

Variability in the Co-occurrence of Discourse Features

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Previous research documenting patterns of variation and change in the use of discourse features has tended to focus on isolated forms without considering how their co-occurrence in discourse may exhibit patterns of social differentiation or be implicated in ongoing change. We address these issues by conducting a systematic quantitative analysis of the co-occurrence of general extenders (e.g. *and stuff, or something like that*) with other discourse features (e.g. *like, you know*) in a corpus collected in north-east England. Comparison of three age groups revealed a number of habitual co-occurrence patterns in discourse. When viewed from an apparent-time perspective, inspection of the syntagmatic arrangement of these patterns, as well as the discourse features constituting them, suggests that they are implicated in ongoing change or age-grading. An increase in the use of discourse *like* in these configurations in apparent-time, concomitant with a reduction in the use of *you know*, additionally indicates that the patterns we have uncovered need to be contextualized with reference to broader discourse-pragmatic changes that are currently underway in English. We conclude by reviewing the utility of our approach for further elucidating patterns of variation and change in discourse.¹

1. Introduction

By virtue of their optionality, lack of semantic meaning and inherent multifunctionality, discourse-pragmatic features such as *I mean, you know, just, like, etc.* have long been neglected in systematic corpus-based examinations of language variation and change. Only in the last few decades have systematic studies of discourse-pragmatic features produced a gently expanding body of evidence demonstrating that they are neither superfluous nor random insertions in discourse: discourse-pragmatic features are strategically used by interactants to signal speaker attitudes and structure discourse (see, for example, Aijmer 2002 for extensive illustrations), and exhibit structured heterogeneity in vernacular usage (see Macaulay 2002 for an overview). Yet the bulk of these studies have focused on individual discourse items or constructions (see, however, Bell & Johnson 1997), with the result that little is known about patterns in the co-occurrence of discourse features.

Observing that utterances are often multiply reinforced by discourse features, a number of scholars have explored the potential functional implications of such co-occurrences.² However, far less attention has been paid to whether such co-occurrence phenomena exhibit recurrent patterns, and whether such patterns, if they exist, are constrained by social and internal factors, and are subject to change. In this paper, we set out to address these issues by conducting a quantitative corpus-based analysis of one specific discourse configuration: the co-occurrence of general extenders, i.e., clause- or phrase-final constructions such as *and*

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2 Explanations of such patterns tend to be polarized in terms of whether the co-occurrence of multiple discourse features is the by-product of redundant priming effects where one feature leads to the use of another with the same or similar functions (cf. Aijmer 2004; Macaulay 2005; Overstreet 2005; Lin 2010), or whether such co-occurrences create new meanings and functions which are different to the meanings and functions of these features when used in isolation (cf. Stubbe & Holmes 1995; Fleischman 1999; Adolphs 2007).

that, and stuff (like that), or something (like that), with other discourse-pragmatic features (e.g. *like, you know, sort of*). General extenders have generated increased academic interest as of late because recent quantitative analyses (e.g. Cheshire 2007; Tagliamonte & Denis 2010; Pichler & Levey, *forth.*) suggest that they may be implicated in a set of ongoing changes associated with grammaticalization, i.e., “the process whereby lexemes and constructions come in certain linguistic contexts to serve [(new) pragmatic] functions” (Hopper & Traugott 1993: xv). Our intention here is to widen the purview of investigations targeting change in the use of general extenders by examining potentially shifting patterns in their co-occurrence with other discourse features.

Examples (1)-(5) from our corpus of interview data collected in Berwick-upon-Tweed, north-east England, illustrate the co-occurrences which are the focus of our paper.³ They demonstrate some recurrent patterns in our data: (i) utterances containing general extenders can contain more than one additional discourse feature, (2)-(5); (ii) co-occurring discourse features can cluster, i.e., they can occur immediately adjacent to each other, (3)-(5);⁴ and (iii) discourse features co-occurring with general extenders occur in a range of syntactic positions, i.e., clause-initially, (3)-(5); clause-internally, (1)-(2) and (4)-(5); and clause-finally, (2) and (5). In examining these co-occurrence patterns, our aim is to investigate whether they are conditioned by both social and internal factors, as well as to probe their evolution in apparent-time.

- (1) But that’s like work commitments **and everything**.
- (2) There’s no sort of racial tension **and things like that**, you know.
- (3) I mean, just like the words we combine **and that**, you can just tell it’s Berwick.
- (4) You know, you’re on about like sort of em Tweedmouth and Spittal **and that**.
- (5) I dunno, people kind of associate Newcastle wi like sort of rougher people **sort of thing**, you know.

In Section 2, we review previous accounts of the co-occurrence of general extenders with other discourse features. We then detail our methods for investigating patterns of co-occurrence in Section 3. In Section 4, we present the results of our analysis before interpreting them in Section 5. Finally, in Section 6, we discuss the major implications of our findings and point to areas of further study.

2. Research on the co-occurrence of general extenders with other discourse features

Recognition of the co-occurrence of general extenders with other discourse features is not new. Aijmer (2002) and Overstreet (1999, 2005) note that general extenders frequently co-occur with *you know, you see, sort of, like* and tag questions. They attribute these co-occurrences to a number of interactional factors, such as the co-ordination of speakers’ and hearers’ points of view, the negotiation of common ground, and the expression of politeness strategies.

Recent variationist studies have operationalized the co-occurrence of general extenders with other discourse features as diagnostic measures of grammaticalization. Arguing that general extenders in earlier stages of semantic-pragmatic change will tend to be reinforced by the presence of additional discourse features performing similar functions, Cheshire (2007:

3 Throughout the paper, we use the following typographical conventions in our examples: bold typeface for general extenders; underlining for their co-occurring discourse-pragmatic features; italics for the constituent over which the general extenders have scope.

4 This phenomenon has been variously called ‘stacking’ (Andersen et al. 1999), ‘chunking’ (Erman 2001), or ‘clustering’ (Aijmer 2002, 2004). We adopt Aijmer’s terminology of ‘clustering’ here.

185-186) and Tagliamonte and Denis (2010) interpret low levels of co-occurrence in their corpora of British English and Toronto English as an indication of advanced stages of semantic-pragmatic change. This interpretation is not uncontroversial, though, for there is evidence from other studies that the co-occurrence of discourse features is indicative of increasing (inter)subjectification (Margerie 2005, 2007).⁵

Less controversial is Cheshire's (2007: 185-186) finding that the choice of co-occurring discourse features in British English adolescent speech is to some extent constrained by whether the general extender variant is adjunctive, i.e., introduced with the connector *and* (e.g. *and stuff, and things, and that, and everything*), or disjunctive, i.e., introduced with the connector *or* (e.g. *or something, or anything*). While *like, just* and *sort of* occur with any general extender variant in Cheshire's data, *kind of* and *about* occur only with adjunctive general extender variants, and *I think* and *I don't know* as well as the adverbials *probably* and *possibly* only with disjunctive general extender variants. Cheshire (2007: 186) also notes a lack of social differentiation in these co-occurrence patterns. However, because Cheshire's study is based on adolescent speakers only, we do not know how representative the sociolinguistic patterns she discerns are of other age groups. Furthermore, because the structural configuration of co-occurrence patterns has not been systematically investigated, it is not clear how the choice of specific discourse features in such patterns may correlate with social factors.

In the ensuing analysis, we explore patterns in the co-occurrence of general extenders in the Berwick English corpus. We explore whether syntagmatic position and type of general extender constrain the selection of different co-occurring discourse features, and whether rates of general extenders co-occurring with other discourse features can be used to gauge the extent of semantic-pragmatic change, as proposed by Cheshire (2007). Particularly innovative here is our attempt to situate shifting patterns in discourse configurations within an apparent-time framework in order to probe the existence and directionality of potential ongoing changes.

3. Data and methodology

3.1. Data

Our study is based on a corpus collected between 2003 and 2005 in Berwick-upon-Tweed, north-east England, comprising some 260,000 words (including false starts, truncations, filled pauses and minimal response particles, but excluding the interviewer's contributions). The data were gathered using the semi-structured interview protocol designed for the *Survey of Regional English* with the aim of eliciting information about community members' use of local dialect words, as well as their attitudes towards their locality and dialect (Llamas 2007). A number of tried-and-tested methods were used to mitigate effects of the Observer's Paradox (Labov 1972), including conducting interviews with self-selected pairs in informants' homes. The resulting recordings consist of many vibrant exchanges, and are a rich repository of local and supra-local vernacular features. As shown in Table 1, the sample includes 36 speakers who are equally stratified across sex and three emically defined age cohorts reflecting shared life stages. The sample represents a socially homogeneous group of working-class speakers, as determined via a combination of traditional social class indicators (housing, education, occupation) and informants' own assessment of their social class membership. It is the usage of this particular community of speakers that we take as the basis of our investigation rather than the speech of individuals (see Weinreich et al. 1968).

5 Cheshire's (2007) inference of change in the general extender cohort is based on one age group only and does not invoke comparisons with an earlier stage of the language.

young (17-23)		middle (27-48)		old (60-81)	
<i>male</i>	<i>female</i>	<i>male</i>	<i>female</i>	<i>male</i>	<i>female</i>
6	6	6	6	6	6

Table 1. Speaker sample.

3.2. Methodology

As pointed out above, our analysis of patterns in the co-occurrence of general extenders with other discourse features falls within the larger purview of a detailed study of ongoing change in the general extender cohort in Berwick English (see Pichler & Levey, forth.). For this project, we delimited the envelope of variation by departing from earlier functionally-based conceptualisations of general extenders (e.g. Dines 1980) and defining them as semi-fixed constructions which share the following underlying pattern schematically represented as: (connector) (modifier) (generic noun/pro-form) (simulative) (deictic).⁶ Using this structural schema, we exhaustively extracted all general extender constructions from the corpus and coded them for variant type as well as the broader distinction between adjunctive and disjunctive variants. All tokens retained for analysis were coded for speaker age to identify and track directions of change in apparent-time. To trace the progression of general extenders along the cline of grammaticalization, we coded the data for a number of structural and semantic-pragmatic diagnostics hypothesized to be implicated in ongoing change. Readers are referred to Pichler and Levey (forth.) for a detailed description of these coding protocols. Summarizing, we operationalized semantic-pragmatic change as a factor group for quantitative analysis by developing a taxonomy modelling the semantic-pragmatic evolution of general extenders in terms of four stages which are outlined and illustrated in Table 2.

<i>STAGE</i>	<i>FUNCTION</i>	<i>ILLUSTRATION</i>	<i>EXPLANATION</i>
0	Set-marking (contingent on intersubjectivity)	And you could go in if something was wrong and you <u>hurt your knee</u> or <u>blacked your eye</u> or something like that.	implicating a larger category of ‘injuries’ or ‘things going wrong’
1	Set-marking and interpersonal/textual	I should imagine it would be <u>Brecheen</u> because they seem to have a bit of a rivalry wi them, for some reason. <u>Or Queen of the South.</u> Somewhere like that. I honestly couldn’t tell you. Divn’t follow it.	implicating a larger category of ‘potential football rivals in this area’; retrospective hedge & topic closure
2	Interpersonal/textual	But I quite like my accent. It’s got touches of different sort of maybe a bit of American when I speak, and a bit of Scottish. And stuff like that.	retrospective hedge; turn-yielder; transition marker
3	Punctor devoid of referential & pragmatic meanings	Just cos eh some of my family’s Scottish and that , and I don’t really like getting called a Geordie.	punctuating the discourse

Table 2. Taxonomy of semantic-pragmatic change of general extenders.

To uncover productive patterns in co-occurring discourse configurations, we coded each general extender token for the number and type of co-occurring discourse features. The coding protocol accommodated adverbials such as *probably*, *possibly*, *maybe* on the grounds that they arguably perform pragmatic functions similar to other discourse features that frequently co-occur with general extenders. Following Cheshire (2007: 185), we excluded turn-initial discourse features such as *oh* or *well* from our coding protocol because these are reported to have different functions. For the same reason, we excluded tokens of the *BE like* quotative marker. Only tokens of what are conventionally referred to as ‘discourse *like*’ were

⁶ See Pichler (forth.) for a justification and rationale of this approach.

included in the coding protocol, i.e., those which occur clause-internally in non-quotative position (see example (1) above) or fill the syntactic adjunct slot (see example 3 above). We also coded co-occurring discourse features for their syntagmatic position within the clause, and vis-à-vis the constituent to which the general extender is appended, because this factor has been claimed to affect the functionality of discourse features (Aijmer 2002; Schiffrin 1987). We differentiated between discourse features that occur clause-initially and clause-internally before constituents that are not in the scope of the general extender, as in (6); features that occur phrase- or clause-finally, as in (7); and features that occur immediately to the left of the constituent over which the general extender has scope, as in (8). We refer to this latter syntagmatic arrangement as a double-bracketed configuration where a discourse feature - or combination of discourse features - marks the initial sequence of a meta-linguistic bracket, while the general extender marks the final sequence of this bracket, either in isolation or in concert with other discourse features.

- (6) a. Like they do letters out **and stuff**.
 b. I just say specks or goggles **or something like that**.
 c. They've kind of got us into watching the games **and that**.
- (7) a. She skinned rabbits **and that**, you know.
 b. It's old boy patter **and that**, like.
 c. Or he's wise **or something**, I dunno.
- (8) a. It's not very like fashionable and artistic **or anything**.
 b. And all the wives were you know doing the nets **and stuff like that**.
 c. Usually hear about Berwick Rangers just on the sport **and that**.

When the initial bracketing sequence was occupied by a cluster of two or more discourse features, as in (9), and where general extenders co-occurred with two or more discourse features in non-bracketing positions, as in (10), we did not code for the specific discourse features that combined with one another owing to the sheer diversity of combinatorial possibilities.

- (9) a. But if it was like, you-know, build a bowling alley where the barracks are **or something**, then I would be telling them kind of where to go then.
 b. Their laws are so different in the sense of like em housing **and things like that**.
 c. I mean, just like the words we combine **and that**.
 d. But you couldn't do that with somebody that was in a big responsible job, you know, eh a director **or-something**.
- (10) a. You know, at one time there was a resident sort-of surgeon there **and everything**.
 b. I heard the wife saying them **and that like, you know**.
 c. It's hardly Channel **and that like, is it?**
 d. Just the way they talk **and that, innit?**
 e. I probably say eh knackered **or something like that**.
 f. They were probably gipsies **or something, I dunno**.
 g. I think, maybe there's a lot wi the football **and that**.

To ensure reliability of our results, we rigorously cross-checked codings of all factor groups for accuracy. Tokens that had not been consistently allocated to the same factor within a factor group by the authors were discussed until agreement was reached; where necessary, modifications were made to the initial coding schema.

4. Results

In this section, we present the distributional results for the co-occurrence configurations of general extenders with other discourse features, including adverbials. Figure 1 shows that

almost half of the 783 general extender tokens in the corpus co-occur with one or more discourse features.

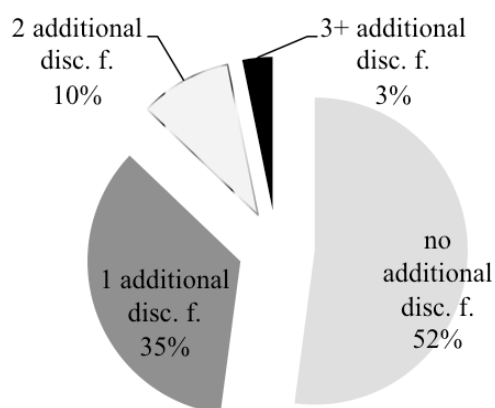


Figure 1. Overall distribution of co-occurrence configurations (N=783).

Figure 2 shows how variability in co-occurrence configurations correlates with speaker age. The older speakers in the corpus are less likely than speakers from other age groups to reinforce utterances with a combination of general extenders and other discourse features.⁷

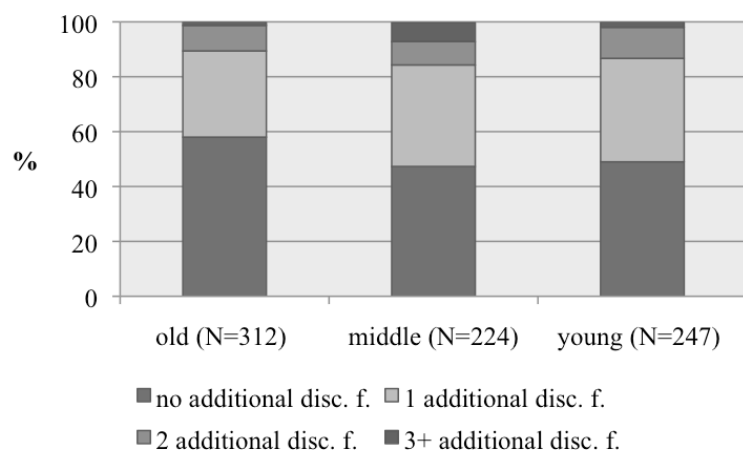


Figure 2. Overall distribution of co-occurrence configurations by sex and age [N=783]. (old vs. middle: $\chi^2 = 16.11$, $df = 3$, $p < 0.05$; middle vs. young: $\chi^2 = 7.9$, $df = 3$, $p < 0.05$)

In order to ascertain whether there are positional and formal constraints on co-occurrence configurations, we will focus in the ensuing sections on those general extender tokens in the corpus that always co-occur with one or more discourse features (N=375). Figure 3 depicts the distribution of discourse features across different co-occurrence configurations. It differentiates between those discourse features that co-occur in a double-bracketing configuration with general extenders (see (8) above), and those that co-occur in other configurations (e.g. where discourse features occur clause-initially or -finally) (see (6) and (7) above).

⁷ Inspection of the distribution of general extenders and their co-occurrence with other discourse features revealed that while there is some expected degree of variation in individuals' usage frequencies, these patterns are sufficiently diffused across speaker groups to be considered representative of community norms.

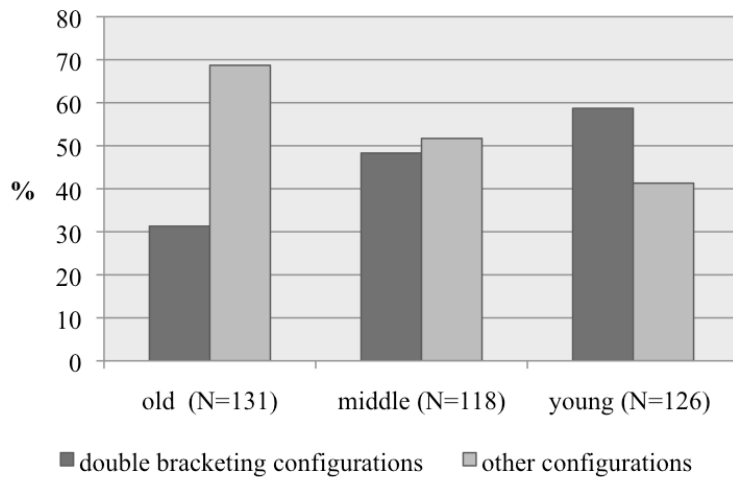


Figure 3. Distribution of discourse features across different co-occurrence configurations [N= 375]. (old vs. middle: $\chi^2 = 7.52$, $df = 1$, $p < 0.05$; middle vs. young: not significant)

While double-bracketing configurations involving general extenders and other discourse features are by no means a recent innovation, as indicated by the distributions for older speakers, there is a trend towards increasing use of double-bracketing configurations in apparent-time. Although such patterns are suggestive of change across the age groups, this inference needs to be tempered by the fact that differences in co-occurrence configurations between middle and young speakers are not statistically significant. In order to pursue the inference of change further, it is necessary to consider more fine-grained distributions within the aggregated data for the different co-occurrence configurations. Hence, we next look more closely at the type of discourse features that speakers are using in different co-occurrence configurations. Figure 4 displays these patterns.

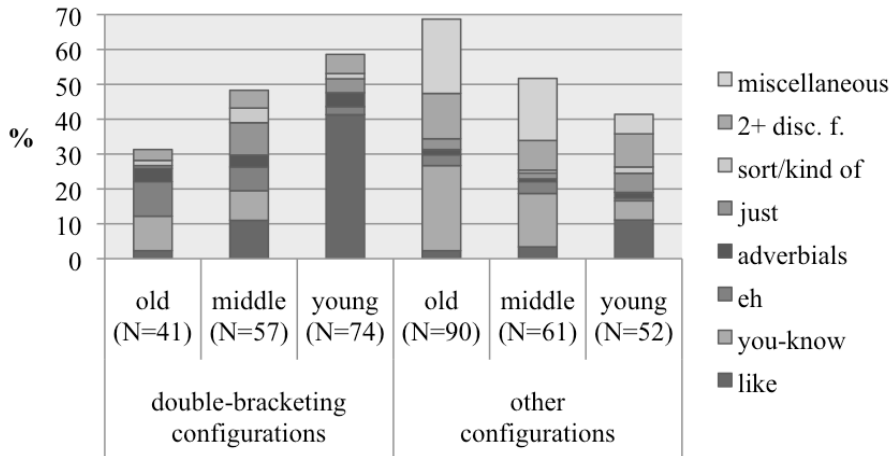


Figure 4. Distribution of type of discourse features across different co-occurrence configurations [N=375]. (chi square for discourse *like* in both configurations: old vs. middle: not significant; middle vs. young $\chi^2 = 0.90$, $df = 1$, $p < 0.05$)⁸

A number of patterns emerge from this distribution. Firstly, the results show that the types of discourse feature which occur in the initial sequence of double-bracketing configurations are limited in this corpus to *like*, *you know*, *eh*, *just*, *sort/kind of* and adverbials.⁹ Conversely, we find additional types of discourse features, including *about*, *all*, *dunno*, *I don't think*, *I mean*, *I think/suppose*, *say*, *see* and tag questions (conflated in Figure 4 as 'miscellaneous'), in other

8 Configurations with other discourse features are numerically insufficient to permit viable statistical analyses across the age groups.

9 Clusters of discourse features in the initial position of meta-linguistic brackets are equally limited to a combination of two or more of these discourse features.

configurations. These patterns suggest that syntagmatic position might be an important factor conditioning the choice of co-occurring discourse features. Secondly, the results show a trend towards decreasing frequency of miscellaneous discourse features in other configurations. Thirdly, the use of *you know* seems to be robust amongst speakers from the older and middle age groups, especially in other configurations (i.e., clause-initial and -final positions), progressively becoming less frequent as we move down the age spectrum. Conversely, there is a steady rise in the use of discourse *like*, so that among younger speakers, *like* has virtually monopolised the initial sequence of double-bracketing configurations. The apparent-time distributions suggest that the inventory of discourse features found in co-occurrence with general extenders might be becoming more uniform in this community.

Figure 5 shows the distribution of co-occurring discourse features with adjunctive general extenders (e.g. *and that*, *and things like that*, *and stuff*) and disjunctive general extenders (e.g. *or something*, *or whatever*). The patterns exhibit a non-significant tendency for adjunctives to co-occur with *like*, *you know*, *eh*, *sort/kind of* and multiple discourse features, and for disjunctives to co-occur with adverbials, *just* and other discourse features. These distributions, then, suggest that the adjunctive/disjunctive split only negligibly conditions the choice of co-occurring discourse features in these data.

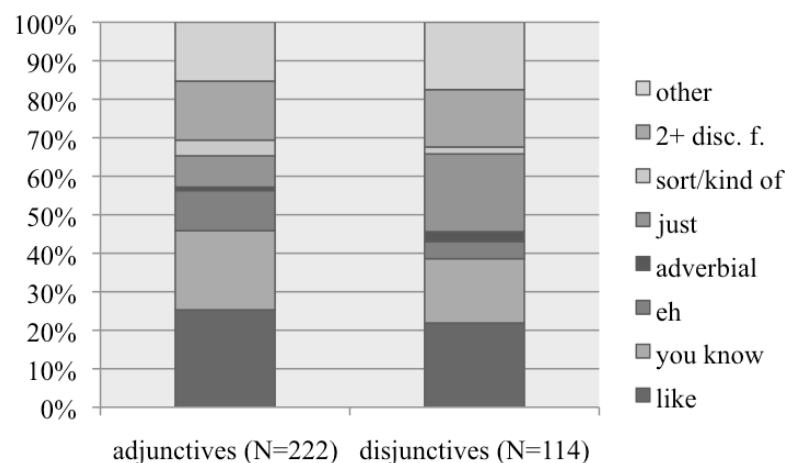


Figure 5. Distribution of co-occurring discourse features across adjunctive and disjunctive general extenders [N=336].¹⁰

Finally, Figure 6 compares the distribution of co-occurrence patterns across different stages of semantic-pragmatic change, as described in Section 3.2 above. The results reveal a tendency for the frequency of co-occurring discourse features to increase as general extenders advance along the cline of semantic-pragmatic change. In other words, the more advanced general extenders are in terms of semantic-pragmatic change, the more likely they are to co-occur with other discourse features in their ambient context. This suggests that, contra Cheshire (2007) and Tagliamonte & Denis (2010), the co-occurrence of other discourse features with general extenders is not an unproblematic metric of semantic-pragmatic change.

¹⁰ We have not included here general extender variants such as *sort of thing*, *things like that* which are not introduced by a connector (N=39).

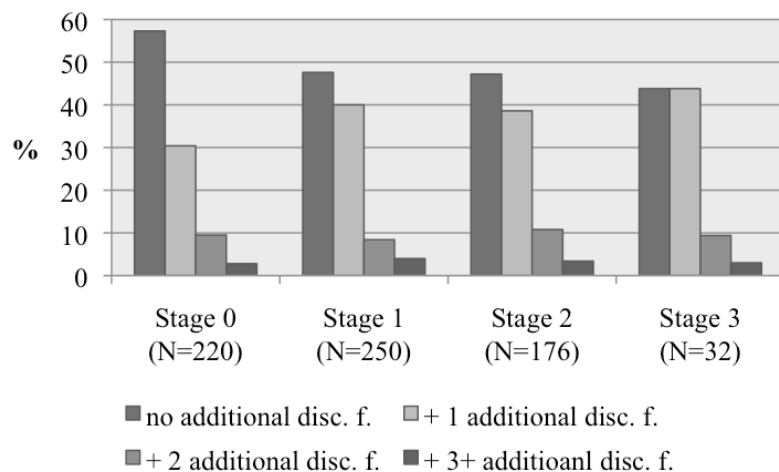


Figure 6. Distribution of co-occurrence configurations across different stages of semantic-pragmatic change [N=678].¹¹

5. Discussion

Our quantitative analysis of co-occurrence patterns in discourse revealed that 48% of general extender tokens in our data co-occur with one or more additional discourse features. These results are testimony to the fact that multiple reinforcement of utterances is by no means exceptional in spoken discourse. Building on our earlier findings that general extenders in Berwick English are socially indexical and changing in apparent-time (Pichler & Levey, forth.), the results presented in Section 4 indicate that variation in the frequency, form and syntagmatic arrangement of patterns in the co-occurrence of general extenders with other discourse features are socially sensitive and indicative of possible ongoing change.

The premium we attached to uncovering productive and recurrent patterns in the data revealed a number of important findings. Firstly, the initial sequence of what we have referred to as double-bracketing configurations is increasingly overtly marked by one or more discourse features. Secondly, the overall diversity of discourse features in the initial sequence of these configurations tends to attract a relatively small number of discourse features. Moreover, as depicted in Figure 4 above, the respective distributions of these features in bracket-initial position is shifting in apparent-time, with discourse *like* constituting the default marker in the youngest age group. These evolving patterns need to be contextualized in relation to broader discourse-pragmatic changes that are currently ongoing in global varieties of English. Discourse *like*, a ubiquitous feature of urban youth vernaculars, is known to be rapidly innovating in contemporary British varieties (Cheshire et al. 2005). Earlier characterizations of *like* as a haphazard insertion in youth speech have been refuted by recent research demonstrating that it is a regular incremental change percolating across successive generations of speakers. D'Arcy's (2008) research on Toronto English suggests that discourse *like* is systematically diffusing through regular processes of language change to different clause-internal positions and is generalizing to the left periphery of the determiner phrase. We conjecture that high rates of discourse *like* in the initial position of the double-bracketing positions may be epiphenomenal of its incursion into clause-internal positions, although we concede that this warrants further detailed investigation of the evolution of discourse *like* in the variety of English targeted in this study.

Our apparent-time snapshot also suggests that the rise of *like* in double-bracketing and, to a lesser extent, other configurations is concomitant with the demise of *you know*. The seeming competition between these two forms within the compressed time frame represented

¹¹ The total number of tokens included in the tabulation of this figure does not amount to 783 because some tokens could not be coded for semantic-pragmatic change (see Pichler & Levey, forth. for details).

by our sample concurs with recent observations that discourse features are characteristically ephemeral and prone to rapid change. As Brinton (2001) points out, pragmatic functions generally perdure over time but the forms conscripted to encode these functions are susceptible to renewal. Whether the ascendancy of discourse *like* over *you know* in our data constitutes a *bona fide* case of pragmatic renewal or a change in interactional style (see Cheshire et al. 2005) warrants additional research.

6. Conclusions and direction for further study

Our preliminary study has illustrated the utility of looking at variation in the co-occurrence of discourse features. Our quantitative analysis of co-occurrence patterns revealed that these are socially diagnostic as well as possibly indicative of ongoing change. The inference of change was systematically pursued by invoking the apparent-time construct. While this construct has proven particularly robust for tracking patterns of variation and change across the generations in previous research, it has acknowledged limitations, necessitating a cautious interpretation of the findings that we have presented in this paper. Foremost among these limitations is the fact that the apparent-time construct does not furnish definitive proof of change as it may give rise to competing interpretations (Bailey 2002). The results generated by apparent-time analyses may reflect the diffusion of an innovation across successive generations. Alternatively, increased use of a feature by speakers from the youngest age group could be the product of age-grading, whereby young speakers make frequent use of a feature but decrease their use of it as they get older. Indeed, statistical modelling of our data across the age groups did not unequivocally establish the pattern expected of a change in progress, i.e., a monotonic relationship between frequency and age (Labov 2001), across all the patterns that we have explored, suggesting that alternative explanations such as age-grading may prove more viable in certain cases.

A challenge for future research is to situate the potential changes in discourse co-occurrence patterns described above in a diachronic context. We have suggested that some of the co-occurrence patterns that we have uncovered are intimately connected with broader discourse-pragmatic changes that are currently underway in contemporary varieties of English. An investigation of the distribution of the most frequent co-occurring discourse features, i.e., discourse *like* and *you know*, and of their co-occurrence with discourse features other than general extenders is needed to establish whether the results reported here are *bona fide* shifts in co-occurrence configurations or whether they simply reflect age-correlated preferences for individual discourse features.

Notwithstanding the caveats that we have raised, we submit that the type of investigation we have pursued here constitutes a valuable adjunct to existing approaches targeting discourse features in isolation. Research into co-occurrence patterns in the use of discourse features offers fertile territory for further exploration of the social indexicality of discourse-pragmatic variation and change in synchronic as well as diachronic datasets.

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