Ongoing Change in the New Zealand English Intensifier System

Dr. Martin Schweinberger
www.martinschweinberger.de

Habilitation project
Acquisition, Variation, and Diachronic Development of Intensification in English

- synchronic quantitative corpus–based study
- adjectival intensification in New Zealand English (NZE)
- based on the New Zealand component of the *International Corpus of English* (ICE-NZ)

Intensification

Examples

(1) yeah... just it would make it so awkward eh you know (ICE-NZ S1A-001:1$M)

(2) um... sara's got a really nice sleeveless green... you know coat jacket (ICE-NZ S1A-002:1$Q)

(3) she was a very nervous sort of a woman (ICE-NZ S1A-018:1$A)

Intensification

Intensification is related to the semantic category of *degree* (degree adverbs) and ranges between very low intensity (downtoning) and very high (amplifiers) (Quirk et al. 1985: 589–590).

- Amplifiers (Tagliamonte 2008)
  - Maximizers (e.g. *completely*)
  - Boosters (e.g. *very much*)
- Downloners
  - Approximators (e.g. *almost*)
  - Compromisers (e.g. *more or less*)
  - Diminishers (e.g. *partly*)
  - Minimizers (e.g. *hardly*)

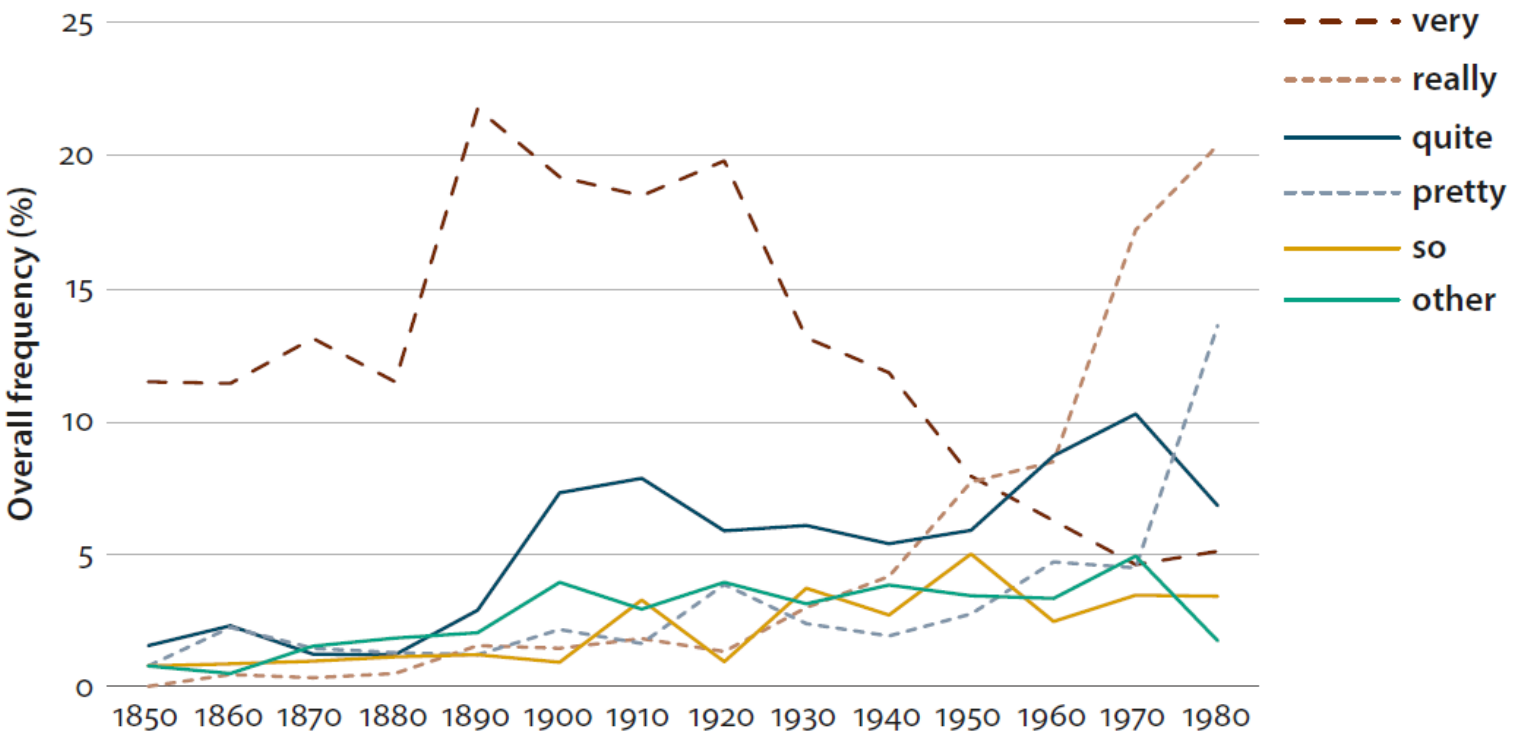
Previous Research

- Intensification...
  - major area of grammatical change (cf. Brinton and Arnovick 2006: 441)
  - crucial for the "social and emotional expression of speakers" (Ito and Tagliamonte 2003: 258)
  - teenage talk and young(ish) speakers (Bauer and Bauer 2002; Macaulay 2006)
  - female speakers (Tagliamonte 2006, 2008; D'Arcy 2015)

Previous Research

- Ongoing changes are accompanied by . . .
  - gender and age differences (apparent time construct)
  - differences in the syntactic function (predicative vs attributive)
  - the semantic type of the modified adjective
  - emotional value of the modified adjective (emotional vs non–emotional)
- Intensifying *really* replaces *very* (lexical replacement) (cf. D'Arcy 2015; Ito and Tagliamonte 2003; Tagliamonte 2005, 2008)

Previous study of intensification in New Zealand English (D'Arcy 2015)



(D'Arcy 2015: 468)

Research Question

Q_1:

Is the NZE Intensifier system currently undergoing change?

ICE New Zealand

ICE New Zealand

New Zealand component of the *International Corpus of English* (Bauer et al. 1999)

- released in 1999 (*The Victoria University of Wellington*)
- consists of one million words (600,000 spoken and 400,000 written)
- representing diverse spoken and written text types
- here only private dialogues (200,000 words)

Data Processing

Data Processing

- Split spoken data into utterances
- Removal of meta information
- Part–of-speech tagging
- Retrieving adjectives (PoS–tag JJ)
- Determining whether adjective is preceded by an intensifying adverb (PoS–tag RB)

Data Processing

- Determining the syntactic type of adjective (predicative vs attributive (if followed by NN* tag))
- Removal of
  - negated adjectives
  - comparative and superlative forms
  - non–intensifiable forms
    (categorical, e.g. nationalities | locations: *asian*, *Asia*)
- Sentiment Analysis
  determines the emotional value of adjectives based on the *Word-Emotion Association Lexicon* (Mohammad and Turney 2013)
- Manual cross–evaluation of automated classification
- Adding speaker information (age, sex, etc.).

Data Summary

Data Summary: ICE-NZ data

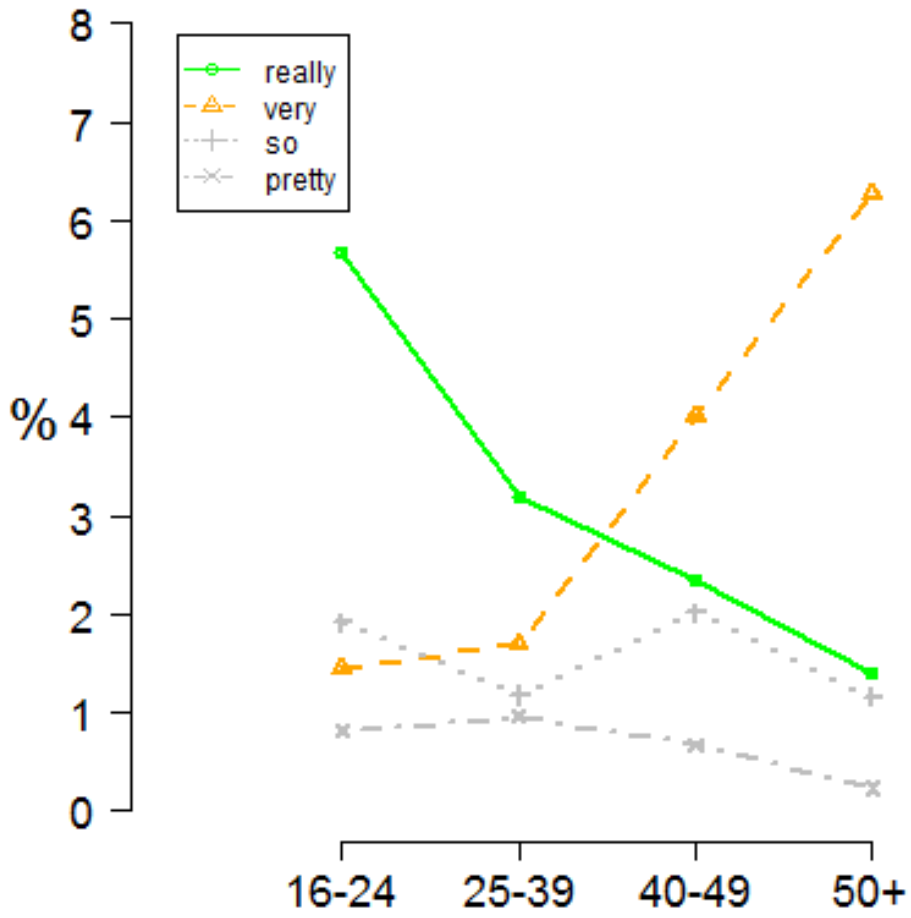
Age	**Sex**	**Speakers** (N)	**Adj.** (N)	**Int.** (N)	**Int.** (%)
16-24	female	39	1102	140	12.7
16-24	male	29	811	81	10.0
25-39	female	23	629	65	10.3
25-39	male	16	481	35	7.3
40-49	female	16	509	60	11.8
40-49	male	9	172	7	4.1
50+	female	7	259	27	10.4
50+	male	6	236	25	10.6
Total		145	4199	440	10.5

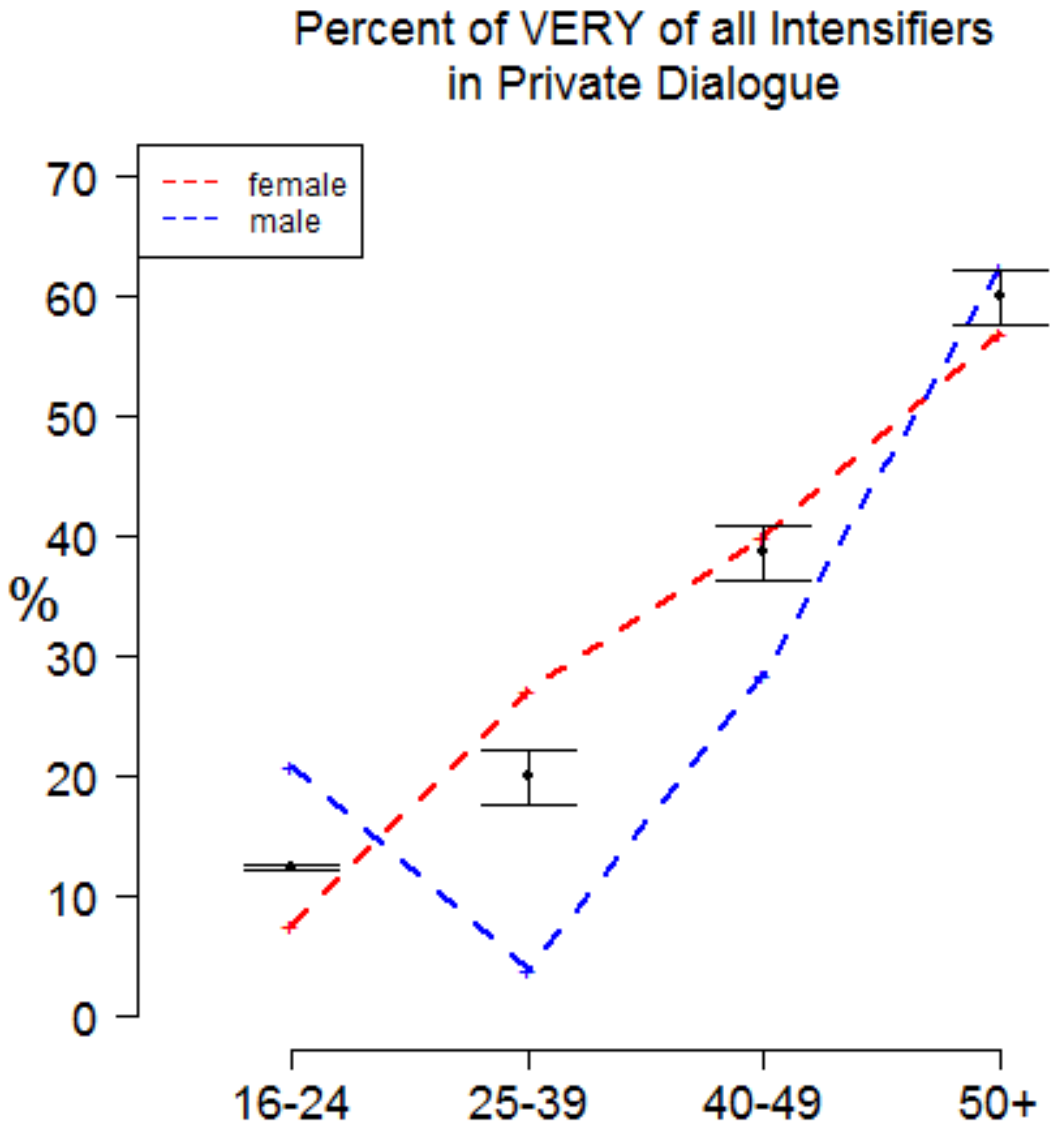
Data Summary: Intensifiers ICE-NZ

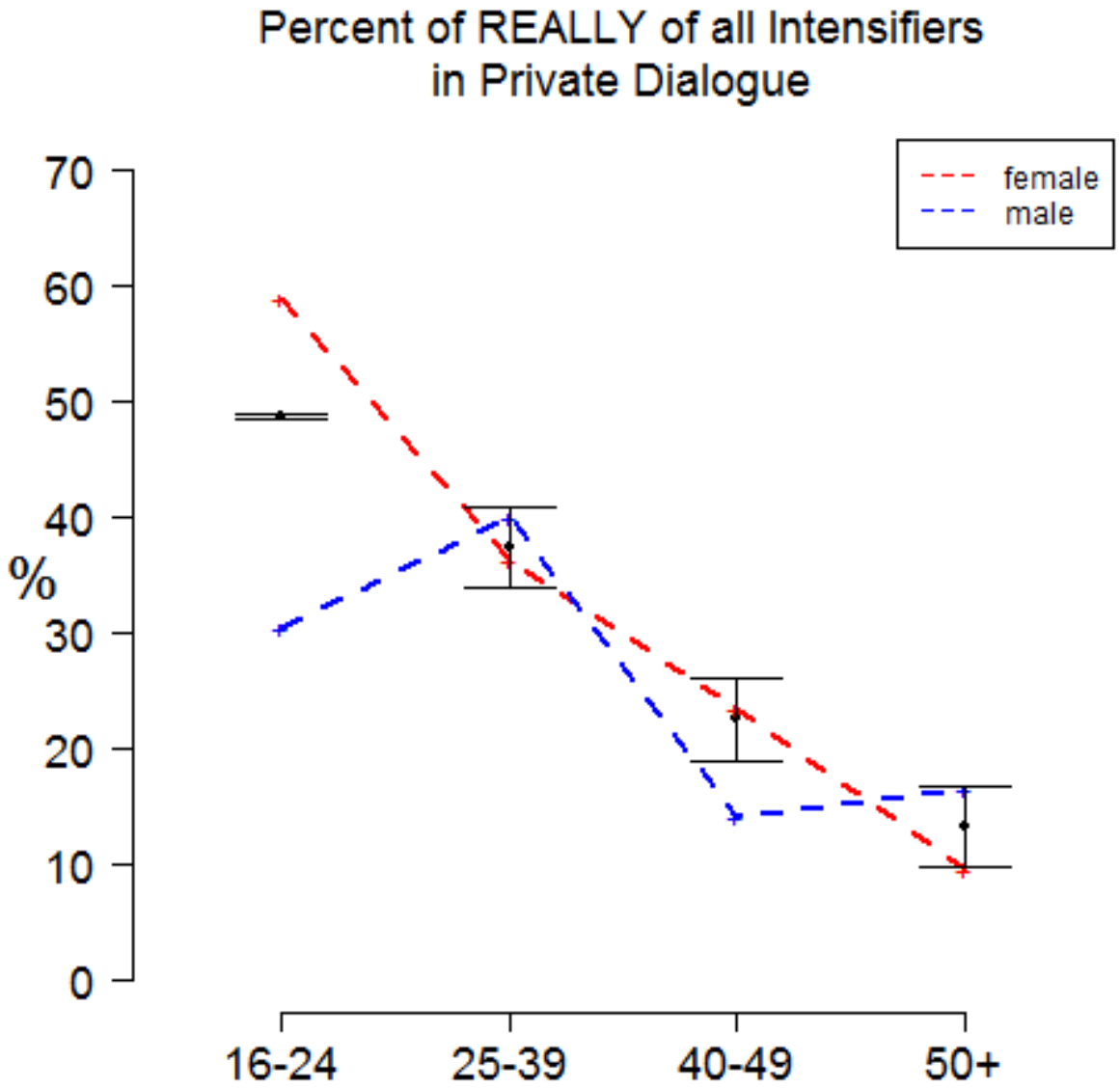
Intensifier	**N**	**%**	**Int.** (%)
∅ Intensification	3759	89.52	
really	150	3.57	34.09
very	96	2.29	21.82
so	66	1.57	15.00
too	34	0.81	7.73
pretty	29	0.69	6.59
real	18	0.43	4.09
well	7	0.17	1.59
absolutely, right, totally	5	0.36	3.42
bloody	4	0.10	0.91
crazy, particularly	2	0.10	0.90
actually, badly, completely, definitely, dreadfully, enormously, entirely, excruciatingly, fucking, fully, horrendously, incredibly, obviously, purely, shocking, true, wicked	1	0.34	3.91
Total	4199	10.48	100

Results
—
Visualization

Intensifiers across Age Cohorts




Percent of VERY of all Intensifiers
in Private Dialogue
female
male
70
60
50
40
30
20
10
0
%
16-24
25-39
40-49
50+


Percent of REALLY of all Intensifiers
in Private Dialogue
female
male
70
60
50
40
30
20
10
0
%
16-24
25-39
40-49
50+

Statistical Analysis

Research question

Q_2:

Which factors correlate with the use of *really* (innovation)?
(age, sex, syntactic function, . . .)

Statistical Analysis

- Mixed–effects binomial logistic regression models
  - AIC based, step-wise step-up model fitting

Dependent Variable(s)		
really	nominal	yes/no occurrence of pre-adjectival *really*

Independent Variable(s)				
age	categorical	age groups in ascending order	extra linguistic	
sex	nominal	male | female		
eth	nominal	pakeha | maori		
occ	nominal	acmp | sml		
emo	nominal	emotional | nonemotional	intra linguistic	
fun	nominal	attributive | predicative		
sem	categorical	semantic type of adjective		
grad	nominal	gradable | nongradable		

Regression Results

Regression Results

	Group(s)	Variance	Std. Dev.	L.R.χ^2(df1)	Sig.
Random Effect(s)	flid	0.44	0.66	29	p<.001***
Fixed Effect(s)	**Estimate**	**VIF**	**OddsRatio**	**z value**	**Sig.**
(Intercept)	-5.04		0.01	-14.55	p<.001***
age:25-39	-0.57	1.07	0.57	-2.09	p<.05*
age:40-49	-0.94	1.08	0.39	-2.7	p<.01**
age:50+	-1.48	1.03	0.23	-2.98	p<.01**
sex:male	-0.85	1.01	0.43	-3.46	p<.001***
fun:predicative	0.74	1	2.09	4.09	p<.001***
grad:nograd	1.88	1.01	6.52	6.31	p<.001***
emo:emotional	0.79	1.01	2.21	4.49	p<.001***
Model statistics					**Value**
Number of Groups					145
Cases in model					4199
Observed successes					150
R^2 (Nagelkerke)					0.155
C					0.844
Somers' D_{xy}					0.688
Prediction accuracy					96.43%
Model LL Ratio Test			L.R.χ^2(df8)	176.67	p<.001***

Regression Results

	Group(s)	Variance	Std. Dev.	L.R.χ^2(df1)	Sig.
Random Effect(s)	flid	0.44	0.66	29	p<.001***
Fixed Effect(s)	**Estimate**	**VIF**	**OddsRatio**	**z value**	**Sig.**
(Intercept)	-5.04		0.01	-14.55	p<.001***
age:25-39	-0.57	1.07	0.57	-2.09	p<.05*
age:40-49	-0.94	1.08	0.39	-2.7	p<.01**
age:50+	-1.48	1.03	0.23	-2.98	p<.01**
sex:male	-0.85	1.01	0.43	-3.46	p<.001***
fun:predicative	0.74	1	2.09	4.09	p<.001***
grad:nograd	1.88	1.01	6.52	6.31	p<.001***
emo:emotional	0.79	1.01	2.21	4.49	p<.001***
Model statistics					**Value**
Number of Groups					145
Cases in model					4199
Observed successes					150
R^2 (Nagelkerke)					0.155
C					**0.844**
Somers' D_{xy}					**0.688**
Prediction accuracy					**96.43%**
Model LL Ratio Test			L.R.χ^2(df8)	176.67	p<.001***

Regression Results

	Group(s)	Variance	Std. Dev.	L.R.χ^2(df1)	Sig.
Random Effect(s)	flid	0.44	0.66	29	p<.001***
Fixed Effect(s)	**Estimate**	**VIF**	**OddsRatio**	**z value**	**Sig.**
(Intercept)	-5.04		0.01	-14.55	p<.001***
age:25-39	-0.57	1.07	0.57	-2.09	p<.05*
age:40-49	-0.94	1.08	0.39	-2.7	p<.01**
age:50+	-1.48	1.03	0.23	-2.98	p<.01**
sex:male	-0.85	1.01	0.43	-3.46	p<.001***
fun:predicative	0.74	1	2.09	4.09	p<.001***
grad:nograd	1.88	1.01	6.52	6.31	p<.001***
emo:emotional	0.79	1.01	2.21	4.49	p<.001***
Model statistics					**Value**
Number of Groups					**145**
Cases in model					**4199**
Observed successes					**150**
R^2 (Nagelkerke)					**0.155**
C					0.844
Somers' D_{xy}					0.688
Prediction accuracy					96.43%
Model LL Ratio Test			L.R.χ^2(df8)	176.67	p<.001***

Regression Results

	Group(s)	Variance	Std. Dev.	L.R.χ^2(df1)	Sig.
Random Effect(s)	flid	0.44	0.66	29	p<.001***
Fixed Effect(s)	**Estimate**	**VIF**	**OddsRatio**	**z value**	**Sig.**
(Intercept)	-5.04		0.01	-14.55	p<.001***
age:25-39	-0.57	1.07	**0.57**	-2.09	p<.05*
age:40-49	-0.94	1.08	**0.39**	-2.7	p<.01**
age:50+	-1.48	1.03	**0.23**	-2.98	p<.01**
sex:male	-0.85	1.01	0.43	-3.46	p<.001***
fun:predicative	0.74	1	2.09	4.09	p<.001***
grad:nograd	1.88	1.01	6.52	6.31	p<.001***
emo:emotional	0.79	1.01	2.21	4.49	p<.001***
Model statistics					**Value**
Number of Groups					145
Cases in model					4199
Observed successes					150
R^2 (Nagelkerke)					0.155
C					0.844
Somers' D_{xy}					0.688
Prediction accuracy					96.43%
Model LL Ratio Test			L.R.χ^2(df8)	176.67	p<.001***

Regression Results

	Group(s)	Variance	Std. Dev.	L.R.χ^2(df1)	Sig.
Random Effect(s)	flid	0.44	0.66	29	p<.001***
Fixed Effect(s)	**Estimate**	**VIF**	**OddsRatio**	**z value**	**Sig.**
(Intercept)	-5.04		0.01	-14.55	p<.001***
age:25-39	-0.57	1.07	0.57	-2.09	p<.05*
age:40-49	-0.94	1.08	0.39	-2.7	p<.01**
age:50+	-1.48	1.03	0.23	-2.98	p<.01**
sex:male	-0.85	1.01	**0.43**	-3.46	p<.001***
fun:predicative	0.74	1	2.09	4.09	p<.001***
grad:nograd	1.88	1.01	6.52	6.31	p<.001***
emo:emotional	0.79	1.01	2.21	4.49	p<.001***
Model statistics					**Value**
Number of Groups					145
Cases in model					4199
Observed successes					150
R^2 (Nagelkerke)					0.155
C					0.844
Somers' D_{xy}					0.688
Prediction accuracy					96.43%
Model LL Ratio Test			L.R.χ^2(df8)	176.67	p<.001***

Regression Results

	Group(s)	Variance	Std. Dev.	L.R.χ^2(df1)	Sig.
Random Effect(s)	flid	0.44	0.66	29	p<.001***
Fixed Effect(s)	**Estimate**	**VIF**	**OddsRatio**	**z value**	**Sig.**
(Intercept)	-5.04		0.01	-14.55	p<.001***
age:25-39	-0.57	1.07	0.57	-2.09	p<.05*
age:40-49	-0.94	1.08	0.39	-2.7	p<.01**
age:50+	-1.48	1.03	0.23	-2.98	p<.01**
sex:male	-0.85	1.01	0.43	-3.46	p<.001***
fun:predicative	0.74	1	**2.09**	4.09	p<.001***
grad:nograd	1.88	1.01	**6.52**	6.31	p<.001***
emo:emotional	0.79	1.01	**2.21**	4.49	p<.001***
Model statistics					**Value**
Number of Groups					145
Cases in model					4199
Observed successes					150
R^2 (Nagelkerke)					0.155
C					0.844
Somers' D_{xy}					0.688
Prediction accuracy					96.43%
Model LL Ratio Test			L.R.χ^2(df8)	176.67	p<.001***

Summary & Discussion

Intensifying *really*

- use declines almost linearly with age (incoming innovation)
- is dis-preferred by male speakers (female dominated change)
- collocates with adjectives that are emotional
- used preferentially in predicative function
- is preferred by non-gradual adjectives

Really is heavily stratified and correlates with various factors (age, sex, syntactic function, . . .).

Conclusion & Outlook

Conclusion

- The NZE intensifier system is currently undergoing change
- *Really* as an incoming variant replaces the traditional form *very*
- The observed change is accompanied by heavy stratification

But why is *really* taking over???

Outlook

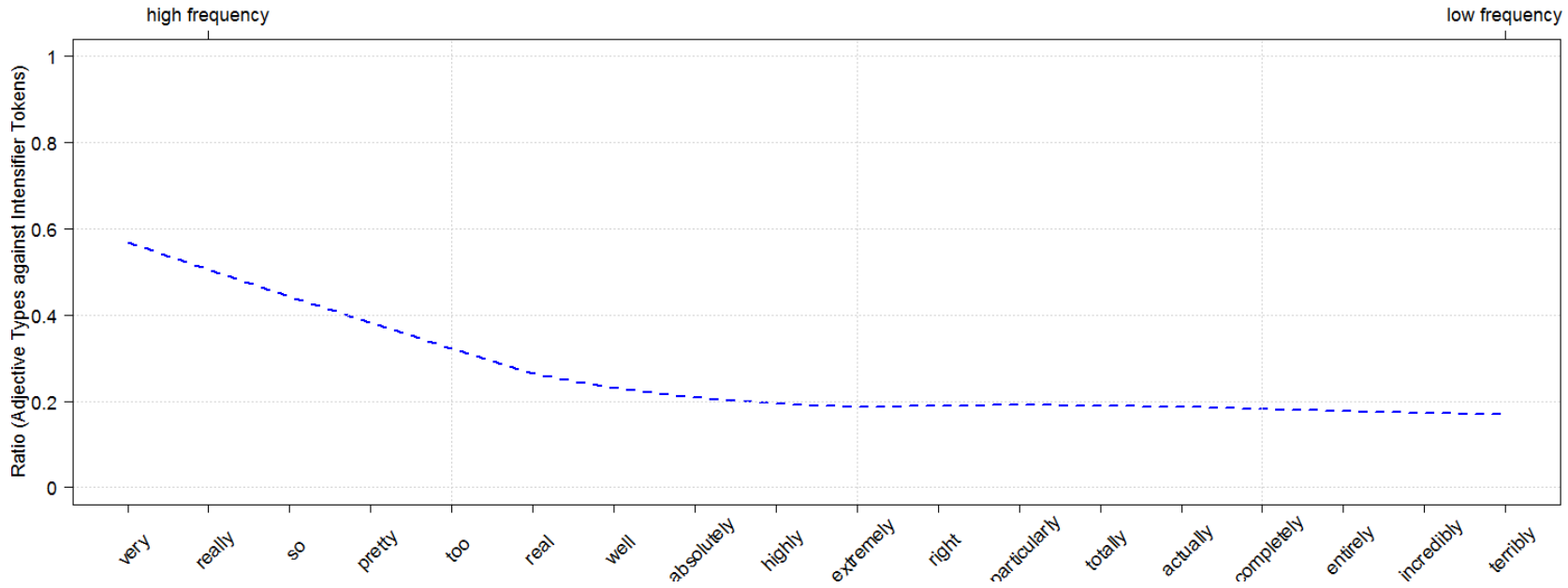
Q_3:

What sets successful innovative intensifiers apart from traditional ones (going extinct)?

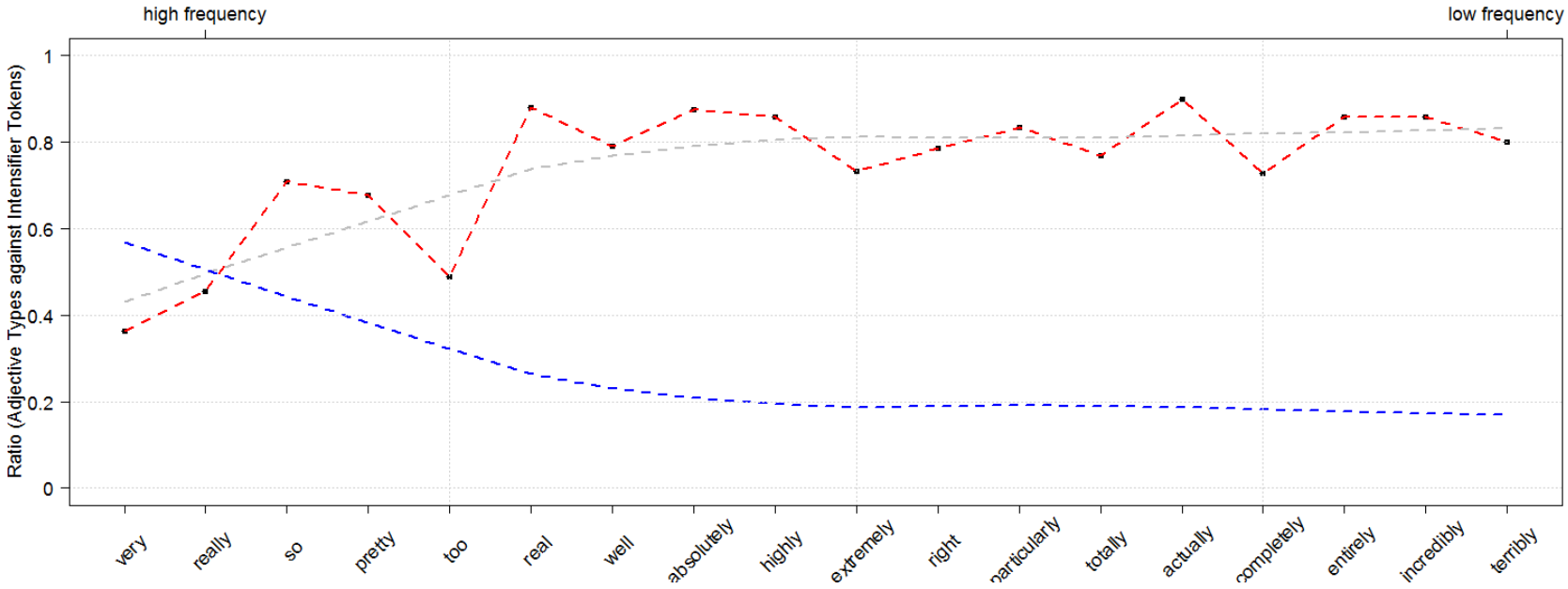
H_1:

Successful innovative intensifiers associate with/bind strongly to few specific adjectives while traditional intensifiers are very general (bleached) and not tied to specific adjectives.

Intensifier tokens : adjective types



Intensifier tokens : adjective types



Intensifier	Tokens	Adj. Types	Ratio
very	604	219	0.36
terribly	5	4	0.80

(all spoken ICE NZ sections combined)

Finding sig. collocations

- Testing whether a certain intensifier correlates significantly with the occurrence of a particular adjective
- 25,424 Fisher's Exact tests (with Bonferroni correction)

Intensifier	**Adjective**	**OddsRatio**	**Bonf. Corr. Sig**
really	good	6.80	p<.001
very	careful	53.78	p<.01
very	difficult	11.56	p<.001
very	good	3.11	p<.001
very	important	5.53	p<.001
very	large	7.04	p<.01
very	last	0	p<.01
very	new	0	p<.001
very	strong	11.54	p<.001

Adjectives : Intensifiers : Age

<good> (N 138, high frequency)

	Age			
Intensifier	16-24	25-39	40-49	50+
other	8	7	6	6
really	27	9	2	3
very	5	15	20	23

<hard> (N 32, medium frequency)

	Age			
Intensifier	16-24	25-39	40-49	50+
other	5	2	2	0
really	5	3	0	1
very	0	3	4	4

		Age			
Adjective	**Intensifier**	16-24	25-39	40-49	50+
difficult	other	2	3	3	2
difficult	really	0	2	0	0
difficult	very	0	4	5	12
good	other	8	6	6	6
good	really	27	9	2	3
good	very	5	15	20	23
hard	other	5	2	2	0
hard	really	5	3	0	1
hard	very	0	3	4	4
important	other	1	0	2	2
important	really	0	1	1	2
important	very	2	6	4	8
interesting	other	1	1	0	1
interesting	really	1	2	1	2
interesting	very	1	0	2	8
little	other	0	0	1	1
little	really	0	0	0	0
little	very	0	5	4	11
nice	other	0	0	0	0
nice	really	7	1	1	1
nice	very	3	2	5	3
strong	other	0	3	0	0
strong	really	0	0	0	0
strong	very	0	2	4	8

		Age			
Adjective	**Intensifier**	16-24	25-39	40-49	50+
difficult	really	0	2	0	0
good	really	27	9	2	3
hard	really	5	3	0	1
important	really	0	1	1	2
interesting	really	1	2	1	2
little	really	0	0	0	0
nice	really	7	1	1	1
strong	really	0	0	0	0
difficult	very	0	4	5	12
good	very	5	15	20	23
hard	very	0	3	4	4
important	very	2	6	4	8
interesting	very	1	0	2	8
little	very	0	5	4	11
nice	very	3	2	5	3
strong	very	0	2	4	8
difficult	other	2	3	3	2
good	other	8	6	6	6
hard	other	5	2	2	0
important	other	1	0	2	2
interesting	other	1	1	0	1
little	other	0	0	1	1
nice	other	0	0	0	0
strong	other	0	3	0	0

increasing trend
receding trend

Collocations by Age

Age	Adjective	Intensifier	OddsRatio	Bonf. Corr. Sig
16-24	really	good	5.44	p<.001
50+	very	difficult	20.07	p<.001
50+	very	good	4.72	p<.001
50+	very	strong	21.33	p<.01

Maybe. . .

- highly frequent intensifiers collocate with more strongly with adjectives than infrequent intensifiers.
- successful variants collocate with frequent adjectives and thus block other intensifiers from taking over.
- *really* has become successful because it "steals" highly frequent collocates from *very* (good)!
- changes in the intensifier system go hand in hand with changes in collocation strength.

→ Diachronic analysis of collocation patterns of intensifiers

Thank you so, really, very much!

Bauer, L. and W. Bauer (2002). Adjective boosters in the english of young new zealanders. *Journal of English Linguistics 30*, 244–257.

Bauer, L., A. Bell, D. Britain, G. Kennedy, C. Lane, M. Meyerhoff, and M. Stubbe (1999). The new zealand component of the international corpus of english (ice-nz).

Brinton, L. J. and L. K. Arnovick (2006). *The English Language: A Linguistic History*. Oxford: Oxford University Press.

D'Arcy, A. F. (2015). Stability, stasis and change – the longue durée of intensification. *Diachronica 32*(04), 449–493.

Ito, R. and S. Tagliamonte (2003). Well weird, right dodgy, very strange, really cool: Layering and recycling in english intensifiers. *Language in Society 32*, 257—279.

Macaulay, R. (2006). Pure grammaticalization: The development of a teenage intensifier. *Language Variation and Change 18*, 267—283.

Mohammad, S. M. and P. D. Turney (2013). Crowdsourcing a word–emotion association lexicon. *Computational Intelligence 29*(3), 436–465.

Quirk, R., S. Greenbaum, G. Leech, and J. Svartvik (1985). *A Comprehensive Grammar of the English Language*. London & New York: Longman.

Tagliamonte, S. (2005). So who? like how? just what?: Discourse markers in the conversations of young canadians. *Journal of Pragmatics 37*(11), 1896–1915.

Tagliamonte, S. (2006). "so cool, right?": Canadian english entering the 21st century. *The Canadian Journal of Linguistics/La revue canadienne de linguistique 51*(2), 309–331.

Tagliamonte, S. (2008). So different and pretty cool! recycling intensifiers in toronto, canada. *English Language and Linguistics 12*(2), 361–394.

Ongoing Change in the New Zealand English Intensifier System

Dr. Martin Schweinberger
www.martinschweinberger.de