (*do* pseudoclefts)

We used these four environments to compare acceptability of direct-speech and eventive readings of *be like* and *say*, as illustrated in (8)-(11).

- (8) She was being like/saying, “They’re coming tomorrow at 11:00” (progressives)
- (9) Just be like/say, “They won't ever do it.” (imperatives)
- (10) Tim forced him to say/be like, “Fine, I'll do it next week.” (*force...to*)
- (11) What she needs to do is say/be like, “John already quit.” (*do* pseudoclefts)

Finally, to compare acceptability of *be like* vs. *say* in contexts biasing non-speech readings, we used *for*-adverbial phrases. As illustrated in (12), temporal *for* phrases are fine with atelic predicates in simple tenses but poor with eventives (Dowty 1979).

- (12) For an hour, Mark had \$100/*spent \$100. (*for* adverbials)

We therefore used such contexts to diagnose the availability of stative, non-speech interpretations of *be like* and *say* quotative predicates, as in (13).

- (13) For an hour, Mark was like/said, “Let's go to McDonald's” (*for* adverbials)

Two lexicalisations were created for each of the above six environment, each assigned either to a *be like* or *say* condition, yielding two lists. Each participant therefore saw each of the above 12 conditions once. Subjects were randomly assigned to lists, and a unique random order of the 12 test sentences and 18 fillers was created for each subject by the software used.

Procedure. The data were gathered in the summer of 2009, through a self-paced web-based, magnitude estimation procedure using WebExp2. In linguistic magnitude estimation experiments, subjects judge stimulus sentences not on an abstract n-point scale but rather in relation to a non-zero score arbitrarily assigned to a benchmark (“modulus”) sentence (Bard et al. 1996). If a participant judges an item to be twice as acceptable as the benchmark sentence, he/she gives it twice the benchmark score; if it is half as acceptable, half the benchmark score, and so on. In

the present experiment, the benchmark sentence used was that in (14), which native speakers of English typically find to be of intermediate acceptability.

(14) I wouldn't give to the boy the difficult puzzle.

Raw scores were normalised by dividing them by the benchmark score. The base-10 logarithm of these normalized values was then taken in order to make data normally distributed and suitable for parametric tests. In the following results, we report these log-transformed values.

2.2. Results.

To examine the effect of speaker age on acceptability scores, we fit mixed-effect linear models for each condition using the `lme4` package for R (Bates and Maechler 2010). The dependent variables were log-transformed values for each condition, with age and verb as fixed effects and subject and item as random effects. P-values were simulated by Markov chain Monte Carlo (MCMC) sampling (10,000 samples) using the `LanguageR` package for R (Baayen 2006, 2010). The results are summarized in Figure 1, which plots *say* and *be like* scores by subject age for each condition. The p-values reported in each plot are for the age*verb (*be like* vs. *say*) interaction. Zero on the y-axis on these plots corresponds to the modulus score. Scores above zero on each of these plots therefore corresponds to a judgement higher than that for (14), and scores below zero reflect lower judgements.

[Figure 1 here]

The plots in Figure 1 show that while the *say-be like* gap increases with age across these conditions, the age*verb interaction reaches significance at $\alpha=.05$ only for three environments: the baseline context; pseudoclefts and imperatives; the interaction for *force...to* complements is suggestive at $p=.052$. For *for*-adverbials there is no interaction between age and verb, and in fact no main effect for verb. These judgement data therefore align only partially with corpus data suggesting diffusion of *be like* in direct speech and non-speech contexts. The absence of more consistent age effects in these data may be partially attributable to the fact that our sample is relatively youthful, with a mean age of 31.1. These age effects are in any case orthogonal to the main focus of this study, and we set them aside in the following discussion.

In addition, the plots in Figure 1 show that acceptability of *be like* is particularly high among younger speakers. For speakers around 25 or younger, acceptability of *be like* is close to that for *say* across these conditions. We examine further the data from younger speakers, using models for each of the above six contexts, with data from only under-26-year-olds in the sample ($n=50$). As in the models just described, the dependent variables were the log-transformed acceptability scores, with fixed effect

verb and random effects item and subject. The analyses revealed no significant main effects for verb in any of the six conditions. These results are summarized in Figure 2, which shows MCMC-estimated confidence intervals for *say* and *be like* sentences; MCMC-estimated p-values for the verb factor appear below the error bars for each condition.

[Figure 2 here]

Figure 2 shows no significant main effect for verb for any of the six conditions, indicating that *be like* in these environments is on a par with counterpart *say* sentences for younger speakers.

A final important result concerns the similarity in the age slopes for *be like* in the atelic-biased *for* condition and eventive-biased conditions in Figure 1. Linear mixed effect models revealed no significant interaction between age and condition for any of the four comparisons.ⁱⁱ These findings are in keeping with corpus results, which generally converge in suggesting a constancy in the effect of the speech/non-speech contrast in this process of change (Cukor-Avila 2001, Tagliamonte & D’Arcy 2007, Buchstaller & D’Arcy 2009, Durham et al. 2012).

The parallel diffusion of the two interpretations of *be like* in Figure 1 is consistent with an approach that treats their diffusion as a single abstract process of change. Work by Kroch and colleagues of the last two decades on patterns of variation in historical corpus data has suggested that for any single abstract process of syntactic change, contextual effects are typically stable over time—an effect that Kroch calls the *constant rate effect* (Kroch 1989, 1994; see also Pintzuk 1991, Santorini 1992, Freuhwald et al 2009). Kroch (1989) explains this effect in terms of individuals’ language-independent faculty for learning frequencies of experienced events. As learners acquire a given set of forms in variation they will also infer propensities of use of variants in different contexts. In the normal course of events, contextual effects will therefore be propagated across generations of speakers, all other things being equal. Sometimes, a given variant may acquire a new kind social or pragmatic meaning, which may lead to change in contextual effects across time, but the historical corpus-based literature suggests that this is atypical (Kroch 1989). From the perspective of this literature, the present experimental results are therefore consistent with a view of the diffusion these two guises of *be like* as different contexts in a single abstract process of grammatical change. We spell out the syntactic reanalysis in section 4 below.

To summarise, the experimental results so far support two main conclusions about the syntax and semantics of *be like* quotatives. First, younger speakers in the sample accept *be like* readily in environments biasing both eventive direct speech and stative non-speech interpretations. For all six conditions, younger subjects accept *be like* on a par with *say*. As eventive, direct-speech *be like* has entered the grammar, it therefore appears not to have displaced the stative variant of *be like*; rather both interpretations are available for the younger speakers who use and

accept *be like* to the greatest extent. Second, the data support corpus evidence suggesting that stative and eventive guises of *be like* are diffusing at the same rate. These facts are consistent with a view of these two variants as involved in a single underlying change in the grammar.

3. Experiment 2: *Be like* and verb movement

The data in the previous section support evidence from corpus studies indicating that for many younger speakers of English, a speech event interpretation of *be like* quotatives is readily available. In this section, we consider a second set of experimental data intended to test one formal approach to these facts.

In many contemporary approaches to agentivity, change-of-state meaning is associated with a functional head merged low in the functional sequence of the clause, above the main verb (Chomsky 1995, Kratzer 1996). From the perspective of these approaches, one possible account of the variation between eventive and stative *be* in *be like* sentences is in terms of their categorial status and merged position in the functional sequence. The *be* in stative *be like* contexts, on this account, will be a garden-variety copula, merged in a designated copula projection or as a modal or tense head (Schütze 2004) as in (15).

(15) [TP *be* [PrtP *like* [QUOTE]]]

By contrast, *be* in eventive contexts will be merged as a main verb low in the functional sequence as in (16).

(16) [TP [VP *be*_{[[SAY]]} [PrtP *like* [QUOTE]]]]

This approach predicts that the *be* of *be like* in eventive contexts will be un-auxiliary-like on standard diagnostics. One such test involves subject auxiliary inversion (SAI), which in contemporary English is restricted to modals and auxiliaries. As illustrated in (17), inversion of the subject with the main verb *ate* is bad; *do-support* is required instead, as in (18).

(17) *Ate you a cucumber?

(18) Did you eat a cucumber?

If the *be* of *be like* is a main verb of the familiar sort, then *ceteris paribus*, we expect *be* to be poor in SAI on eventive interpretations on a par with other main verbs. In contrast, if *be* in stative contexts is an auxiliary we expect it to be acceptable.

A second standard diagnostic of main-verb-hood concerns placement of VP adverbs like *quickly*, which never appear to the left of modals/auxiliaries, but can appear to their right (Jackendoff 1972).

(19) *George quickly was finishing his dinner. (*quickly*-Aux)

(20) George was quickly finishing his dinner. (*Aux-quickly*)

Main verbs, on the other hand, happily take *quickly*-type adverbs to their left, but not to their right, as shown in (21) and (22).

(21) Jeremy quickly ate his soup. (*quickly-V*)
 (22) *Jeremy ate quickly the soup (*V-quickly*)

In the following sections we describe an experiment intended to test these predictions.

3.1 Method

Subjects. Participants were 50 volunteer undergraduates and staff at CUNY and NYU, 37 women and 13 men, aged 18-39 ($M=20.3$, $SD=3.19$). All were self-described speakers of American English.

Materials. The experiment consisted of two subdesigns, one focusing on SAI and the second focusing on adverb placement. The SAI subdesign crossed two factors, each with two levels: verb movement, with levels inversion (a *yes/no* question) and non-inversion (a declarative); and quotative verb, with levels *say* and *be like*. The *say* sentences are included as a control condition: in order to test whether *be like* is degraded in inversion vs. non-inversion contexts, we compare the effect of this contrast with that for *say* as a quotative verb with more familiar main-verb syntax. To bias a speech event interpretation for *be like*, each test sentence included an adverbial felicitous with a direct speech reading but not non-speech/thought readings, e.g. *twice in a row*, *in five seconds flat* etc. This design is summarized in table 1 below.

Table 1: SAI subdesign design

	SAI	\neg SAI
Say	Did she say, “shut up” twice in a row?	She said, “shut up” twice in a row.
Be like	Was she like, “shut up” twice in a row?	She was like, “shut up” twice in a row.

Four lexicalizations were created for each cell and assigned to one of four test groups by Latin square. Each subject therefore judged each condition once.

The adverb placement subdesign was similar in design, crossing two factors: verb-adverb order with levels V-adverb and adverb-V; and quotative verb with levels *say* and *be like*. This design is illustrated in Table 2 below.

Table 2: Adverb placement subdesign design

	V-Quickly	Quickly-V
Say	She said quickly, “shut up” twice in a row.	She quickly said, “shut up” twice in a row.
Be	She was quickly like,	She quickly was like, “shut

like	“shut up” twice in a row.	up” twice in a row.
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Four lexicalizations were created for each cell and assigned to lists by Latin square. Each subject therefore judged each condition once. These sentences together with the four experimental sentences from the SAI subdesign were pseudo-randomized together with 12 fillers.

Procedure. The testing procedure was similar to that for experiment 1. The data were gathered through a self-paced online magnitude estimation procedure using WebExp2 in the autumn of 2010. The benchmark sentence used was (14), the same used in experiment 1. After giving consent to participate, subjects were asked to provide some background information, including age, sex, highest level of education completed and hometown. Subjects were then introduced to the magnitude estimation procedure, and then given two sets of slides providing practice in applying this technique. In the first set, subjects used magnitude estimation to measure lengths of lines; the second set provided sample sentences to judge. The experimental phase followed, which subjects typically completed in between five and ten minutes. As with the data from section 2, we report normalized, log-transformed values following Bard et al.’s (1996) procedure.

3.2 Results

Subject-Aux inversion. The effects of verb and verb movement interaction were measured by fitting mixed effects linear models, with log-transformed acceptability scores as the dependent variable, verb and verb movement as fixed effects and item and subject as random effects. P-values were again simulated using MCMC sampling (10,000 samples) using the languageR package.

The analysis revealed no significant main effect for verb ($p=.085$) or verb movement ($p=.200$), and no significant interaction between these factors ($p=.364$). We illustrate these results in Figure 3, which plots the partial effects of the above model with 95% highest posterior density credible intervals for our four conditions: *be like* and *say* sentences in (SAI) yes/no questions and (non-SAI) declaratives.

[figure 3 here]

Figure 3 shows that aggregate scores for *be like* and *say* in non-SAI contexts are near identical. Scores for *be like* are somewhat degraded on the SAI condition, but this difference is not significant at $\alpha=.05$. These results, therefore, provide no support for a difference in behaviour between *be like* and *say* in terms of SAI. The fact that movement of inflected *be* to the left periphery is on a par with that for *do*, in the *say* condition suggests that for this sample the *be* of *be like* in speech event contexts is not particularly main-verb-like in SAI-triggering contexts.

Adverb placement. A mixed-effect linear model revealed no significant main effect for verb-adverb order ($p=.245$), but a significant main effect for verb ($p=.001$), and a significant

interaction for verb and adverb-verb order ($p=.047$). These results are illustrated in Figure 4, below, which show partial effects for the above model with 95% highest posterior density credible intervals.

[Figure4 here]

The interaction shown in Figure 4 is what we expect if the *be* of *be like*, unlike *say* is not a lexical verb but rather sits higher in the clause. These results, along with the SAI data summarized in Figure 2, therefore, suggest little support for a “main verb” *be* approach. In the discussion below, we develop an approach to the syntax/semantics of *be like* that takes *be* in such constructions to be a garden-variety copula.

In the previous sections, we have seen experimental evidence for the existence of both eventive and stative readings of *be like*. We have also seen evidence that, perhaps surprisingly, *be* acts as a copula under both readings, among younger speakers. In the remaining discussion, we review one approach to ambiguity between stative and eventive interpretations of *be like* by Haddican and Zweig (2012), before discussing the evolution of *be like*.

4. The syntax and semantics of *be like*

In the previous sections, we have seen experimental evidence for the existence of both eventive and stative readings for *be like*. We have also seen evidence that, perhaps surprisingly, *be* acts as a copula under both readings. A natural starting point for an analysis, then, is to relate quotative *be like* to other cases where copula *be* can display eventive readings. In this section we summarize one such approach to these facts by Haddican and Zweig (2012), which we use in modelling the syntactic evolution of *be like* discussed above.

Haddican and Zweig’s proposal departs from the well-known fact that copula *be*, while typically characterized as a stative verb, can take eventive readings in certain contexts, such as (23).

(23) John is being silly.

The first *be* in (23) is the auxiliary form that precedes V+*ing* forms in progressives. The second, which appears in progressive form, is notable in that while it selects an adjective, the overall meaning imparted is not stative, but rather active. Parsons (1990) called this guise of *be* “*be* of activity”. Such uses of *be* are typically discussed in relation to progressive contexts like (23), however as Rothstein (1999) discusses in detail, *be* of activity appears also appear in other contexts such several other contexts as well including object control constructions like (24). This sentence is ambiguous between a stative reading where Mary asked John to adopt a new characteristic, and an eventive reading where she requested that he act in a silly manner:

(24) Mary asked John to be silly.

Early accounts of the *be* of activity (Partee 1977, Dowty 1979, Parsons 1990) proposed that it is a case of lexical ambiguity, wherein English has a lexical item *be* that means something like *act*. However, Rothstein (1999) argues that this account is untenable, and proposes instead an account that argues that there is a single *be* in English. The function of *be*, in Rothstein's view, is to take the meaning of an adjective phrase, which is a property of states, and repackage it into a Davidsonian eventuality argument. In most contexts, this argument itself will be stative, so the purpose of the repackaging will be to convert a general stative property to a particular one; in (25) below, it converts the property of silliness to John's particular silliness:

(25) John is silly.

However, when there are other cues to the nature of the eventuality – for example, a progressive aspect as in (23) above or an embedded *be* as in (24), the process can result in an eventive reading for the adjective phraseⁱⁱⁱ. While there are important differences between *be like* and the data discussed in the majority of the *be* of activity literature – the main one being that the *like*-quotative argument of *be* is not an adjective phrase – Rothstein's proposal provides an important component to understanding the change involved in the meaning of *be like*, as it shows that a single *be* can generate both eventive and stative readings from the same argument. Below we discuss the emergence of these meanings

Our syntax for *be like* quotatives will need to accommodate the semantic proposal just presented along with several other properties that distinguish *be like* from other English quote introducers as discussed in Haddican and Zweig (2012). First, as noted above, *be like* differs from *say*-type verbs in that cannot introduce indirect speech, as shown in (26) and (27).

(26) *John was like that he was hungry.

(27) John said that he was hungry.

Second, as noted by Flagg (2007), *be like* differs from *say* in that when a quote introduced by *be like* is questioned, the question word cannot extract. The question in (28), for example, is fine on an interpretation where the questioner is asking about some salient state of Aaron, but not to ask what Aaron said. *Say* in quotative contexts shows no such opacity to *wh*-extraction, as shown in (29).

(28) What was Aaron like?

a. * 'What did Aaron say?'

b. OK: 'What was Aaron's state?'

(29) What did Aaron say?

Third, as Flagg (2007) notes, *be like* also differs from *say*,

in that a quote introduced by *be like* cannot raise (Flagg 2007). Examples (30) and (31) illustrate the well-known fact that quotes can precede *say* with or without an inverted subject (Collins 1997, Suñer 2000).

(30) “Shut up,” Aaron said.

(31) “Shut up,” said Aaron.

Be like quotatives on the other hand never allow quote raising with or without inversion, as shown in (32) and (33).

(32) *“Shut up,” Aaron was like.

(33) *“Shut up,” was like Aaron.

Fourth and finally, unlike quotative sentences with *say*, *be like* quotatives on a direct speech interpretation are most naturally interpreted not as reporting a verbatim quote, but rather a close paraphrase (Buchstaller 2004:111). We illustrate this difference in (34) and (35). (34 a,b) show that quotatives with *say* are felicitously preceded with phrases like *word for word* and *exactly* which force verbatim interpretations. As shown in (35), counterpart sentences with *be like* are odd.

(34) a. Word for word, she said, “I-didn't-plagiarize.”

b. She said exactly, “I promise to be there.”

(35) a. # Word for word, she was like, “I-didn't-plagiarize.”

b. #She was exactly like, “I promise to be there.”

This “mere paraphrase” component of *be like* quotatives does not appear to be asserted, but rather shows properties of being an implicature. These include the fact that it can be explicitly cancelled by later discourse, at which point the verbatim interpretation arises, as seen in (36), as well as the fact that it is susceptible to *in fact* cancellation (37).

(36) A: She was like, “I-didn't-plagiarize.”

B: Word for word?

A: Yes.

(37) She was like “I like pomegranates” – in fact, that was exactly what she said.

Ignoring the “mere paraphrase” meaning which we return to shortly, we take a view in the spirit of Davidson (1968), wherein the quote has to be the same as the speech event, where “same-saying” allows for contextually agreed upon vectors of variation (for example, if the subject of the sentence spoke with a lisp, the person quoting them does not have to replicate this lisp to count as saying the same). We also adapt Davidson’s proposal in assuming that the quote is introduced by a demonstrative THAT. (See also Partee (1973), Munro (1982) and Etxepare (2010) for likeminded proposals.) In most dialects, this

demonstrative is null, however in a few other varieties, including Glasgow English, it is optionally overt as in (38).

(38) And they were like that “How’re you doing, Mary.” Glasgow English (Macaulay 2001:13)

Following Partee (1973, Munro (1982) and Collins and Branigan (1997), we assume that the quoted material is not merged as a complement of the saying predicate. Rather, following Etxepare (2010), we assume that the demonstrative is merged in a small clause structure headed by a null relator morpheme (den Dikken 2006). We take the *like* of *be like* to be a manner preposition, which takes the Relator-headed small clause as its complement. On these assumptions, the lower portion of a sentence like (1) will have the structure shown in (39).

(39) [_{PP} like [_{RelP} that [_{Rel'} Rel QUOTE]]]

Something more, however, is required to account for additional properties of *be like* discussed above namely (i) its opacity to extraction, and (ii) the “mere paraphrase” implicature. Adapting Kayne’s (2007 fn. 9) brief discussion of *be like* quotatives, we assume that *be like* quotatives conceal a null SOMETHING heading a DP complement of *be*. We illustrate this structure in (40).^{iv}

(40) [_{TP} Aaron [_{TP} was [_{PP} something [_{PP} like [_{RelP} that [_{Rel'} Rel QUOTE]]]]]]]

On this approach, the unavailability of *wh*-extraction with direct speech readings will be reminiscent of restrictions on *wh*-raising out of *some*-quantified DPs, as in (41) and (42).

(41) ?? Who did you see some picture of <who>?
 (42) * What did you see something like <what>?

Similarly, the incompatibility of quote raising with *be like* might constructions now be related to whatever excludes raising in counterpart sentences with *say* as in (43) and (44).

(43) *“Shut up,” Aaron said something like.
 (44) *“Shut up,” said Aaron something like.

Finally, the paraphrase meaning for quotes introduced by *be like* is also explained in terms of (40), which asserts that Aaron said *something like* the quote. As noted above, such sentences are pragmatically odd in a context in which the quote content is intended as a verbatim quote. From the perspective of the structure in (40), quotative *be like* sentences implicate a “mere paraphrase” understanding of the reported quote in the same way that (43) implicates that cougars are merely similar to mountain

lions.

(43) A cougar is something like a mountain lion.

In addition, the incompatibility of *exactly* and *word for word* with *be like* quotatives might now be related to the presence of the null SOMETHING. That is, the oddness of (35 a,b), might be understood in the same way that (44) is odd, whereby the speaker at once weakens and strengthens the epistemic commitment to the comparison.

(44) #A cougar is exactly something like a mountain lion.

That the presence of a null SOMETHING (35 a,b) and an overt *something* in (44) is implicated in their oddness is suggested by the fact that the same infelicity does not arise in sentences like (45) without an overt *something*.

(45) A cougar is exactly like a mountain lion.

To summarize the proposal so far, we have followed Kayne (2007) in assuming that *be like* quotative constructions conceal a null SOMETHING indefinite that takes the like-headed PP as its complement. We show that this approach accounts for a set of exceptional properties of *be like* as a quote introducer in English. It also suggests a fairly simple process of syntactic change: once quotes came to be available as descriptors of states, eventive *be like* interpretations fall out, with the additional enrichment of a null SOMETHING, which we discuss further below.

On this approach, *be like* quotatives will be a species of manner deictic quotative construction, which have been peripheral to the formal literature on quotatives (Munro 1982, Güldemann 2002, Blain and Déchaine 2007 and Etxepare 2010.) Particularly reminiscent of *be like* from the perspective of the above proposal are *hebben zoiets van* quotative constructions available for some younger speakers with an overt ‘something’, *iets*, as in (46) (van Craenenbroeck 2002).

(46) **Dutch**

- Jan had (zo)-iets van, “laat me gerust.”
Jan had such-something of leave me alone
a. Jan thought something like, “Leave me alone.”
b. %Jan said something like, “Leave me alone.”

As discussed in Haddican & Zweig (2012), Dutch *hebben zoiets van* constructions share with English *be like* many of the syntactic properties discussed above. The presence of an overt ‘something’ in these similar Dutch constructions, therefore lends plausibility to the present proposal that English *be like* constructions contain a silent SOMETHING, as proposed by

Kayne (2007).

5. The evolution of *be like* quotatives

As noted above, early descriptions of *be like* characterized it not as an introducer of direct speech but rather of reported thought exclusively; direct speech *be like* is reported to have emerged subsequently (Butters 1982, Tagliamonte and Hudson 1999, Buchstaller 2004). In this light, one possible analysis of the evolution of *be like* is that stative and eventive interpretations emerged independently. In particular, one possibility proposed in the diachronic literature is that stative, non-speech uses of *be like* emerged as a reanalysis of descriptions of states of individuals in sequences of *be* + focuser/discourse marker *like*+ predicate adjectives or non-lexicalised sounds as in (47) and (48) respectively (Buchstaller 2004:101-113). Direct speech uses of *be like* might then have evolved as a reanalysis of these reported thought interpretations.

(47) I was like devastated.

(48) She was like “*ugh*”.

Nevertheless, in the preceding discussion, we have suggested two reasons for viewing diffusion of direct speech and reported thought guises of *be like* as involving a single abstract process of change. First, from the perspective of Kroch’s constant rate hypothesis, a unified approach explains the similar age slopes in the experimental data reviewed above and much of the corpus based literature suggesting similar rates of diffusion for these two guises of *be like*. A second motivation for this approach is that it accounts for eventive interpretations of *be like* constructions in the absence of any overt material obviously responsible for the change of state interpretation. In particular, we have proposed that the eventive interpretation is produced not by an ambiguity in the meaning of *be*, but rather by a flexibility in its meaning; as shown by Rothstein (1999), the same *be* can create both eventive and stative readings. This approach entails that direct speech *be like* is produced by the grammar from the outset of albeit as a disfavoured variant, as it remains in most recent production studies (Tagliamonte and D’Arcy 2007, Buchstaller and D’Arcy 2009).

An additional issue unaddressed in the discussion so far is the learner’s cue to posit a null SOMETHING. We suggest that the principal cue for this is in fact approximate quote meaning; that is, that early reported thought quotes introduced by *be like* will have been readily interpretable as approximate quotes. We propose that this inferred *something like* meaning provided the cue for positing the null indefinite illustrated in (40). On this approach, a single innovation is fundamentally responsible for the emergence contemporary *be like* quotatives, namely the novel use of quotes to describe states of individuals. No further syntactic changes are required to account for the emergence of eventive

“direct speech” guises of *be like* on this approach, which come for free as a consequence of a Rothsteinian “repackaging” mechanism independently motivated for “agentive” *be* contexts. The development of a null SOMETHING motivated by the pragmatics of *be like* in direct speech contexts accounts for a range of additional syntactic properties of *be like* quotatives that distinguish it from other English verbs of saying.

6. Conclusion

Based on results from two judgement experiments and some recent spoken corpus studies, this paper proposes a diachronic syntax for *be like* quotatives in English. We propose that evidence suggesting similar rates of diffusion for eventive (direct speech) and stative (non-speech/thought) interpretations of *be like* quotatives reflect a single abstract process of change. In the spirit of Rothstein’s (1999) proposal for adjectival predicates of copula *be*, we propose eventive direct speech interpretations of *be like* quotatives are derived via a repackaging mechanism akin to those that make count readings out of mass nouns in the nominal domain. Our proposal relates *be like* to other manner deictic (‘thus’) quotatives cross-linguistically (van Craenenbroeck 2002, Güldemann 2002, Blain & Déchaine 2007). Future formal work might usefully explore the semantics of these under-studied constructions from a comparative perspective.

The forgoing discussion also suggests two implications for the study of diachronic syntax more generally. First, we have demonstrated the utility of controlled experiments for understanding syntactic change in apparent time. Over the past decade, advances in experimental methodologies for linguistics have expanded the range of data available to researchers. Of particular interest to the study of linguistic change, techniques for web-based experiments enable researchers to acquire large datasets from a wide range of age groups. The recent emergence of Amazon Mechanical Turk as a web-based source of subjects in linguistic/psycholinguistic research, also increasingly facilitates the collection of large amounts of data at relatively low cost (Mason and Suri 2012, Sprouse 2012). The importance of these developments for the study of formal diachronic syntax is that they make possible the study of change in apparent time using controlled techniques that avoid some of the problems inherent in corpus-based studies, including the scarcity of data in crucial environments. This allows for a more direct examination of hypotheses about the nature of language change than is possible from relying solely on limited corpora. For phenomena that allow for interpretation to be contextually biased reliably—as in the case of the ambiguity between reported thought and direct speech readings of *be like*—controlled techniques potentially provide a better approach to ambiguity than corpus data.

In this context it is worth noting that acceptability judgements, which the present results are based on, are a different kind of linguistic performance from the production data that is

recorded in spoken and written corpora, which many diachronic syntax studies are based on. A growing body of literature, however, suggests that acceptability judgments closely mirror relative probabilities of semantically equivalent competing forms in production (Bresnan 2007; Bader & Häussler 2010a, 2010b; Melnick, Jaeger, & Wasow 2011). These results suggest that acceptability judgments are useful for inferring change in apparent time in a way comparable to variation in corpus data. Future formal diachronic work on change in apparent time might therefore avail itself of these new techniques.

A second consequence of the above discussion is to highlight the scarcity of formal research on processes of change in the aspectual domain, such as the shift between stative and eventive interpretations of *be like*. While the studies described in this paper only focus on a specific change, they show that this is an area of inquiry that can produce profitable results. Also, if we are to take seriously the consensus in the semantic literature (as exemplified by Rothstein's (1999) coercion approach to agentive *be* adopted here) that the eventive domain shares structure with the nominal domain, the current research opens up the related issue of understanding change in the semantics of count and mass entities. A rich comparative semantics literature has focused on differences among languages with different ways of marking count/mass and state/event distinctions, but relatively little literature has focussed on the diachrony of these issues, and the question of what more general principles might govern such change. Whether the semantic changes involved with *be like* are representative of this wider field remains an open question, of course, but this paper shows that this is a domain that may well be usefully addressed by future diachronic syntactic and semantic work.

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Figure 1: *Say* and *be like* scores by age for six conditions.

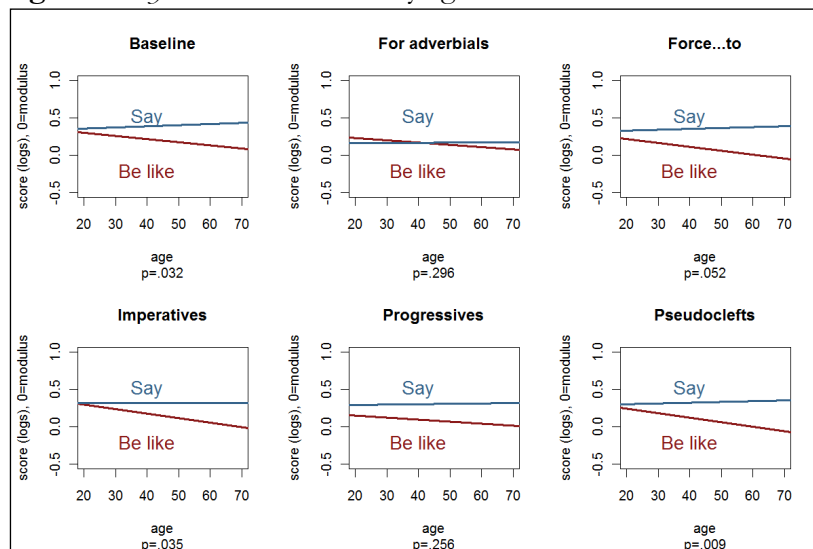


Figure 2: Partial effects and 95% HPD intervals for under-26-year-olds' scores in six conditions

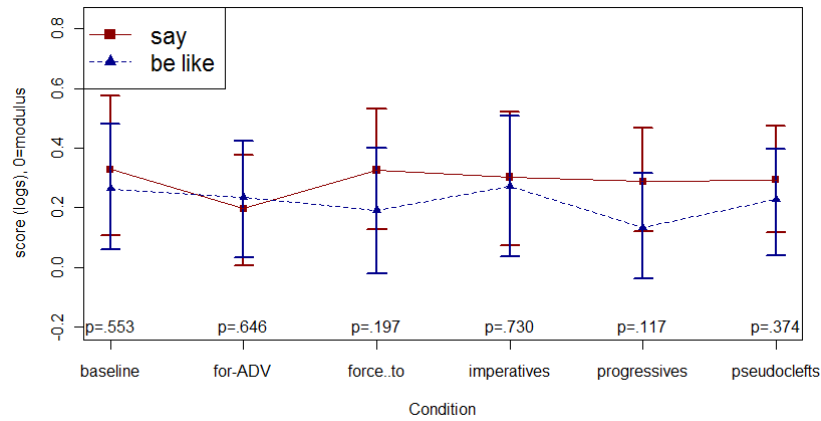


Figure 3: Partial effects and 95% HPD intervals for *be like* and *say* in SAI and non-SAI contexts

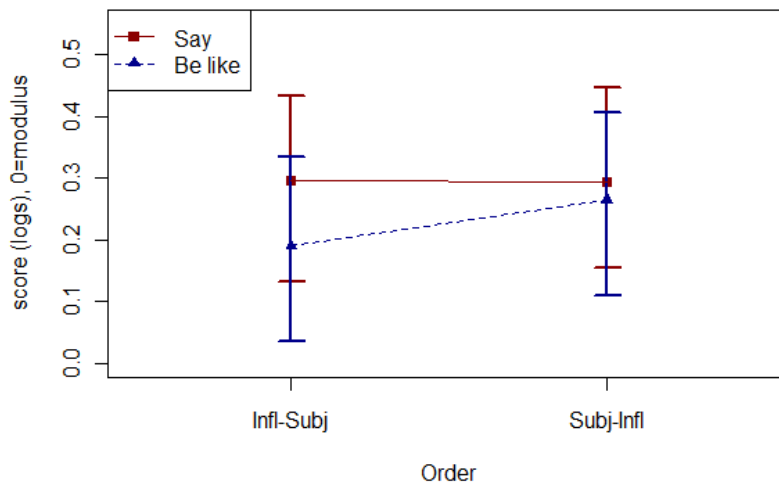
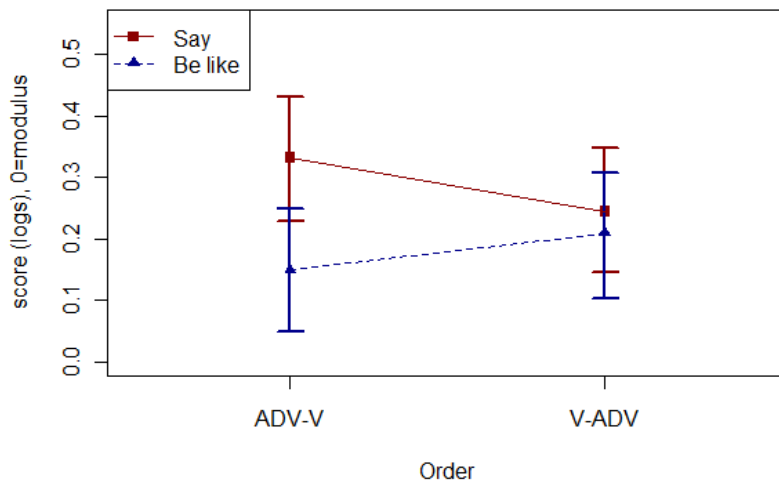


Figure 4: Partial effects and 95% HPD intervals for *be like* and *say* in Adv-V and V-Adv orders



ⁱ Rothstein refers to this as a “repackaging” mechanism.

ⁱⁱ For *for* adverbials vs. *force...to* as the eventive/stative comparison, $p=.542$; *for* adverbials vs. pseudoclefts $p=.316$; *for* adverbials vs. progressives $p=.930$; and *for* adverbials vs. imperatives, $p=.317$.

ⁱⁱⁱ Readers may refer to Rothstein (1999) for detailed argumentation and formal implementations of her theory.

^{iv} Haddican and Zweig (2012) propose a slightly richer structure motivated in part by a comparison with similar quotative constructions in Dutch. The motivation for these additional assumptions is not directly relevant to the present discussion and we set aside these issues, here.

^v The $\xi\varnothing$ ‘such’ element often appears in such constructions but is not obligatory.