

Epistemic Modality and Discourse Markers. A quantitative analysis of the distribution and function of discourse marker LIKE across varieties of English.

by

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What are we dealing with?

- (1) [Y]ou could get knocked off your feet if you were *like* uh unsteady or something (ICE Philippines:S1A-007#B)
- (2) I don't know exactly how much time it would take to score a booklet, but let's imagine that it's *like* 5 minutes (CSPAЕ: COMM597#PHILLIPS) .
 - Non- or substandard, dialectal and vulgar (OED Online)
 - Symptomatic of careless speech, functioning merely as a meaningless interjection (e.g. White 1955: 303)
 - “It [LIKE] can occur grammatically anywhere in a sentence” (Siegel 2002: 64).

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- “It [LIKE] can occur grammatically anywhere in a sentence” (Siegel 2002: 64).

What are we dealing with?

- Before exact numeric expressions
- (3) I said yeah we have it it's it's *like* eighty-nine point five (ICE-PHI:S1A-026#A).
- (4) She ends at *like* two thirty (ICE-HK:S1A-091#Z).
- Before quantities
- (5) [Y]ou know it's *like* so deep already (ICE-SIN:S1A-011#C).
- (6) It 's only about *like* that size and you look into it and you can read but except I couldn't read anything (ICE-IRE: S1A-035\$B).

Why are we dealing with it?

- Linguistic items which are related to the domain of epistemic modality convey the speakers attitudes towards utterances, i.e. “[e]pistemic judgments of truth, probability, certainty, belief and evidence” (Givon 1993: 169).
- Discourse markers are frequently associated with “marking stance, and [...] with the marking of epistemic modality” (Gupta to appear).
- This is especially so in their first phase of grammaticalization (Traugott 1997: 8).
- Discourse marker LIKE is frequently assigned a hedging function and is thus related to the domain of epistemic modality (Andersen 1998, 2000).
- According to Buchstaller, the element of subjective evaluation of the truth of a proposition links LIKE with epistemic modality, evidentiality and politeness if used as a face-saving device (2001: 32)

Modality and truth conditions

- Discourse markers are grammatically optional (Brinton 1996, Schiffrin 1987, 2001) and do not interfere with the truth conditions of utterances (e.g. Brinton 1996)
- LIKE, however, interferes with truth conditions (Andersen 2000; Siegel 2002)
- (7) Because there was only like say seven of them in their class and there were *like* thirty in our class (ICE-IRE: S1A-011\$B).
*No, there were 29 in our class!
- Now, is LIKE in such cases a discourse marker or an adverb?

What does the literature say?

1. LIKE is a borderline case between adverbial and discourse marker. Nevertheless, if LIKE precedes exact numeric expressions and quantities, it is a discourse marker (Andersen 1998, 2000; Schoroup 1983, 1985)
 - LIKE is a discourse marker, NOT an adverb functions differently than traditional adverbials of approximation do
 - signaling that “the utterance contains a loose interpretation of the speakers thought and that the speaker does not commit herself to the literal truth of the utterance, in a way which *roughly* or *approximately* could not do (Andersen 2000: 260)
 - it conveys the speakers subjective attitude towards the truth of the proposition (exactness of the numeric value)
 - It co-occurs with other traditional adverbials of approximation

What does the literature say?

2. LIKE before exact numeric expressions and quantities is a regular traditional adverb of approximation (D'Arcy 2005).
 - LIKE is an adverb, NOT a discourse marker
 - approximating function
 - LIKE and other traditional adverbials of approximation are in complementary distribution
 - LIKE does not co-occur with other traditional adverbials of approximation such as *roughly*, *about*, *around*, *approximately* or *nearly*.

What does the literature say?

2. LIKE before exact numeric expressions and quantities is a regular traditional adverb of approximation (D'Arcy 2005).
 - approximating function
 - LIKE is replacing other adverbials of approximation over time (language change in progress)

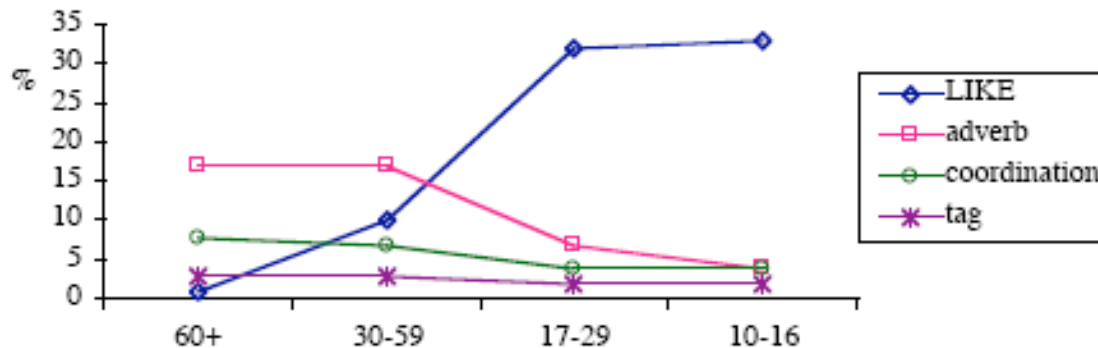


FIGURE 2.1 Distributions of numerical modifiers across apparent-time

Research question

Is LIKE before exact numeric expressions or quantities a traditional adverb of approximation or is it a discourse marker?

Hypotheses

1. H0:
LIKE does *not* co-occur more frequently with traditional adverbs of approximation than other such adverbs commonly do ($p > 0.05$).

H1:
LIKE co-occurs more frequently with traditional adverbs of approximation than other such adverbs commonly do ($p \leq 0.05$).

2. H0:
LIKE does *not* replace other traditional adverbs of approximation ($p > 0.05$).

H1:
LIKE does replace other traditional adverbs of approximation ($p \leq 0.05$).

Outline

- Data
- Methodology
- Testing
- Conclusion
- References

Data

- Irish and Canadian components of the International Corpus of English (ICE), i.e., ICE Ireland and ICE Canada.
- Spoken parts of ICE Ireland and Canada.
- Corpora family with matching designs and thus guarantee comparability
- Cover a wide variety of registers
- Provide extensive sociolinguistic information of the speakers.

Methodology

- First, all instances of *like, roughly, about, approximately, nearly, around, circa* were extracted using a concordancing tool (MonoConc Pro 2.2).
- Secondly, all instances in which these forms preceded a numeric expression or quantitative term were extracted.
- Thirdly, speaker of each instance was identified and the respective sociolinguistic information was added.
- Fourthly, the hypotheses were statistically evaluated using a Yates corrected χ^2 and a binary logistic regression.
- Finally, the results were put into context.

Methodology

All instances were excluded ...

- which had no approximating function.
- (7) If we were talking *about* Mag Jones at the minute (ICE-IRE: S1A-018\$B)
- which did not occur before numeric or expressions or expressions denoting quantities.
- (8) [T]hey hit the rock *almost* on the nose every time [..] (ICE-CAN:S2A-008#B).
- which occurred in ambiguous or missing contexts.
- (9) What distance *approximately* <unclear> several sylls </unclear> (ICE-IRE: S1B-061\$C)

Data

	Modifying an exact numeric expression		Modifying a quantity expression	
	N	%	N	%
<i>about</i>	651	65.0	37	45.7
<i>almost</i>	40	4.0	5	6.2
<i>approximately</i>	31	3.1	0	0.0
<i>around</i>	68	6.8	24	29.6
<i>circa</i>	1	0.1	0	0.0
<i>like</i>	184	18.4	8	9.9
<i>nearly</i>	16	1.6	6	7.4
<i>roughly</i>	10	1.0	1	1.2
	1001	100	81	100
	1082			

Table 1: Quantities of expressions modified by traditional approximating adverbs or LIKE.

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Hypotheses: Co-occurrence

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H1:

LIKE co-occurs more frequently with traditional adverbs of approximation than other such adverbs commonly do ($p \leq 0.05$).

- If LIKE is an optional discourse marker and not an adverb of approximation, then should co-occur with a significantly higher frequency with traditional adverbs of approximation.

Frequencies	Instances with co-occurrence	Instances without co-occurrence	SUM
<i>like</i>	7	185	192
<i>all others combined</i>	3	887	890
SUM	10	1072	1082

Table 2: Frequency of co-occurrences of traditional approximating adverbs or LIKE.

$$\chi^2_{\text{Yates}} = 15.442, \text{ df} = 1, \text{ p} < 0.001, \varphi = 0.12$$

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LIKE co-occurs more frequently with traditional adverbs of approximation than other such adverbs commonly do ($p \leq 0.05$).

BUT... INCONCLUSIVE!

Hypothesis: Replacement

2. H0:
LIKE does *not* replace other traditional adverbs of approximation ($p > 0.05$).
- H1:
LIKE does replace other traditional adverbs of approximation ($p \leq 0.05$).
- If LIKE is an optional discourse marker and not an adverb of approximation, then it should not replace traditional adverbs of approximation

=

AGE* should not have a significant effect on the use of LIKE before numeric expressions and quantities!

*Note that this study uses synchronic data and thus replacement over time refers to changes in apparent time!

Epistemic Modality and Discourse Marker LIKE.

	0-18		19-25		26-33		34-41		42-49		50+		N/A		SUM	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
<i>about</i>	-	-	18	40.0	49	53.8	65	54.6	36	59.0	42	79.2	124	66.0	334	59.7
<i>almost</i>	-	-	1	-	3	3.3	5	-	2	-	1	1.9	17	9.0	29	5.2
<i>approximately</i>	-	-	1	-	2	-	1	-	4	-	3	-	6	3.2	17	3.0
<i>around</i>	-	-	4	8.9	11	12.1	8	6.7	6	9.8	3	5.7	27	14.4	59	10.6
<i>circa</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
<i>like</i>	2	100	21	46.7	25	27.5	38	31.9	12	19.7	3	5.7	12	6.4	113	20.2
<i>nearly</i>	-	-	-	-	1	1.1	-	-	-	-	-	-	1	0.5	2	0.4
<i>roughly</i>	-	-	-	-	-	-	2	-	1	1.6	1	1.9	1	0.5	5	0.9
SUM	2		45		91		119		61		53		188		559	

Table 3: Frequency of traditional approximating adverbs or LIKE according to speaker age in Canadian English.

	0-18		19-25		26-33		34-41		42-49		50+		N/A		SUM	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
<i>about</i>	2	100	82	67.8	32	61.5	12	60.0	38	80.9	59	71.1	130	64.7	523	99.4
<i>almost</i>	-	-	-	-	1	1.9	-	-	-	-	4	4.8	11	5.5	16	3.0
<i>approximately</i>	-	-	-	-	-	-	-	-	-	-	-	-	14	7.0	14	2.7
<i>around</i>	-	-	7	5.8	5	9.6	2	10.0	4	8.5	4	4.8	12	6.0	34	6.5
<i>circa</i>	-	-	-	-	-	-	-	-	-	-	-	-	1	0.5	1	0.2
<i>like</i>	-	-	32	26.4	11	21.2	6	30.0	3	6.4	6	7.2	21	10.4	79	15.0
<i>nearly</i>	-	-	-	-	3	5.8	-	-	1	-	8	9.6	9	4.5	21	4.0
<i>roughly</i>	-	-	-	-	-	-	-	-	1	2.1	2	2.4	3	1.5	6	1.1
SUM	2		121		52		20		47		83		201		526	

Table 4: Frequency of traditional approximating adverbs or LIKE according to speaker age in Irish English.

LIKE preceding exact numbers and quantities

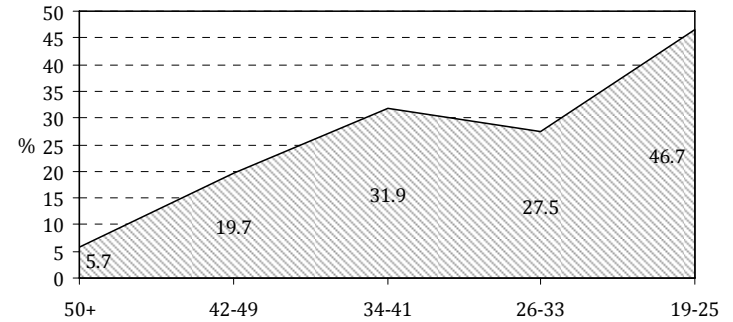


Figure 2: Frequency of LIKE before numbers and quantities according to speaker age in Canadian English.

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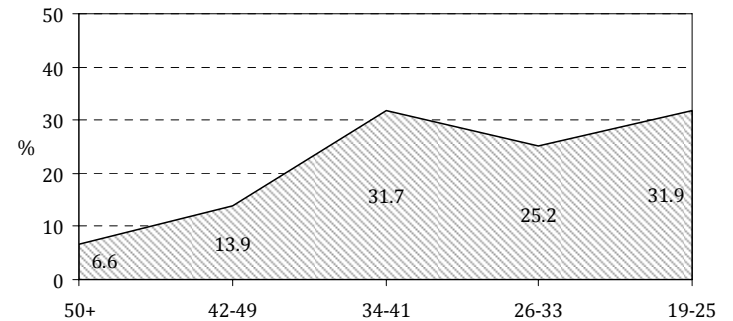


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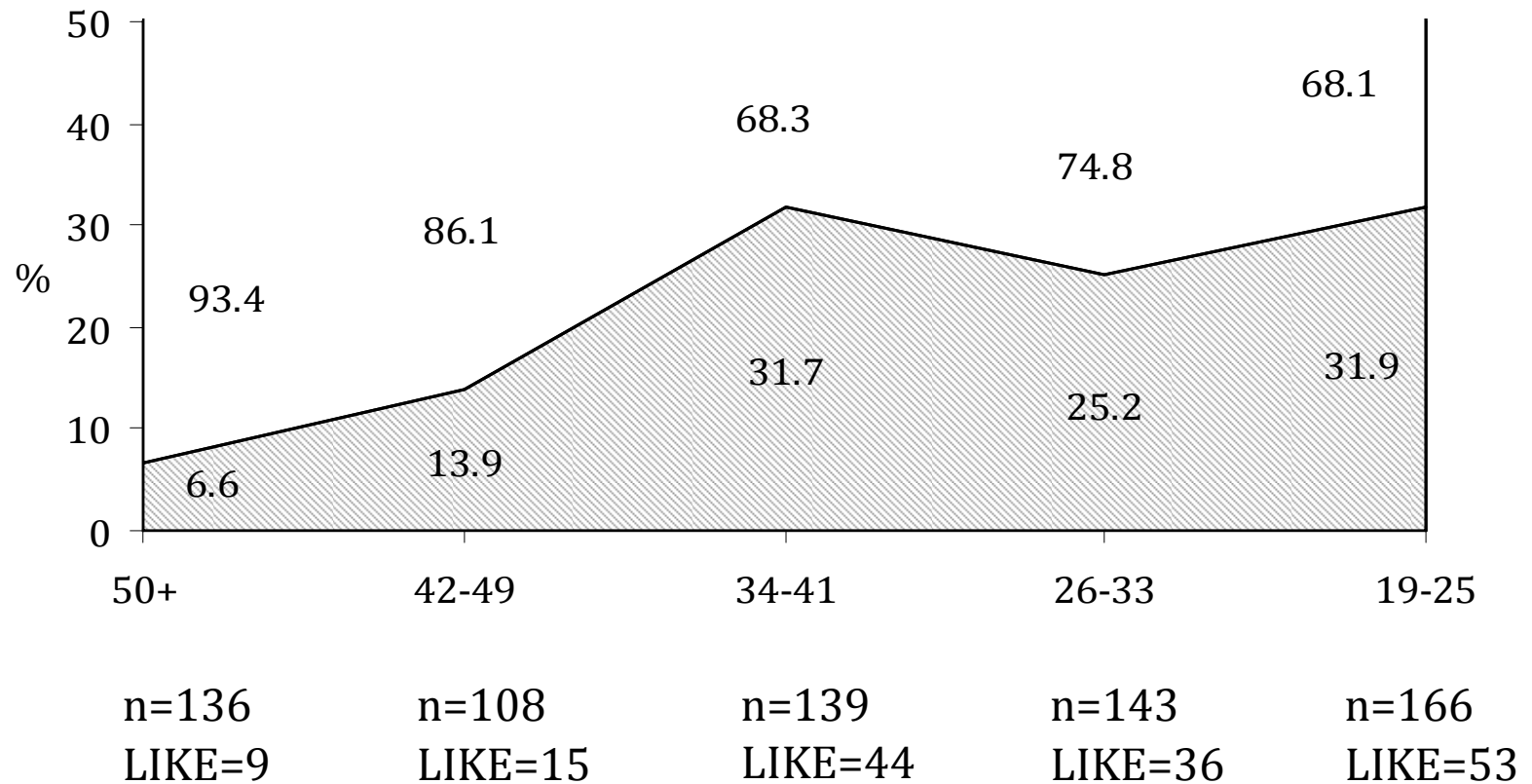


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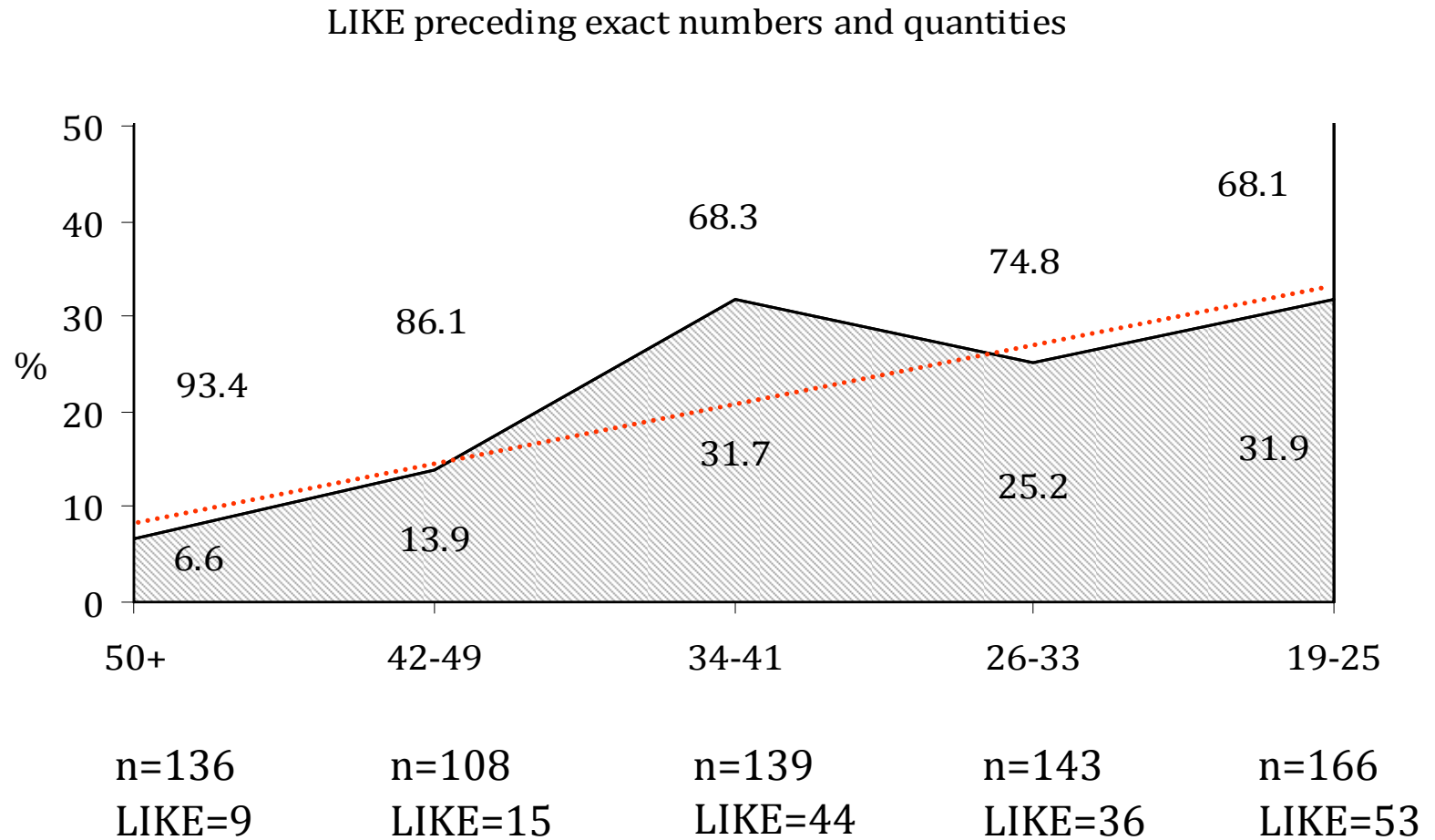


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Testing

- binary logistic regression model
 - dependent variable
 - ADV (adverb; LIKE = 1, all other adverbs = 0)
 - independent variable
 - AGE (age; 1=19-25, 2=26-33, 3=34-41, 4=42-50, 5=50+)
 - VAR (variety; Irish English vs. Canadian English)
 - REG (register according to the classification in the ICE corpora)

binary logistic regression model

- Results

- The correlation between the independent variables and the dependent variables is highly significant

log-likelihood $\chi^2 = 66.89$, $df = 3$, $p < 0.001$. Nagelkerke's $R^2 = 0.139$. Minimal adequate model has a rather high predictive power: $C = 0.701$, $D_{xy} = 0.401$ and 77% of all occurrences of LIKE could be predicted correctly

- The correlation between the occurrence of LIKE and the variable AGE is also strongly significant

odds ratio ~ 0.708 , 95%-confidence interval: 0.607 and 0.819, $p < 0.001$, i.e. if the speaker is older by one unit according to the classification of the ICE corpora, then the probability of LIKE use instead of other traditional adverbs of approximation decreases by 29.2%.

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H0 = REJECTED

Conclusion

- LIKE does co-occur with other traditional adverbs of approximation with a significantly higher frequency, but the small effect size renders this result inconclusive.
- The binary logistic regression shows that LIKE does in deed replace other adverbs of approximation.
- Thus, before numeric expressions and quantities LIKE appears to be rather an adverb of approximation than a discourse marker.

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LIKE vs other traditional approximating adverbs

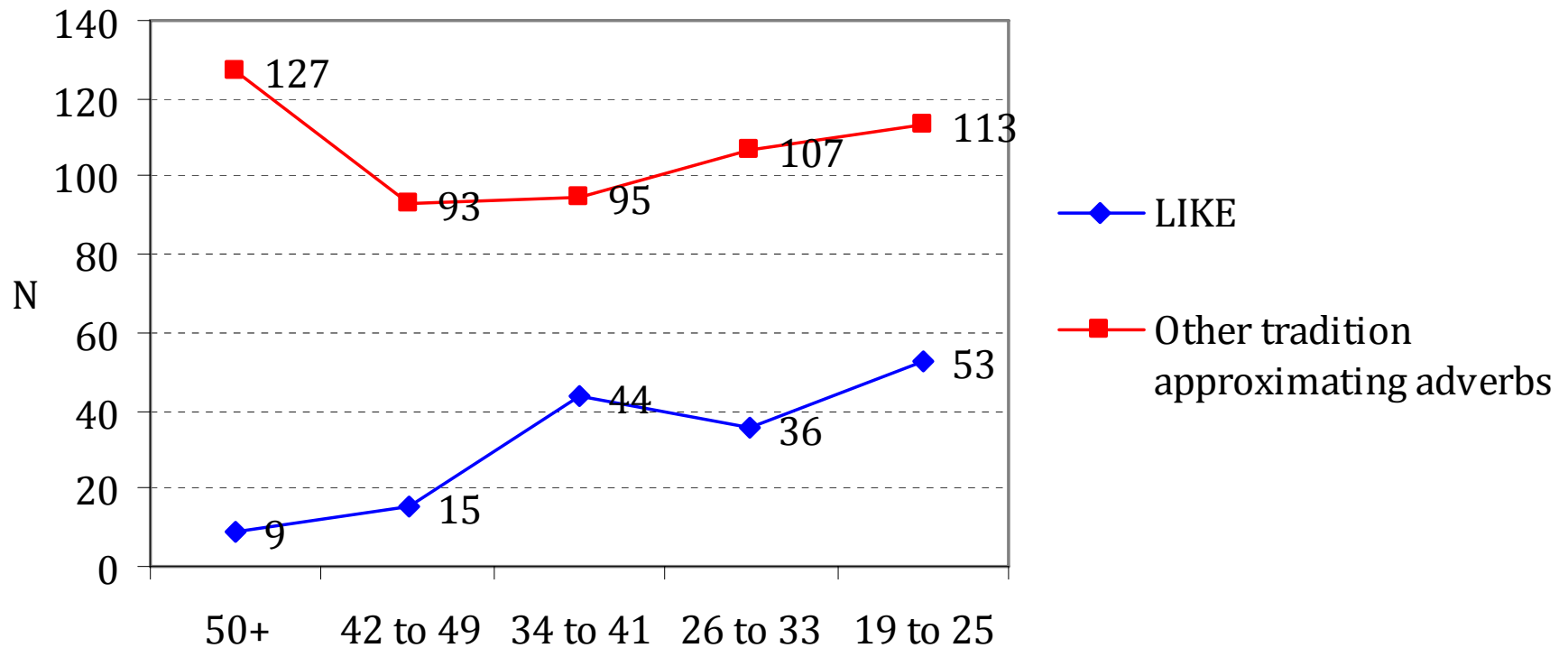


Figure 5: Absolute numbers of LIKE and traditional approximating adverbs before numbers and quantities.

LIKE vs other traditional approximating adverbs

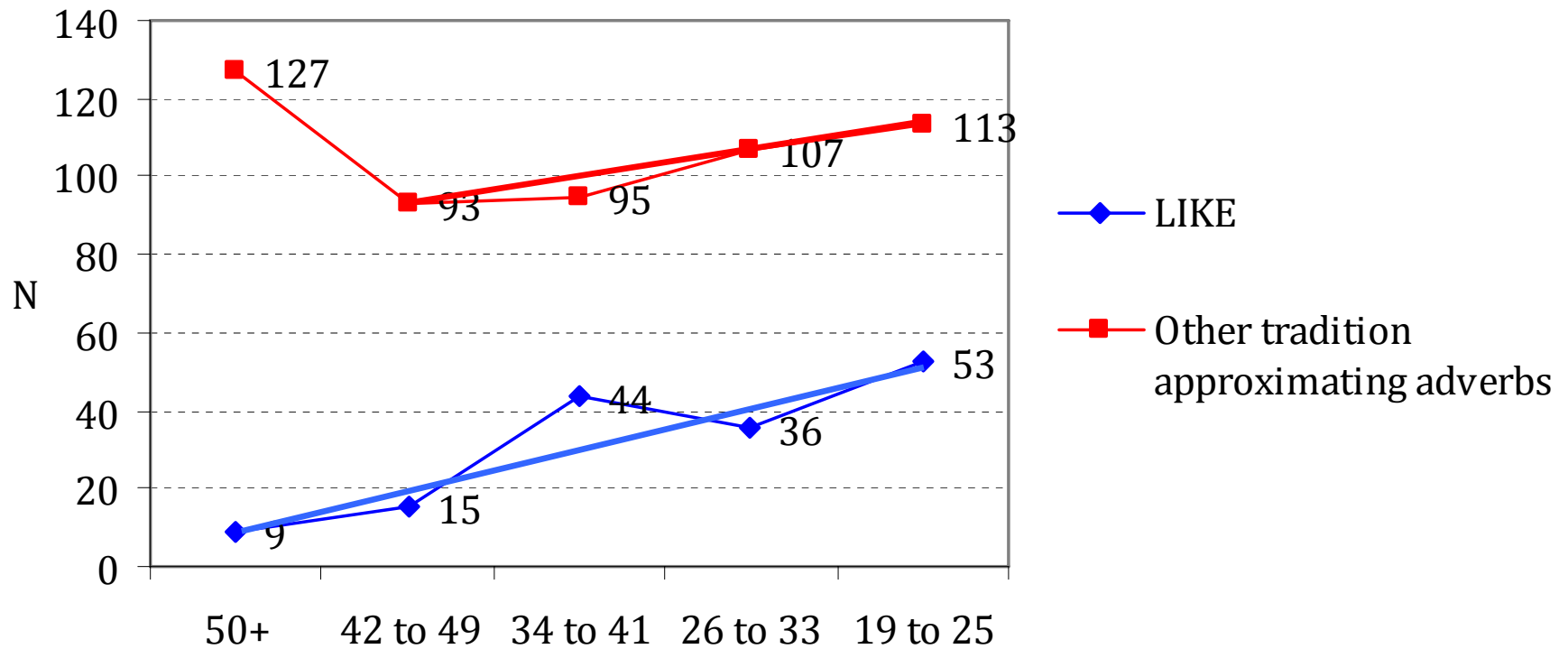


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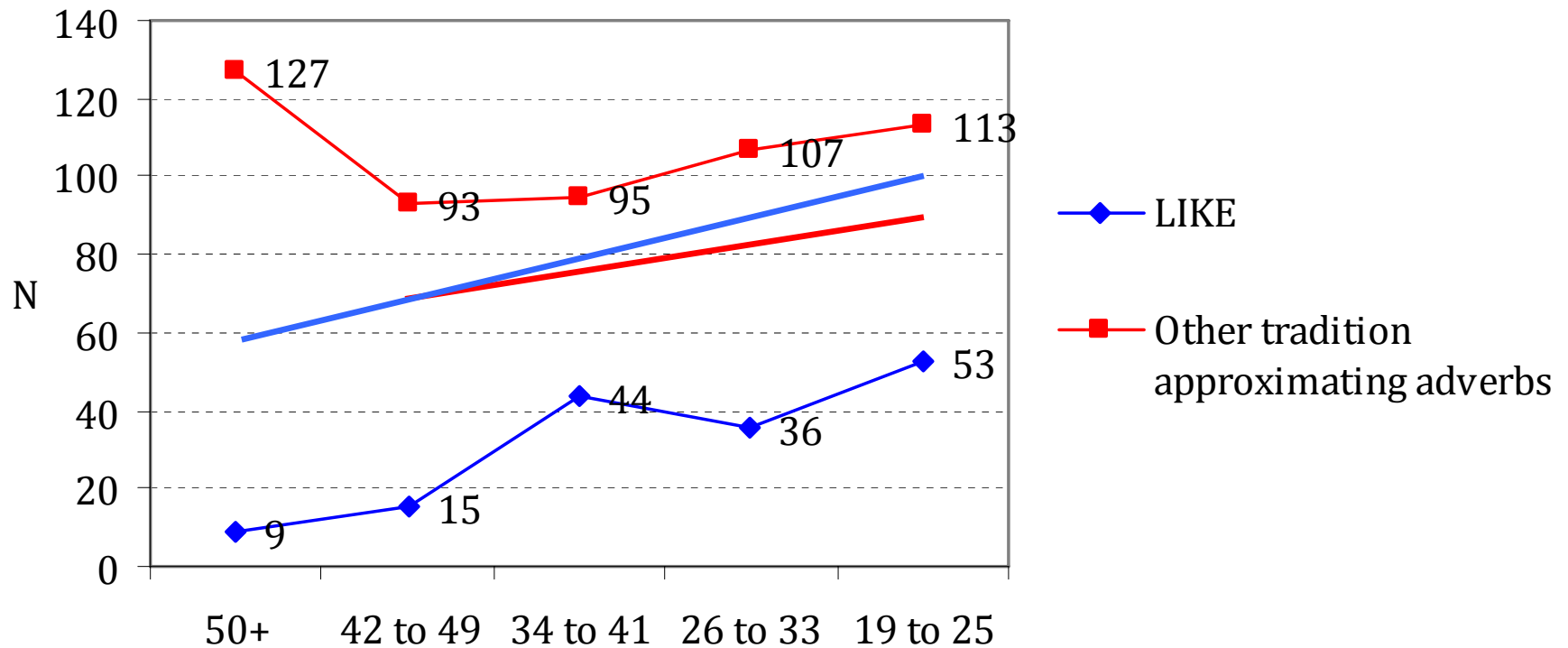


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