A corpus-based analysis of ongoing change in the adjective amplifier systems of Hong Kong, Indian, and Philippine English

Dr. Martin Schweinberger

slides available at

www.martinschweinberger.de

m.schweinberger@uq.edu.au

R code upon request

Phenomenon: Adjective Amplification

(1) And you just have to hint well then it's a very good hint (ICE-AUS:S1A-012$A)

(2) They're all really cheap <#> They're all really nice, the t-shirts in there (ICE-AUS:S1A-009$B)

(3) It was so bad (ICE-AUS:S1A-044$B)

Intensification

Related to the semantic category of *degree* (degree adverbs) and ranges from low (downtoning) to high (amplifiers)

(?: 589–590)

- Amplifiers
  - Boosters, e.g. *very*
  - Maximizers, e.g. *completely*
- Downtoners
  - Approximators, e.g. *almost*
  - Compromisers, e.g. *more or less*
  - Diminishers, e.g. *partly*
  - Minimizers, e.g. *hardly*

Motivation

Amplification

- major area of gramm. change (cf. **?**: 441)
- crucial for "social and emotional expression of speakers" (**?**: 258)
- linguistic subsystem which allows precise circumscription of a variable context (**??**: 49)
- ideal case for testing mechanisms underlying language change!

Previous Research

Amplification

- substantial amount of corpus-based research on intensification (e.g ??????)
  → but mostly either focused on individual intensifiers or without regard to the intensified adjectives
- recently amplifier-adjective bigrams have come more into focus (e.g. ???)
- associated with teenage talk and young(ish) (female) speakers
  (?????)

Focus

- Amplifying *really* replaces *very* (lexical replacement)

(see ? for NZE; see ? and ? for North East British English, ? and ? for Toronto English; see ? for South Eastern Ontario English)

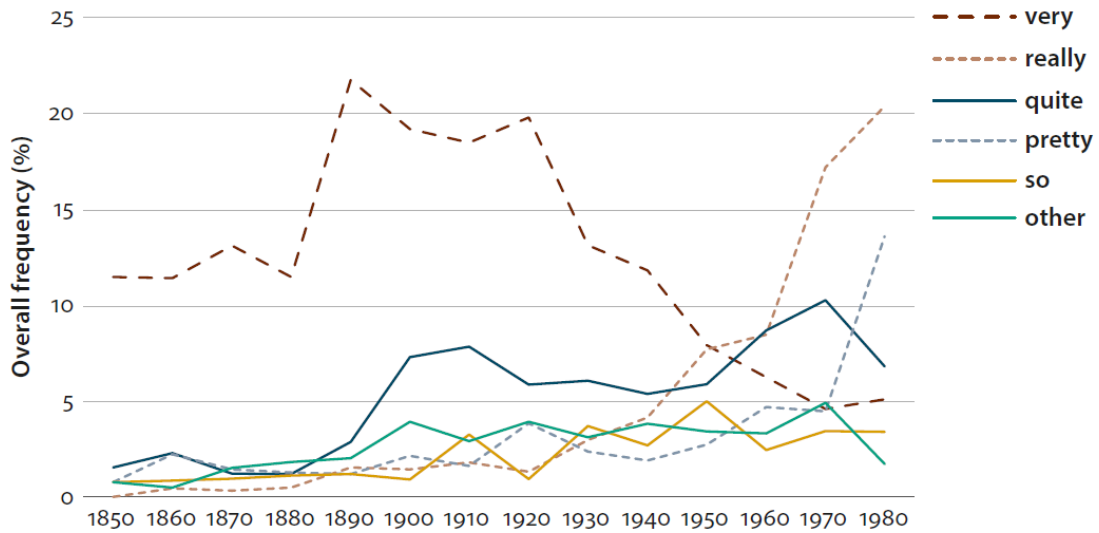

Figure 1: Amplifier variants in NZE across real-time (from ?: 468)

Research Question

Q

Are Asian Englishes in-line with the trend among traditional L1 and other post-colonial varieties of English in that *very* is being replaced by *really*?

Hypotheses

$H_1 1$

HKE, IndE, PhiE align with other varieties:
really is replacing *very*
as the default adjective amplifier

$H_1 2$

Aligned with AmE/AusE → more advanced
Aligned with GBE → more lagging behind

Data and Methodology

Corpus data: International Corpus of English (ICE)

- Hong Kong, Indian, and Philippine ICE components
- Shared design (allows meaningful comparisons between varieties of English)
- One million words (600,000 spoken and 400,000 written) from diverse spoken and written text types (cf. next slide) with each file containing app. 2,000 words.
- Accompanied by metadata and biodata of speaker (extremely interesting resource for variationist analyses)

Corpus data: International Corpus of English (ICE)

Mode	Conversation type	Register	Text type	Number of text files
SPOKEN (300)	Dialogues (180)	Private (100)	Face-to-face conversations	90
			Phonecalls	10
		Public (80)	Classroom Lessons	20
			Broadcast Discussions	20
			Broadcast Interviews	10
			Parliamentary Debates	10
			Legal cross-examinations	10
			Business Transactions	10
	Monologues (120)	Unscripted (70)	Spontaneous commentaries	20
			Unscripted Speeches	30
			Demonstrations	10
			Legal Presentations	10
		Scripted (50)	Broadcast News	20
			Broadcast Talks	20
			Non-broadcast Talks	10

Data Processing

- Spoken private dialogue section of each component
- Part–of-speech tagged (OpenNLP vis R) the
- Retrieved adjectives (PoS–tag JJ)
- Determined whether adjective were preceded by an amplifier (member of a predefined set of amplifiers)
- Sentiment Analysis of adjective types (?)

Data Processing

- Determined if the same amplifier type had occurred within a span of three adjective slots previously ($\rightarrow$ Priming)
- Token freq. of adjective type by age group (?)
- Removed...
  - negated adjectives
  - comparative and superlative forms
  - adjectives that were not amplified by at least two different amplifier types
  - adjectives that were preceded by downtoners
  - strange forms (e.g. *much, many*)

Data Processing

- Semantic classification of adjective (simplified version of **?**, cf. also **????**)
- Manual cross–evaluation of automated classification
- Metadata and speaker information

Variable Coding

Dependent Variable(s)				
Variant	nominal	yes/no occurrence of pre-adjectival *really, so, very*		
Independent Variable(s)				
Age	ordinal	min. young | middle-aged | old	extra linguistic	
Gender	nominal	Female | Male	extra linguistic	
(Education)	nominal	College | NoCollege	extra linguistic	
Priming	nominal	prime | noprime	extra linguistic	
Emotionality	categorical	negative | nonemotional | positive	intra linguistic	
Function	nominal	attributive | predicative	intra linguistic	
SemanticCat.	categorical	semantic category of adj.	intra linguistic	
Gradability	numeric	Gradability score based on BNC	intra linguistic	
Adjective	categorical	bad | funny | good | interesting | nice | other	intra linguistic	
Frequency	numeric	Frequency of adj. by age group	intra linguistic	

Statistical analysis

Statistical analysis: options

Model	Dep. var.	Interactions	Nested data	Output	Overfitting
Tree-based models					
Conditional-Inference Tree (CIT)	✓	✓	X	✓	X
Random Forests (RF)	✓	✓	X	X	✓
Regression models					
Multinomial mixed-effects (GLMMM)	✓	✓	✓	X	✓
Logistic mixed-effects (GLMBLM)	X	✓	✓	✓	✓

→ CIT + run separate GLMBLMs for each variant

Generalized Linear Mixed-Effects Binomial Logistic Regression Model

(??)

What is GLMBLM?

- Standard model for multivariate analyses
- Can handle nested/grouped data structure
- Easy multicollinearity detection

Problems of GLMBLM

- Cannot handle small data sets (well)
- Extremely high β-error rate (?)
  - if sig. effect: ✓
  - if no sig. effect: ???

Results

Results

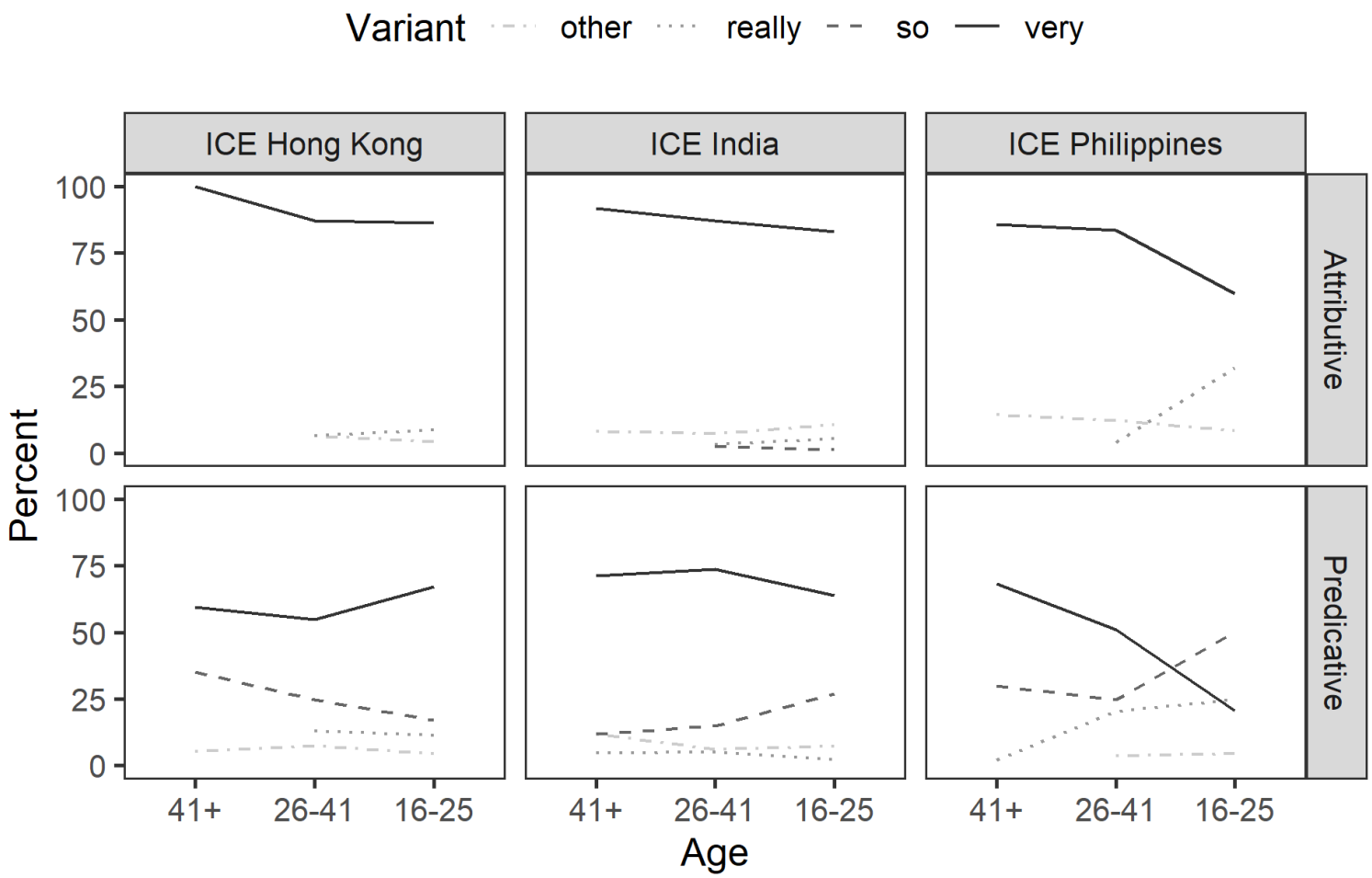

Figure 2: % variants across speaker age by function and corpus.

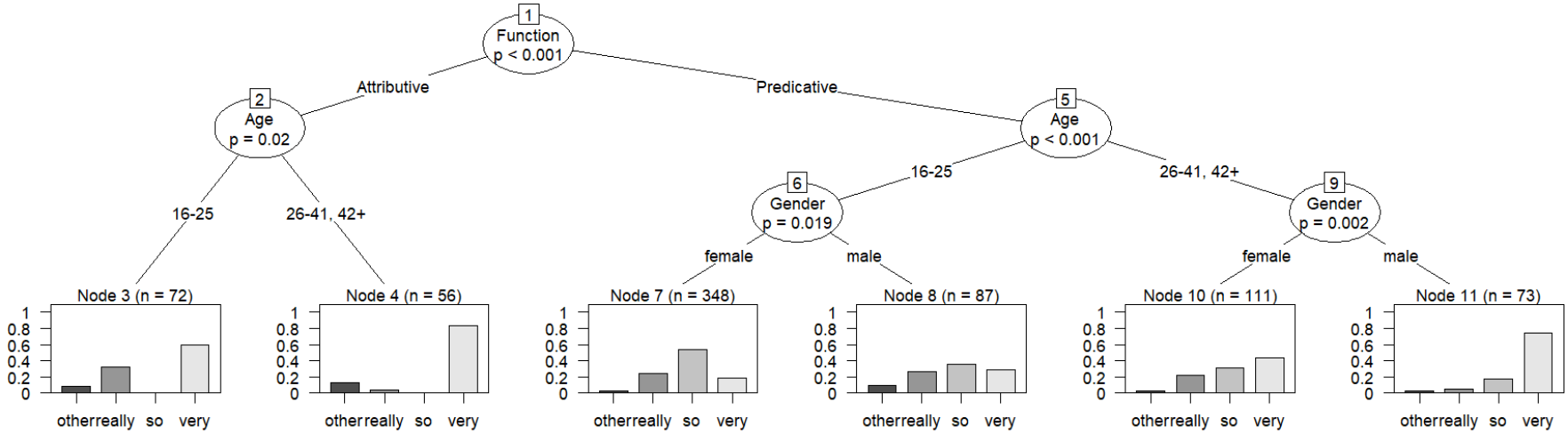

Figure 3: Results of the CIT analysis on ICE-PHI.

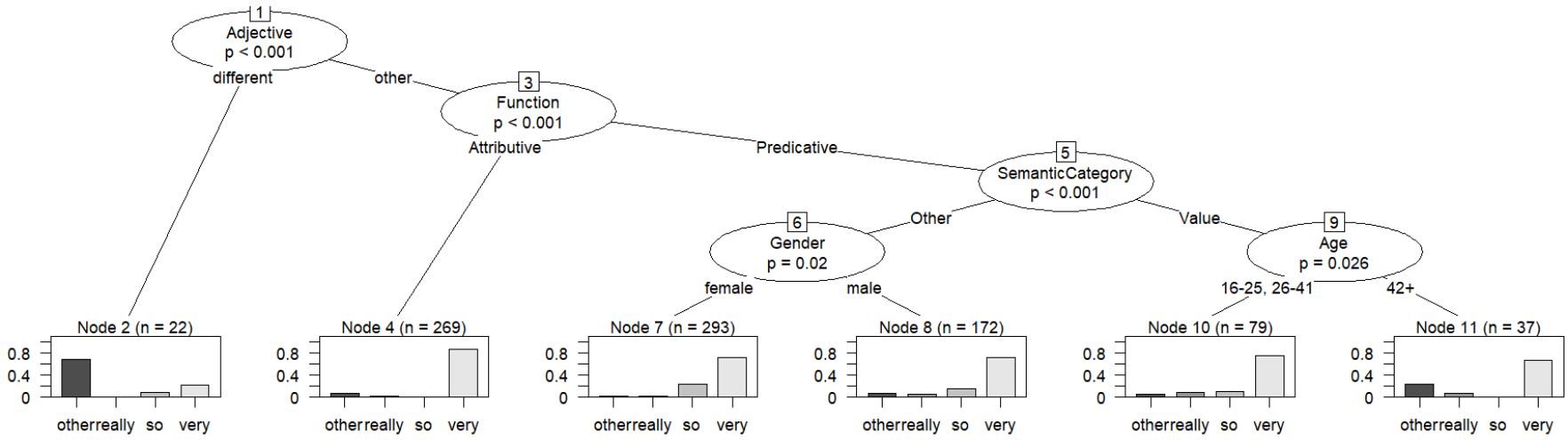

Figure 4: Results of the CIT analysis on ICE-IND.

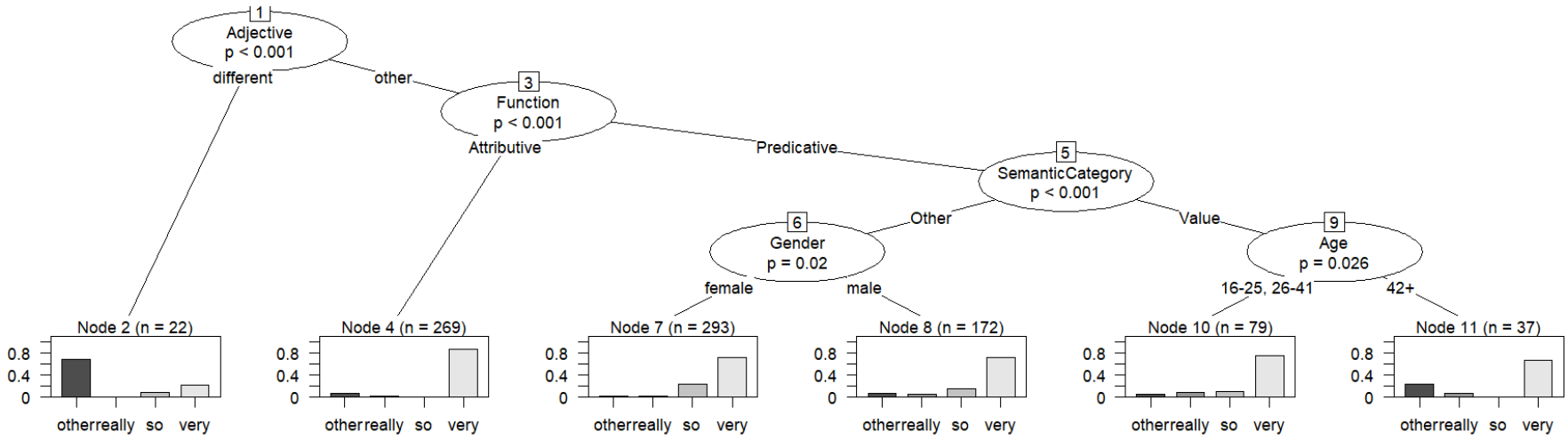

Figure 5: Results of the CIT analysis on ICE-HK.

Results *very* in ICE-PHI

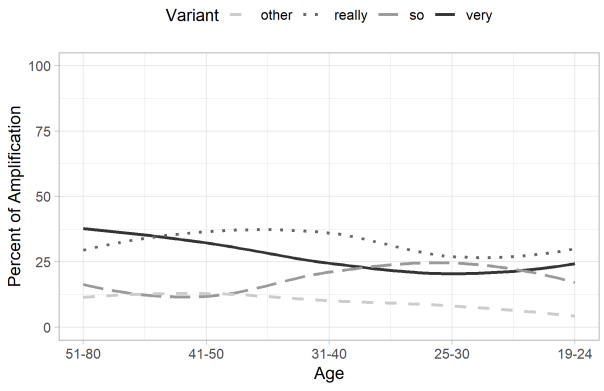

Figure 6: % Variants in CanE.

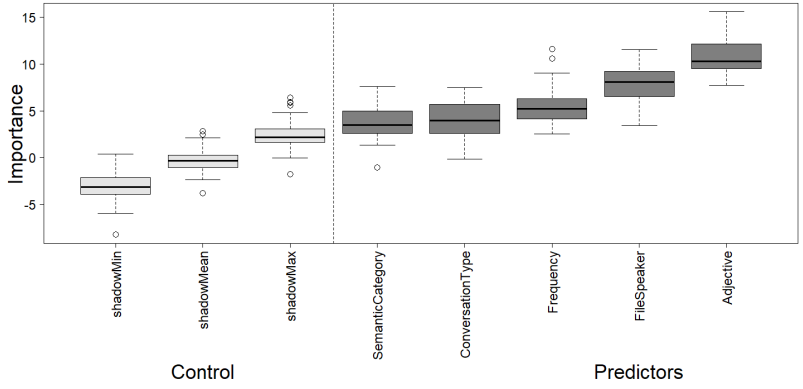

Figure 7: Boruta results for really in CanE.

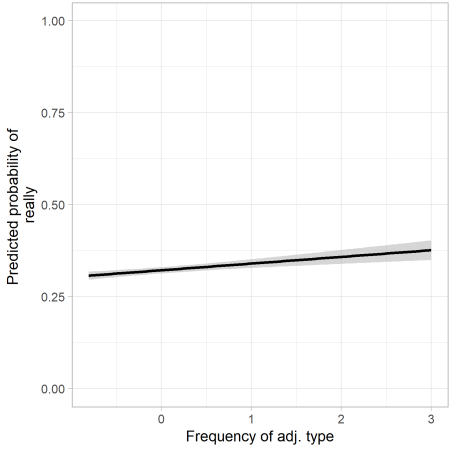

Figure 8: Prob. really in CanE by adj. freq.

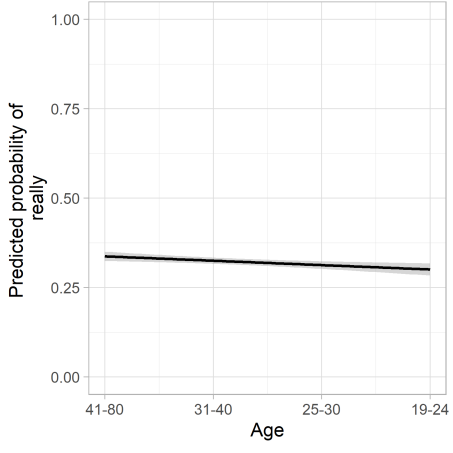

Figure 9: Prob. really in CanE across age.

Discussion & Outlook

Summary

The analysis . . .

- confirms that *really* correlates with adj. freq. (positive correlation between the use of *really* and adjective frequency)
- suggests that lexical replacement is accompanied by (functional) re-organization in addition to diffusion through the speech community (absence of age effects) (see **?**)
- shows that complementing mixed-modeling with Boruta is useful to avoid overlooking significant effects (avoidance of β-errors)

Discussion

- *Really* successfully replaced the dominant form *very* because it collocated with HFAs.
- No signs that *really* of broadening before taking over the system.
- Broadening once dominant (substantiates ? ?)

Argument

1. The co-occurrence with HFAs lead to the innovative variant being used as a more expressive variant to amplify certain HFAs.
2. The frequency of the innovative form increased because it piggybacked on the frequency of the HFA.
3. Increase in use $\rightarrow$ more deeply entrenched.
4. Deeper entrenchment $\rightarrow$ increased ease of retrieval.
5. Higher ease of retrieval $\rightarrow$ advantage over rival variants.
6. Innovative variant broadens because it increasingly co-occurs with more adj. types.

Outlook

Could this be a universal mechanism?

Test if the mechanisms. . .

- can be shown to have worked in analogous changes in English, e.g.
  3^{rd} p. sg. ind. morpheme: <eth> → <(e)s>
- can be shown to have worked in analogous changes in languages other than English

Thank you so, really, very much!

Acknowledgements

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the ICE teams who have compiled the data for the current study (without them the current study would not have been possible)

my colleagues at UQ

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Aijmer, K. (2011). Are you totally spy? a new intensifier in present-day american english. In S. Hancil (Ed.), *Marqueurs discursifs et subjectivité*, pp. 155–172. Rouen: Universités de Rouen and Havre.

Aijmer, K. (2018). That's well bad. some new intensifiers in spoken in british english. In V. Brezina, R. Love, and K. Aijmer (Eds.), *Corpus Approaches to Contemporary British English*, pp. 60–95. New York and London: Routledge.

Baayen, R. H. (2008). *Analyzing linguistic data. A practical introduction to statistics using R*. Cambridge: Cambridge University press.

Barnfield, K. and I. Buchstaller (2010). Intensifiers on tyneside - longitudinal developments and new trends. *English World-Wide 31*(3), 252–287.

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

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 duree of intensification. *Diachronica 32*(4), 449–493.

Dixon, R. M. W. (1977). Where have all the adjectives gone? *Studies in Language 1*, 19–80.

Faraway, J. J. (2016). *Extending the linear model with R: generalized linear, mixed effects and nonparametric regression models*, Volume 124. CRC Press.

Fuchs, R. (2016). Register variation in intensifier usage across asian englishes. In H. Pichler (Ed.), *Discourse-Pragmatic Variation and Change: Insights from English*, pp. 185–213. Cambridge: Cambridge University Press.

Fuchs, R. (2017). Do women (still) use more intensifiers than men? *International Journal of Corpus Linguistics 22*(3), 345–374.

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.

Jockers, M. L. (2017). Syuzhet 1.0.4 now on cran. http://www.matthewjockers.net/2017/12/16/syuzhet-1-0-4/.

Johnson, D. E. (2009). Getting off the goldvarb standard: Introducing rbrul for mixed-effects variable rule analysis. *Language and linguistics compass 3*(1), 359–383.

Kursa, M. B., W. R. Rudnicki, et al. (2010). Feature selection with the boruta package. *J Stat Softw 36*(11), 1–13.

Labov, W. (1966). *The Social Stratification of English in New York City*. Washington DC: Center for Applied Linguistics.

Labov, W. (1972). *Sociolinguistic patterns*. Philadelphia, PA: University of Pennsylvania Press.

Lorenz, G. (2002). Really worthwhile or not really significant? a corpus-based approach to the delexicalization and grammaticalization of intensifiers in modern english. In I. Wischer and G. Diewald (Eds.), *New Reflections on Grammaticalization*, pp. 143–161. Amsterdam: John Benjamins.

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

Mair, C. (2004). Corpus linguistics and grammaticalisation theory. statistics, frequencies and beyond. In H. Lindquist and C. Mair (Eds.), *Corpus approaches to grammaticalization in English*, pp. 121–150. Amsterdam and Philadelphia: John Benjamins.

Méndez-Naya, B. (2003). On intensifiers and grammaticalization: The case of swithe. *English Studies 84*, 372–391.

Núñez Pertejo, P. and I. Palacios (2014). That's absolutely crap, totally rubbish. the use of intensifiers absolutely and totally in the spoken language of british adults and teenagers. *Functions of Language 21*(2), 210–237.

Palacios, I. and P. Núñez Pertejo (2012). He's absolutely massive. it's a super day. madonna, she is a wicked singer. youth language and intensification: A corpus-based study. *Text and Talk 32*(6), 773–796.

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

Schweinberger, M. (2017). Using intensifier-adjective bi-grams to investigate mechanisms of change. Paper presented at ICAME38. Prague, 27/5/2017.

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.

Tagliamonte, S. and C. Roberts (2005). So weird; so cool; so innovative: The use of intensifiers in the television series friends. *American Speech 80*(3), 280–300.

Tagliamonte, S. A. and D. Denis (2014). Expanding the transmission/diffusion dichotomy: Evidence from canada. *Language 90*(1), 90–136.

Wagner, S. (2017a). Amplifier-adjective 2-grams world-wide: focus on pretty. Paper presneted at ICAME 37. Charles University Prague, 27/5/2017.

Wagner, S. (2017b). Totally new and pretty awesome: Amplifier–adjective bigrams in glowbe. *Lingua 200*, 63–83.

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Appendix

Variationist Sociolinguistics

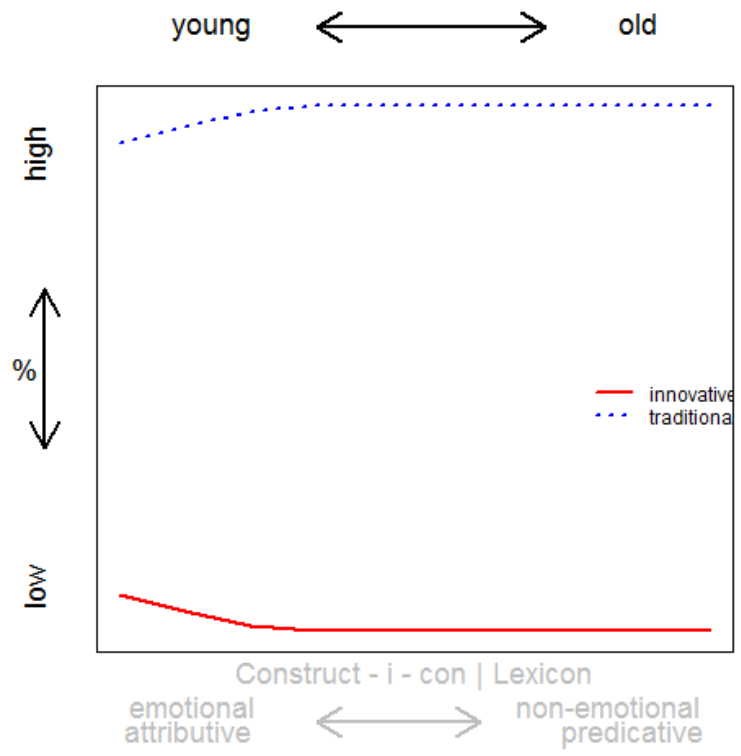
- Language is not homogeneous: variation is ubiquitous
  - Social factors : language use
  - Linguistic variation not random
  - Systematic correlation between certain social factors (age, gender, class, ethnicity, etc.) and language use
- Linguistic differentiation $\leftrightarrow$ social stratification

Diffusion of Innovations

young ⟷ old

upper

working



Diffusion of Innovations

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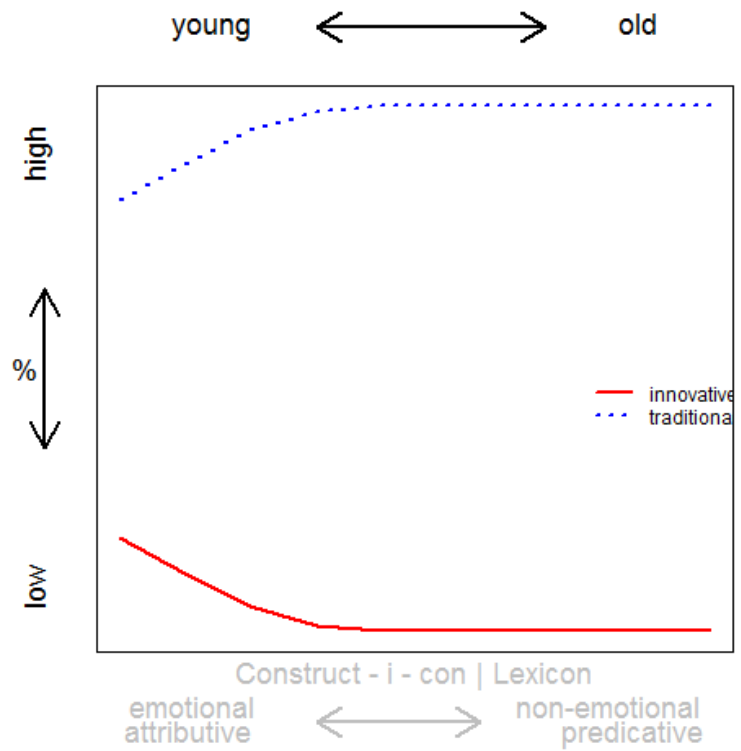

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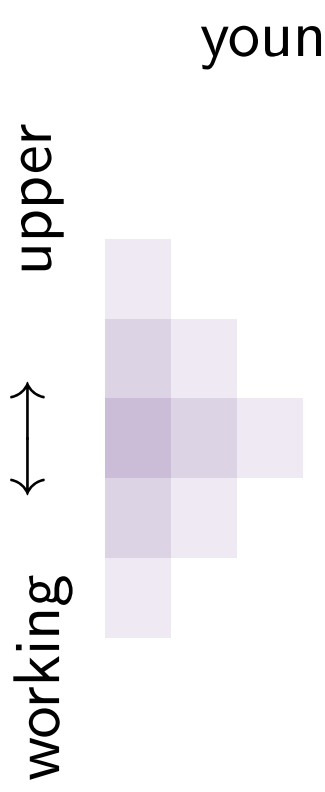

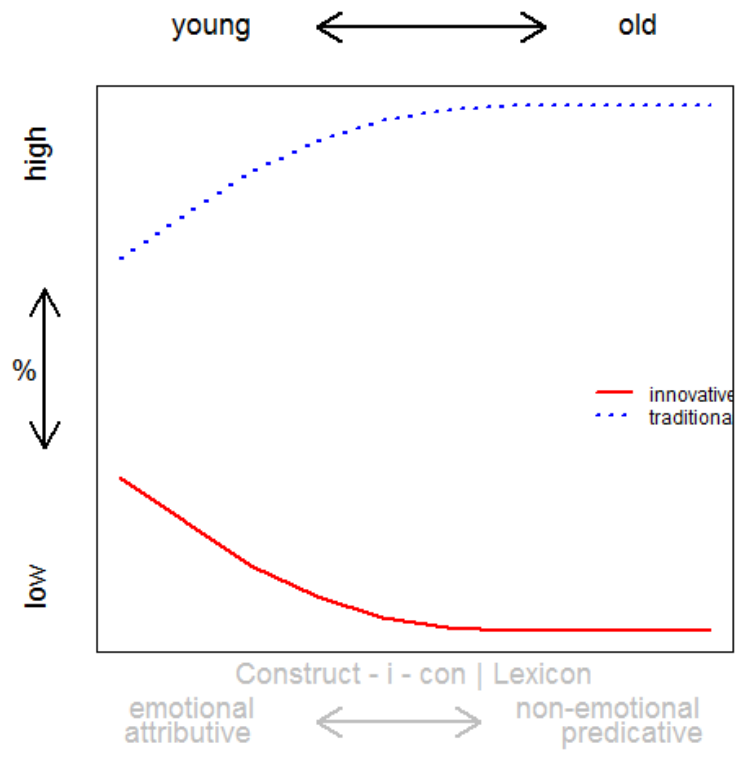

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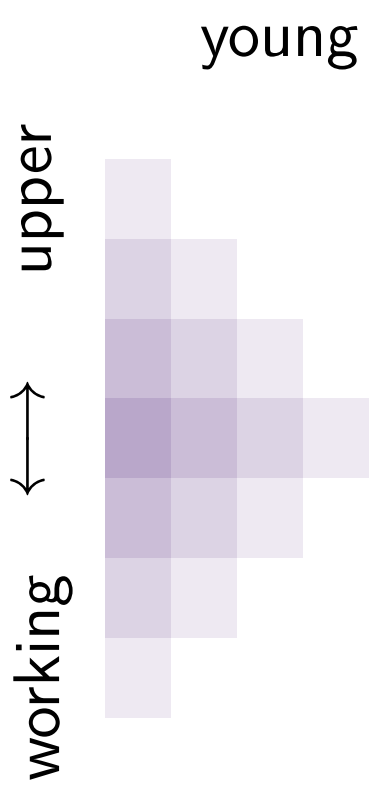

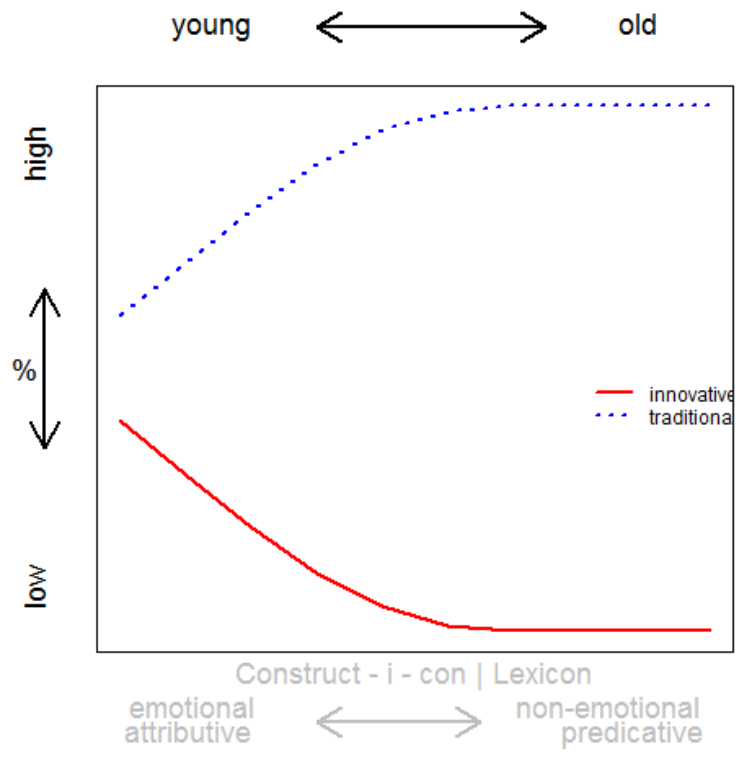

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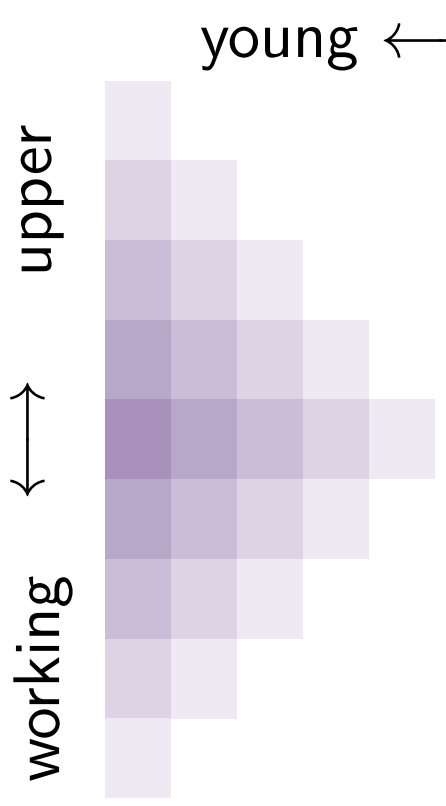

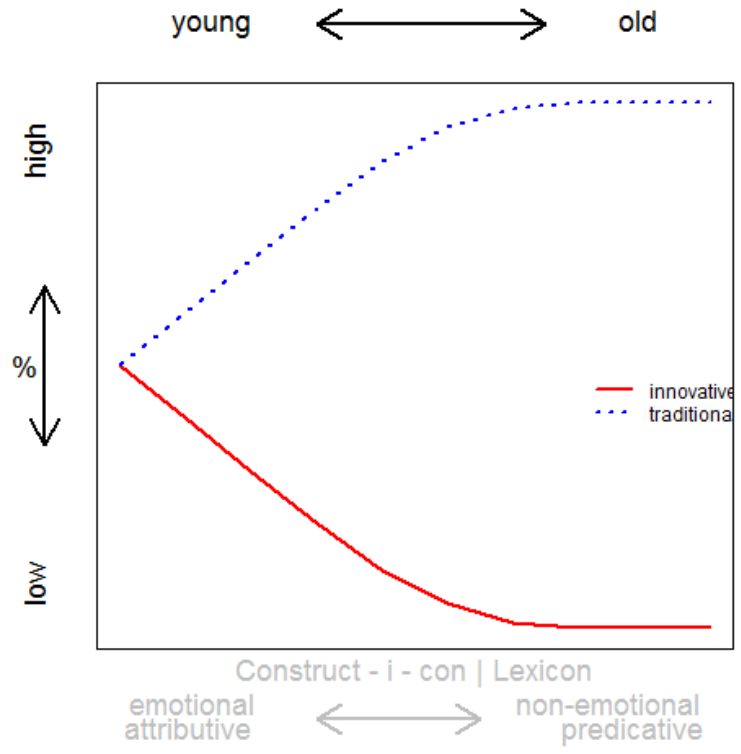

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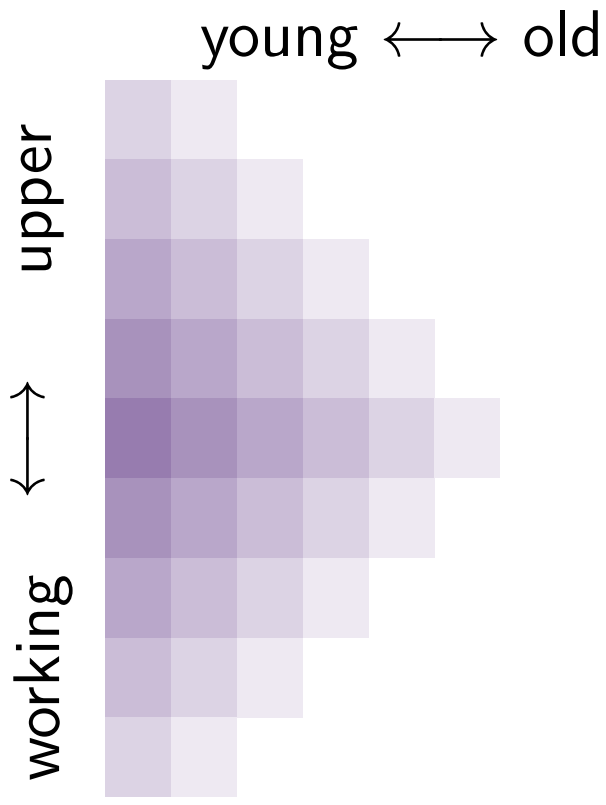

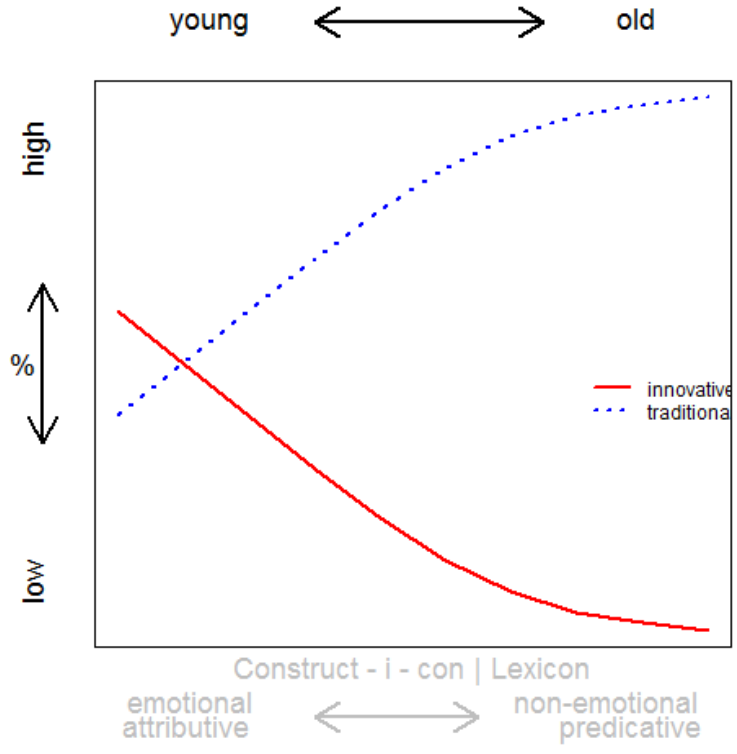

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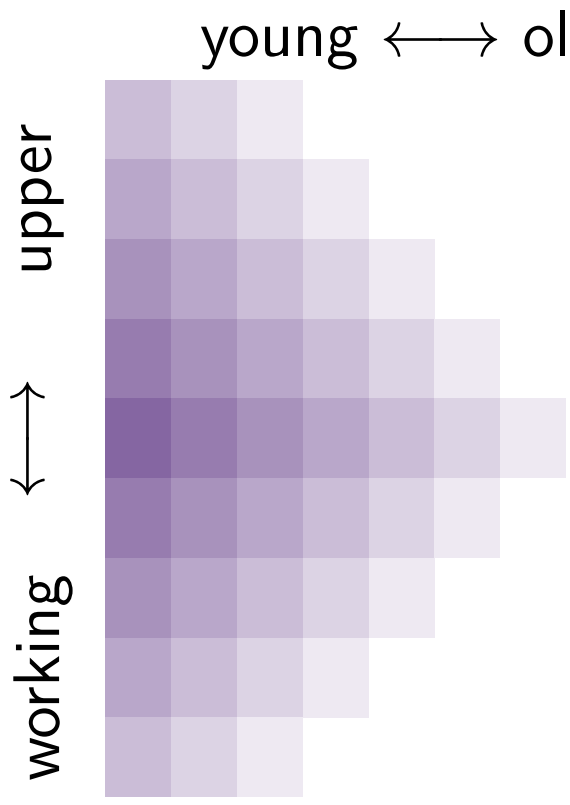

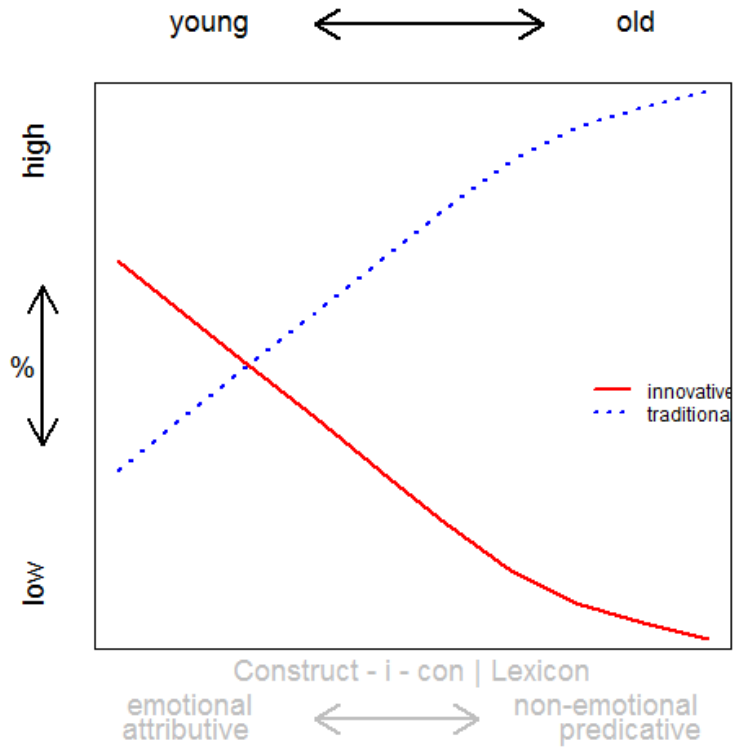

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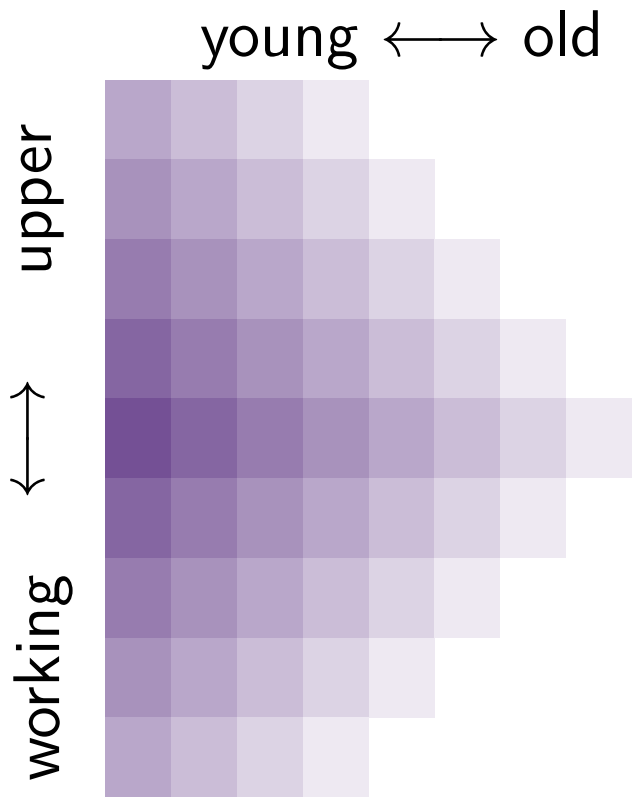

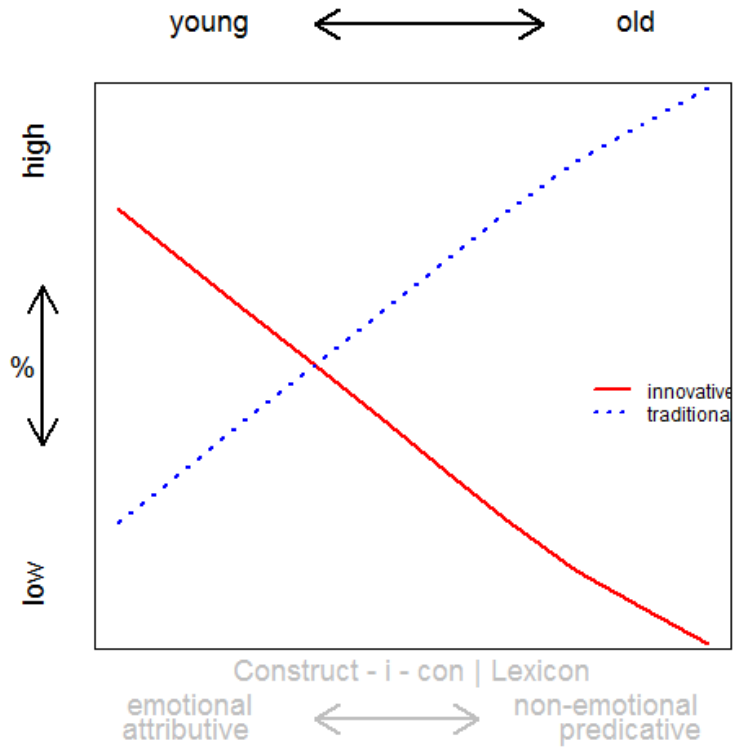

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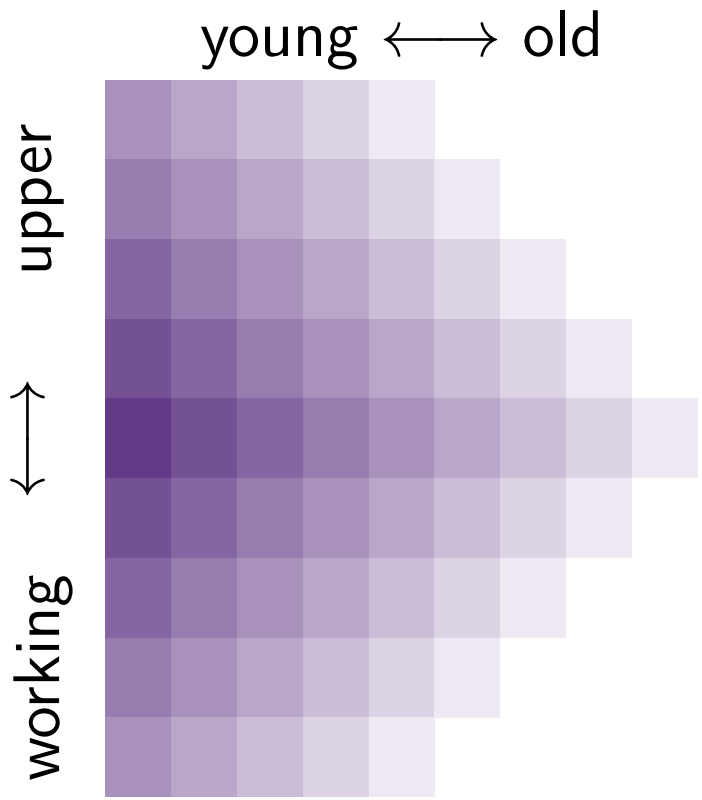

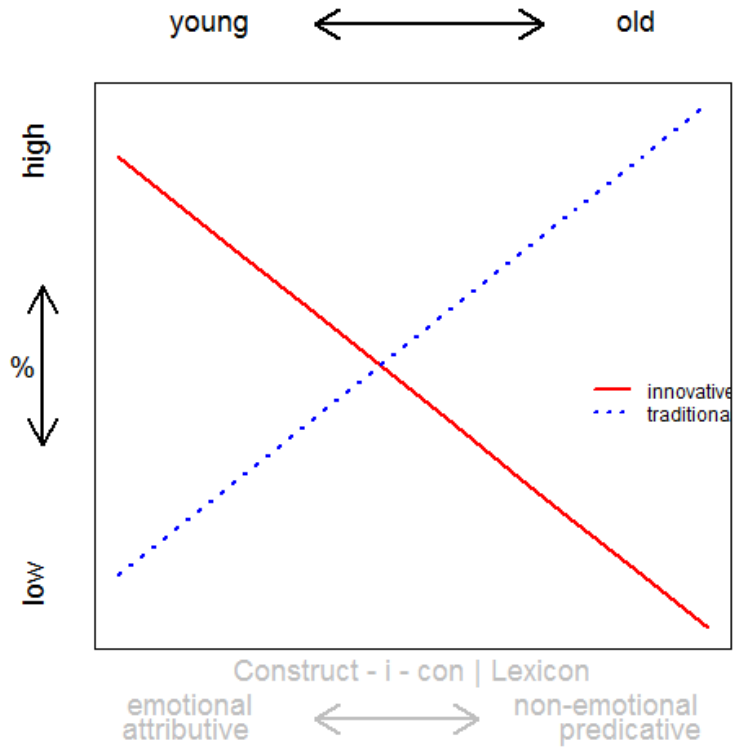

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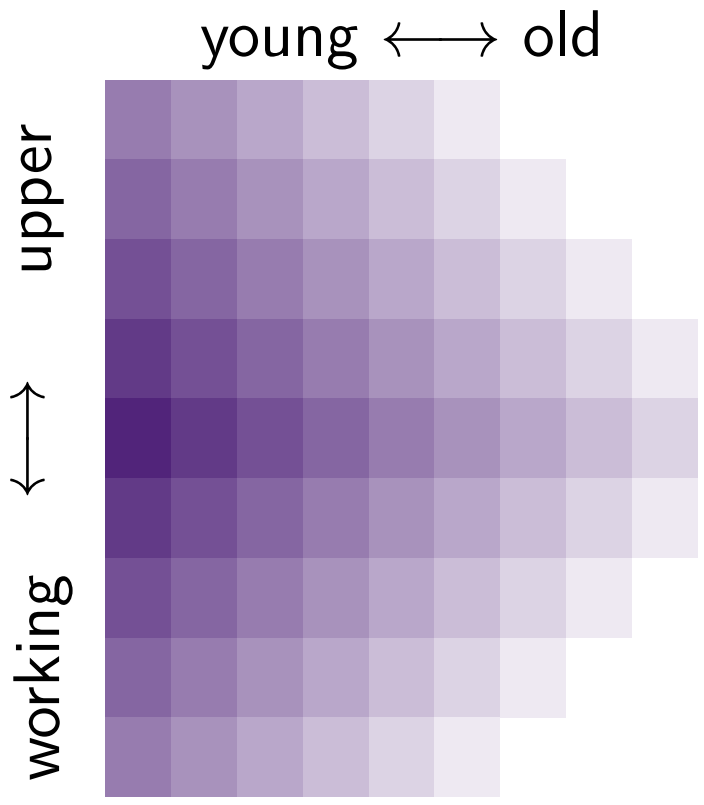

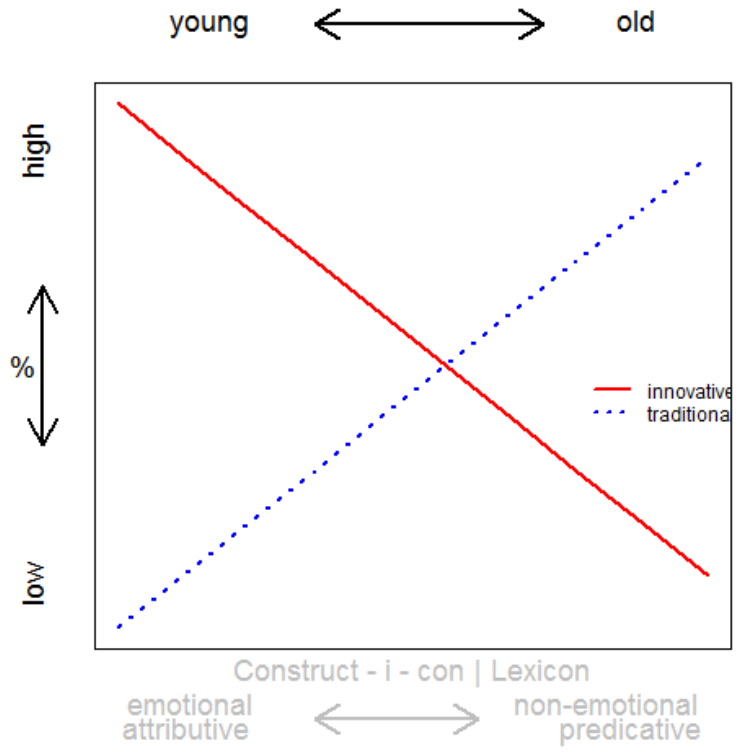

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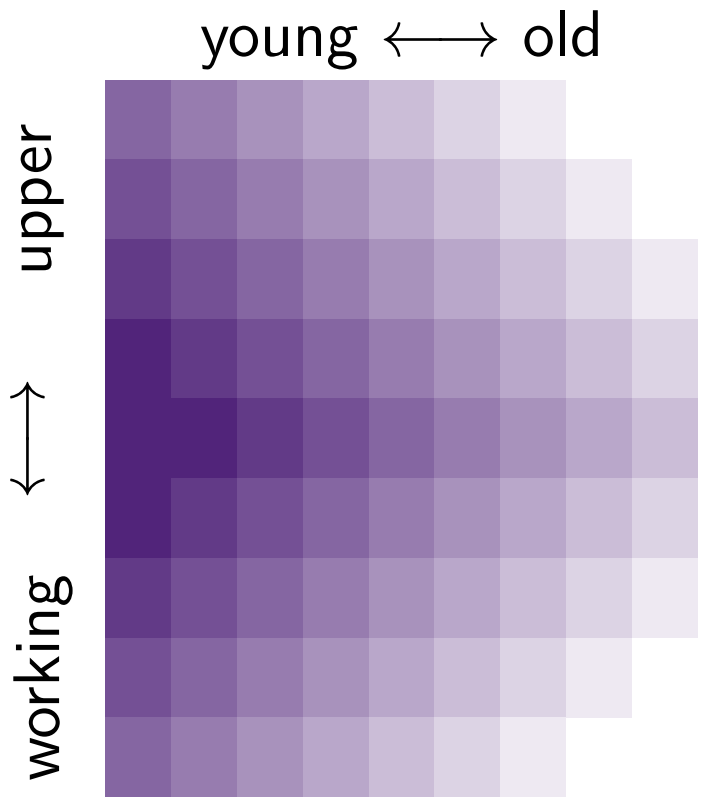

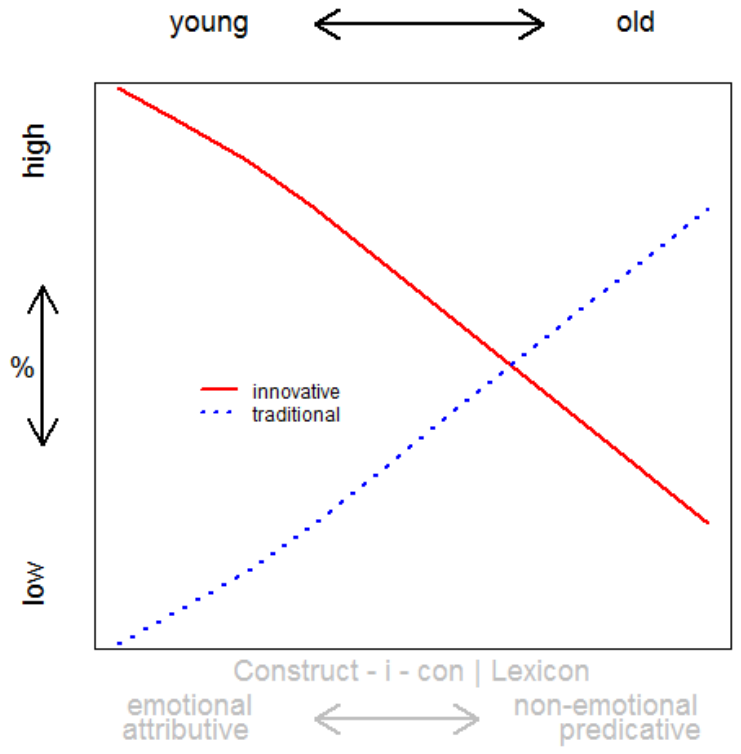

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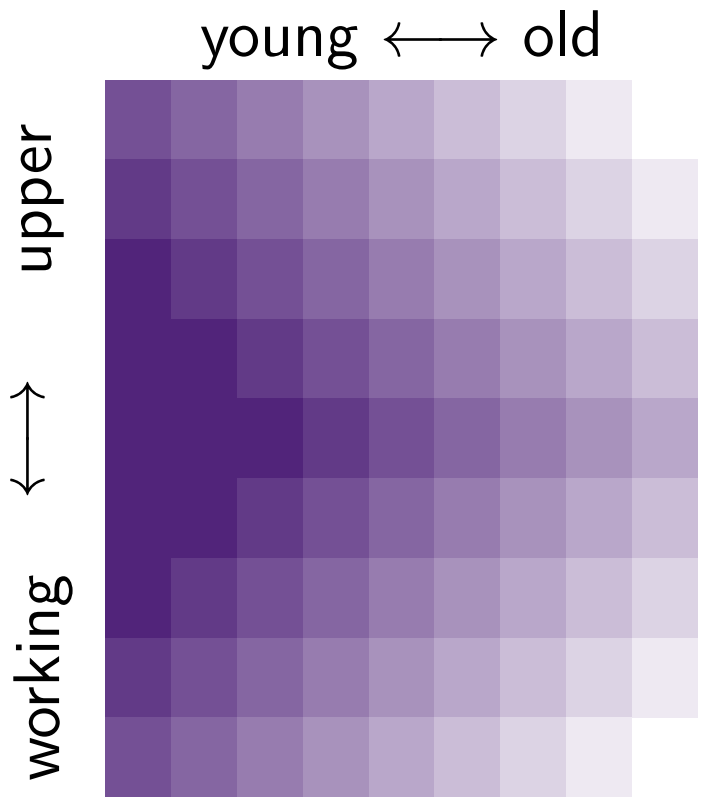

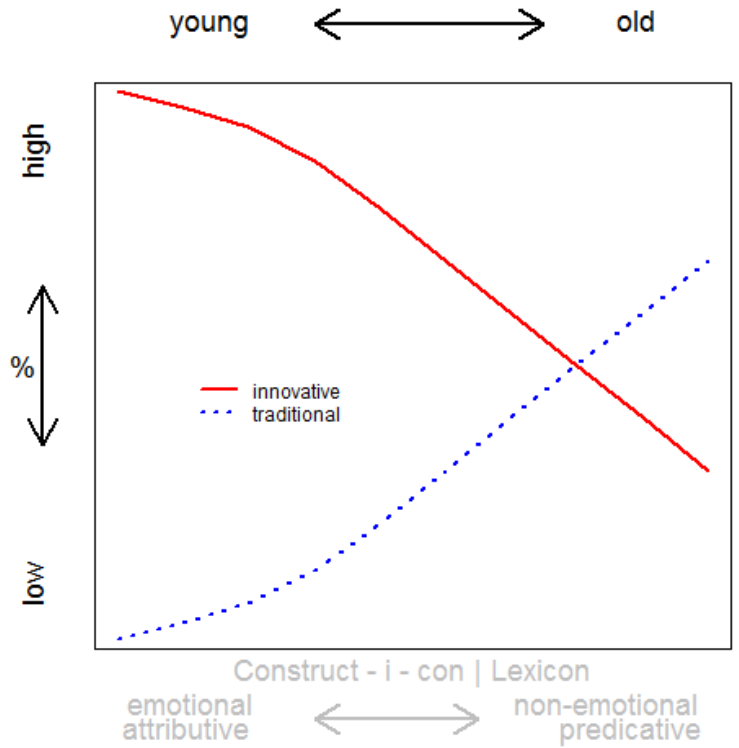

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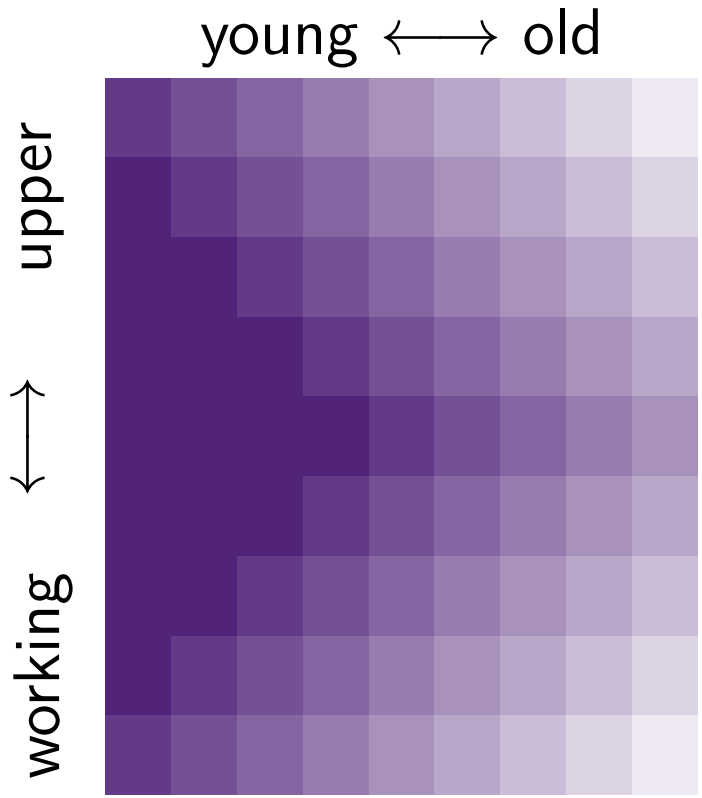

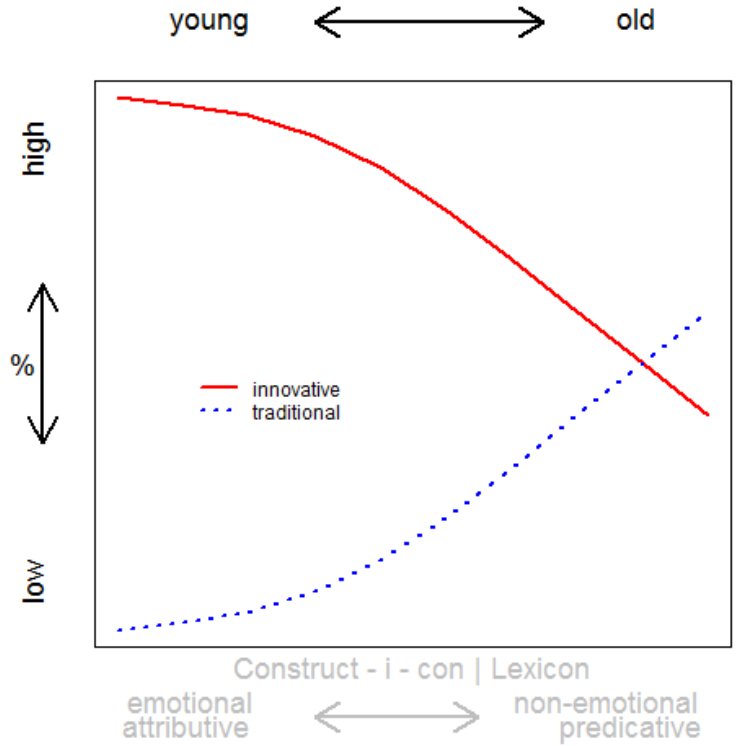

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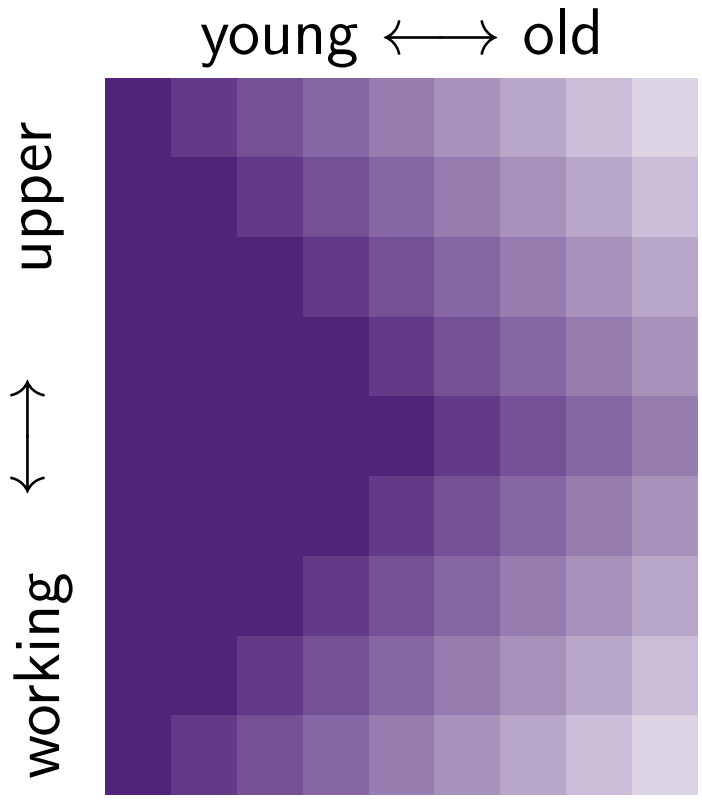

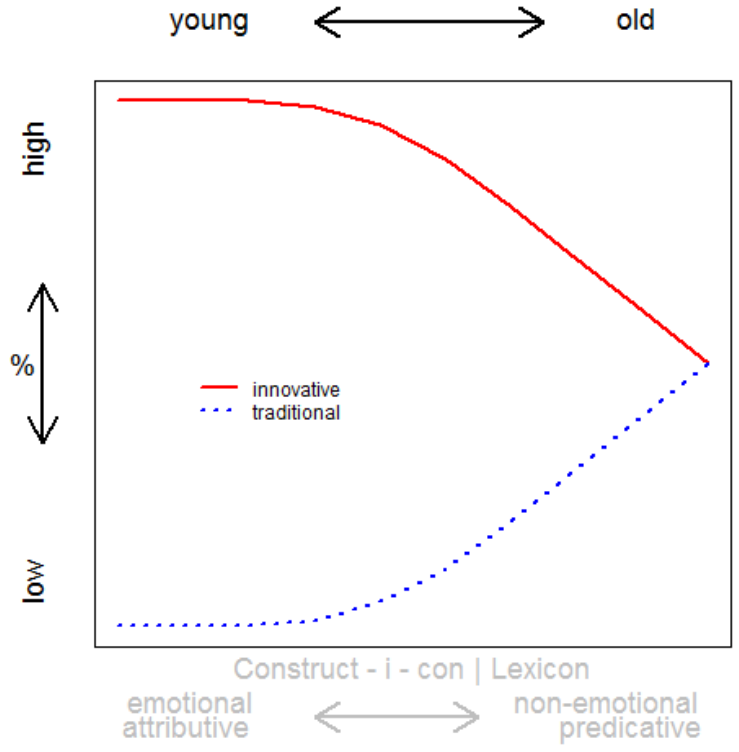

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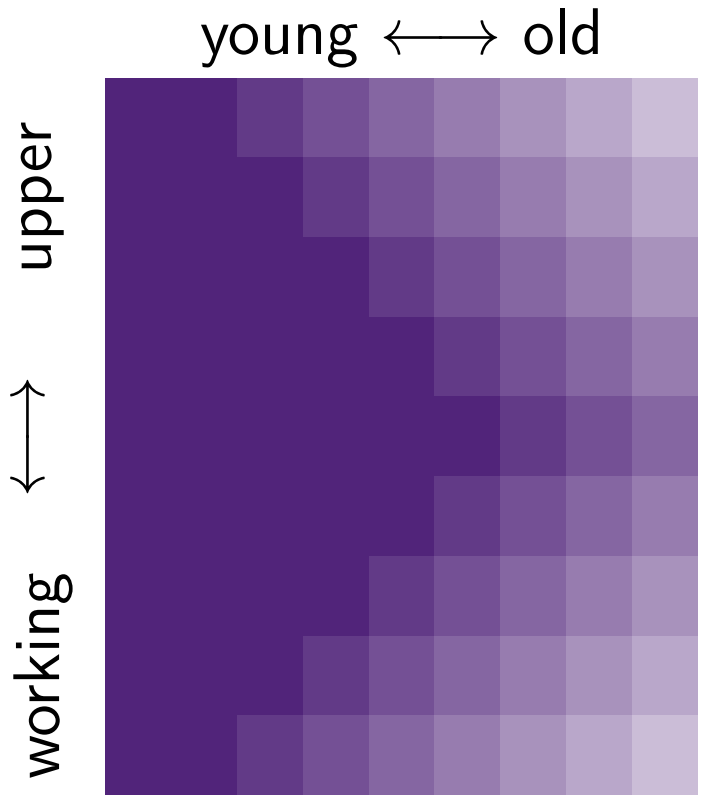

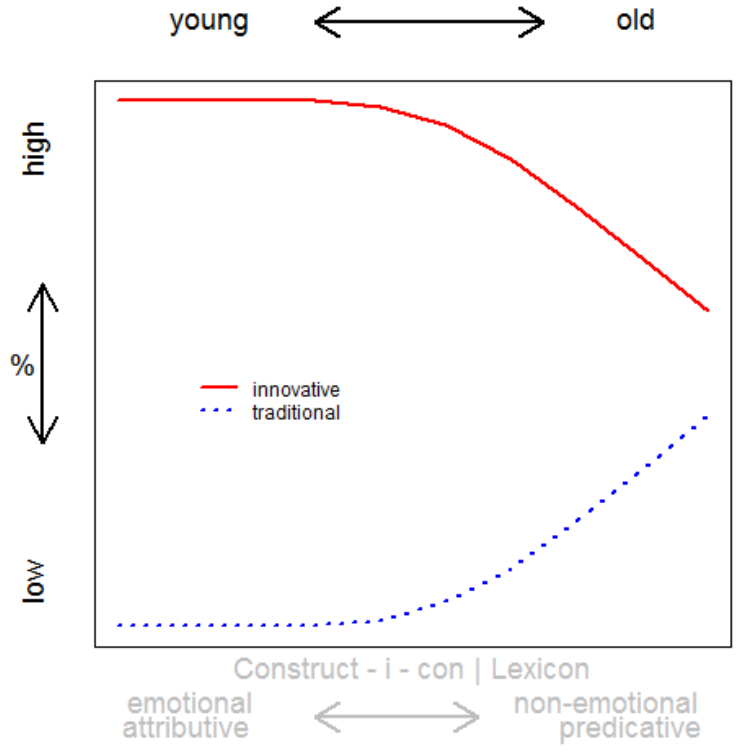

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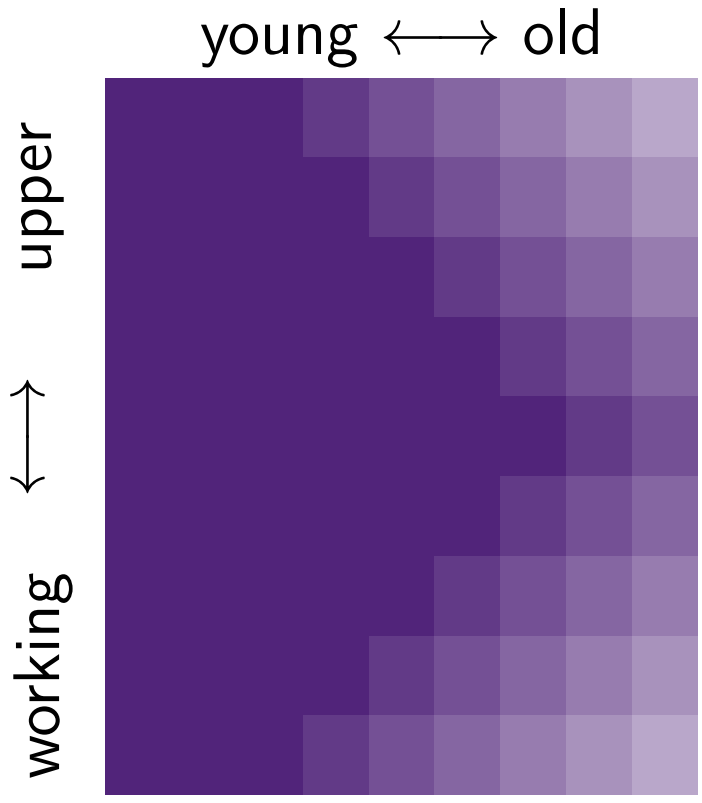

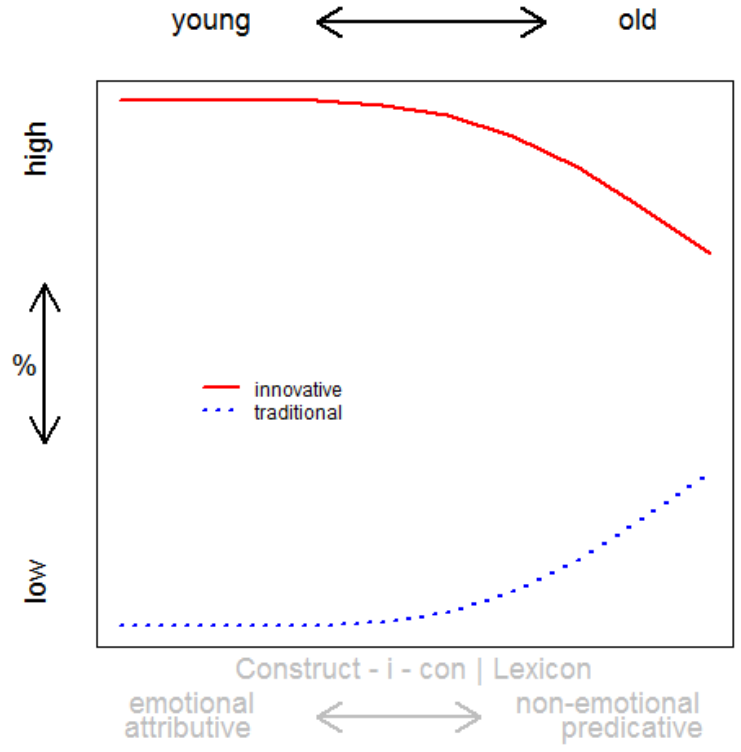

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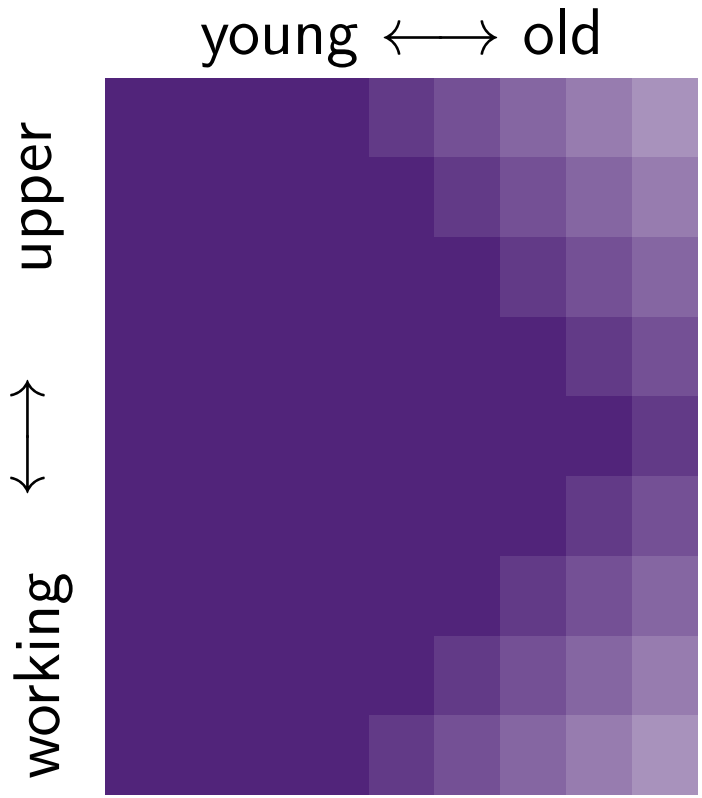

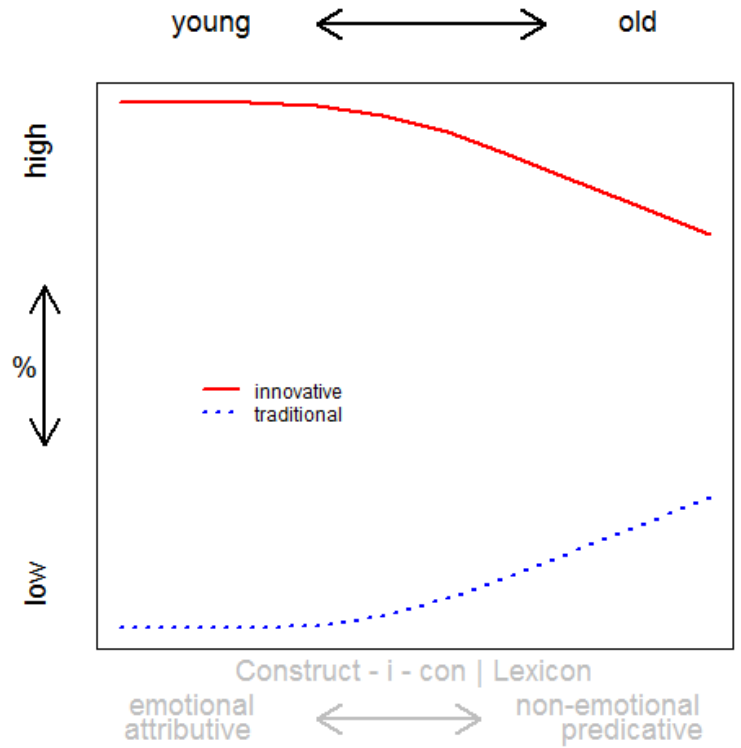

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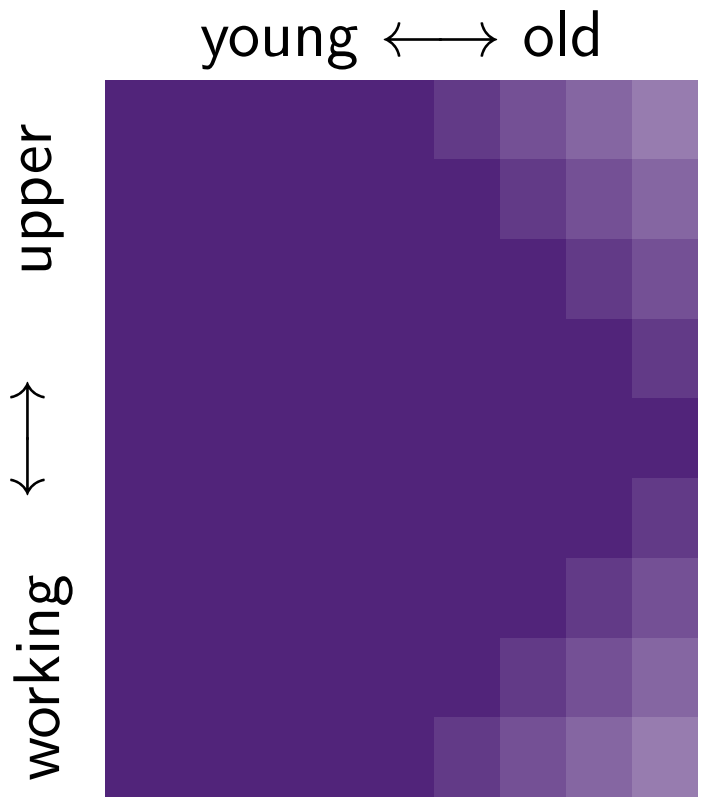

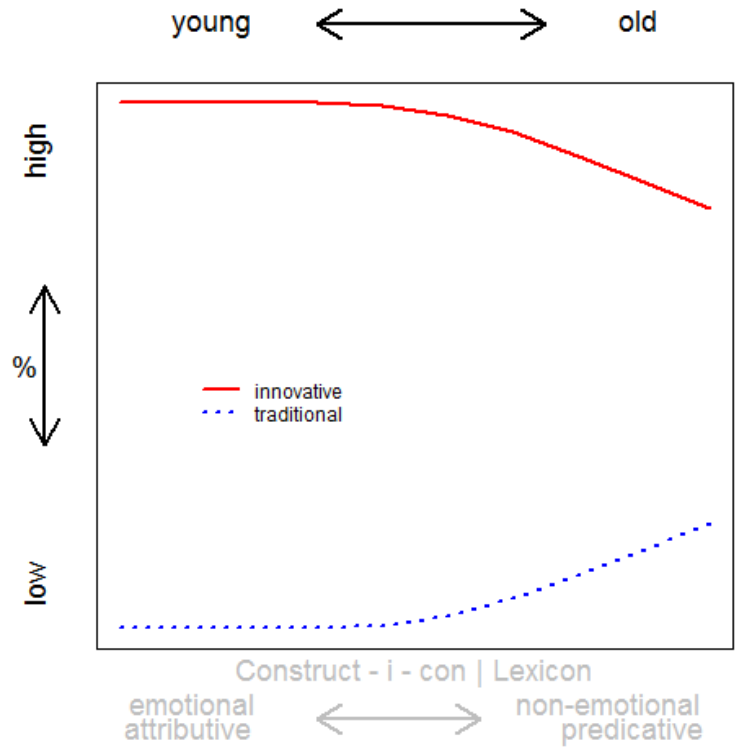

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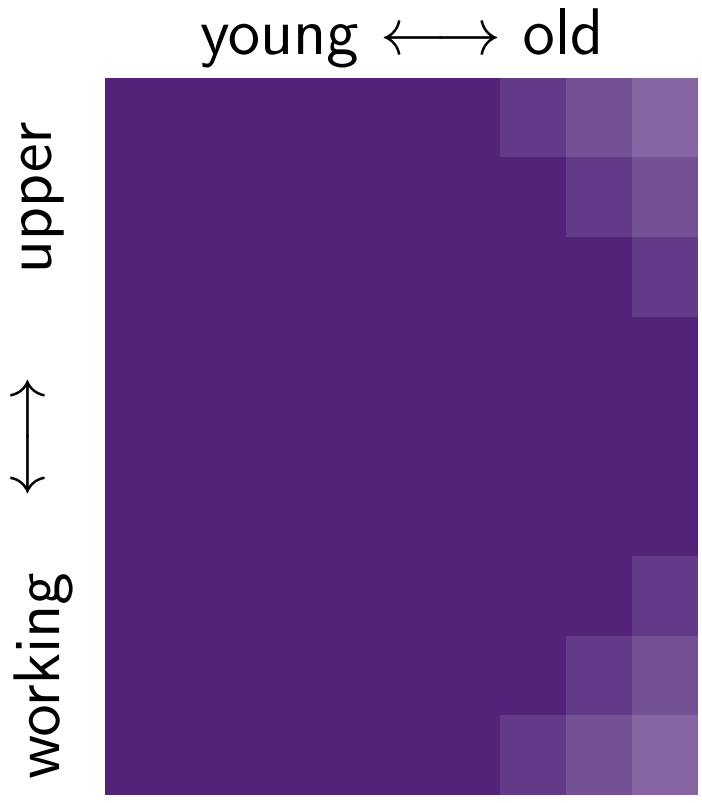

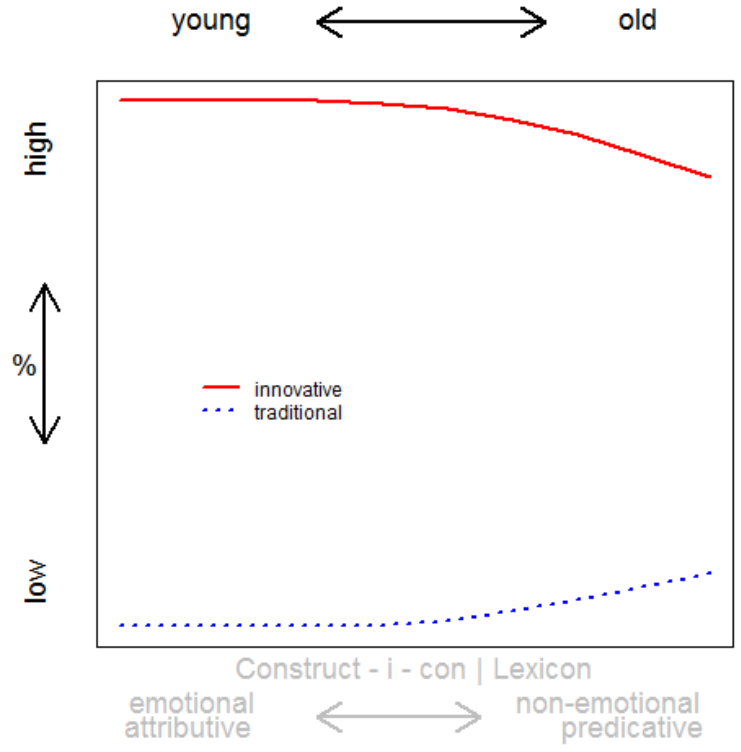

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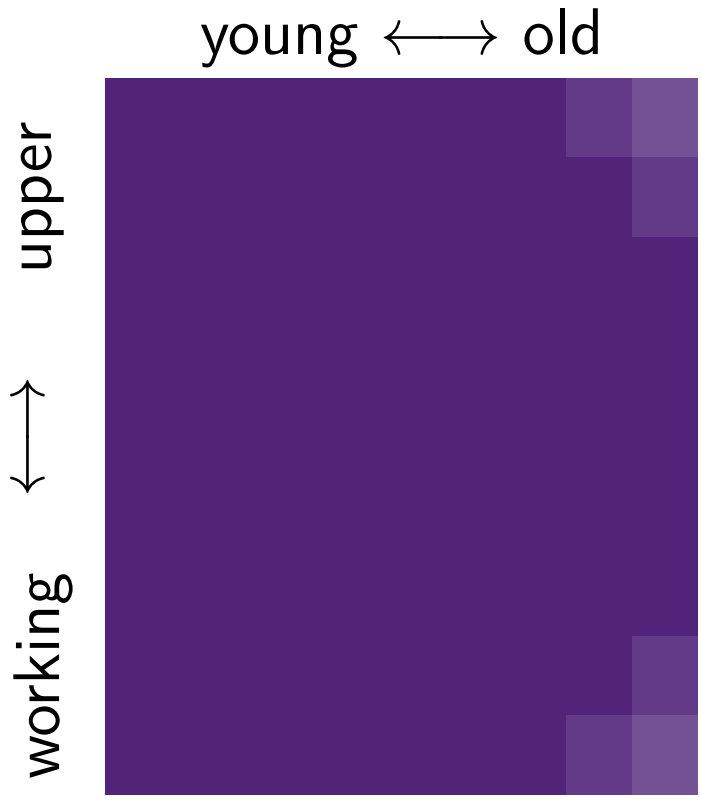

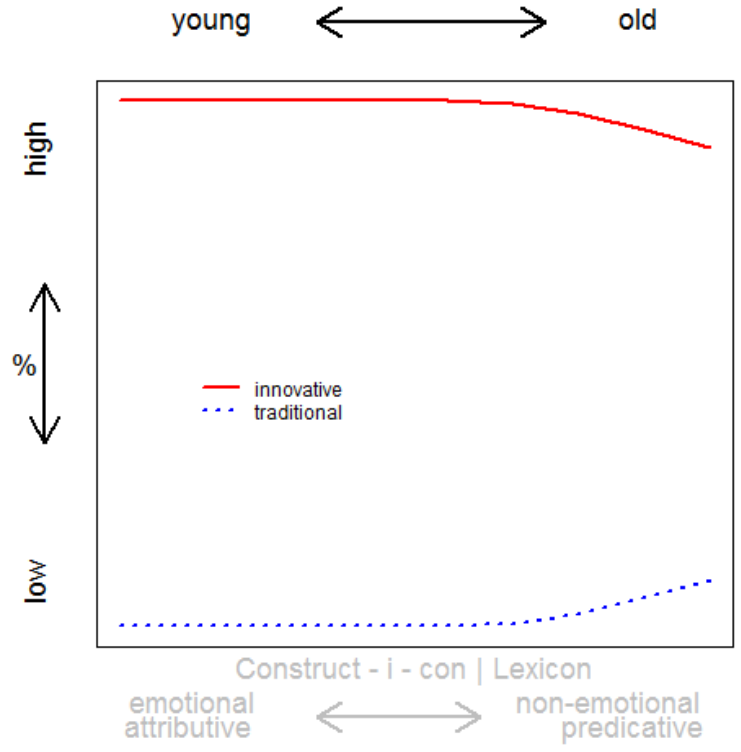

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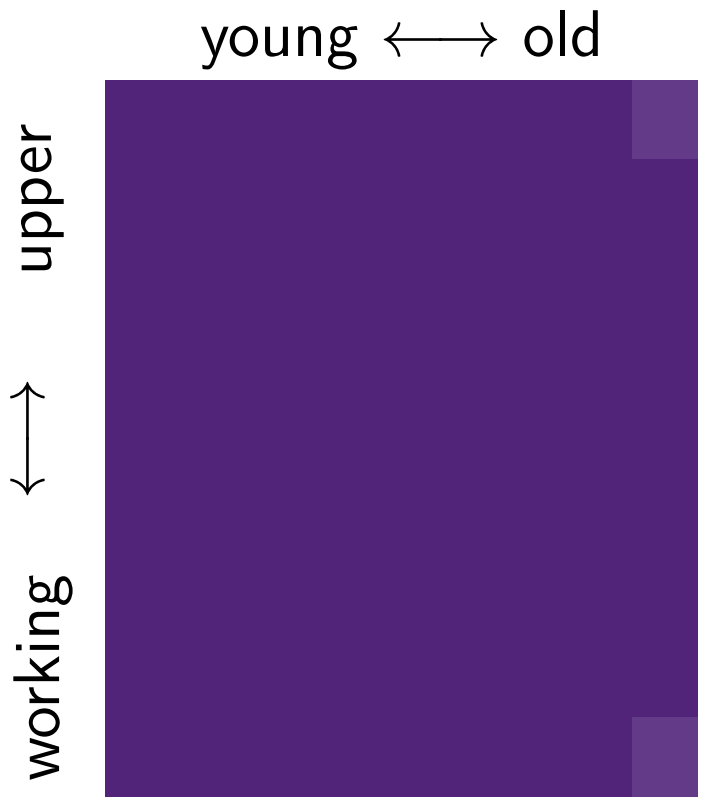

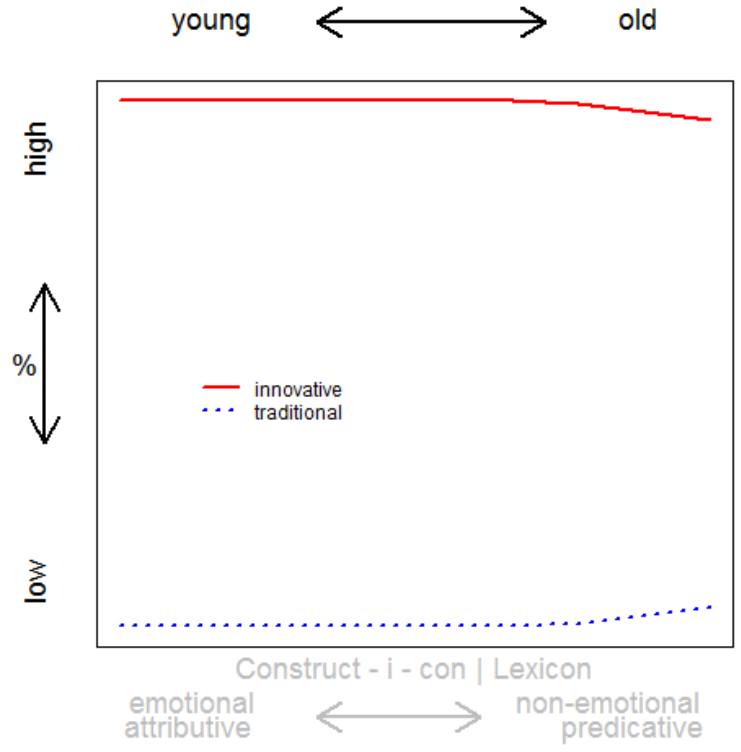

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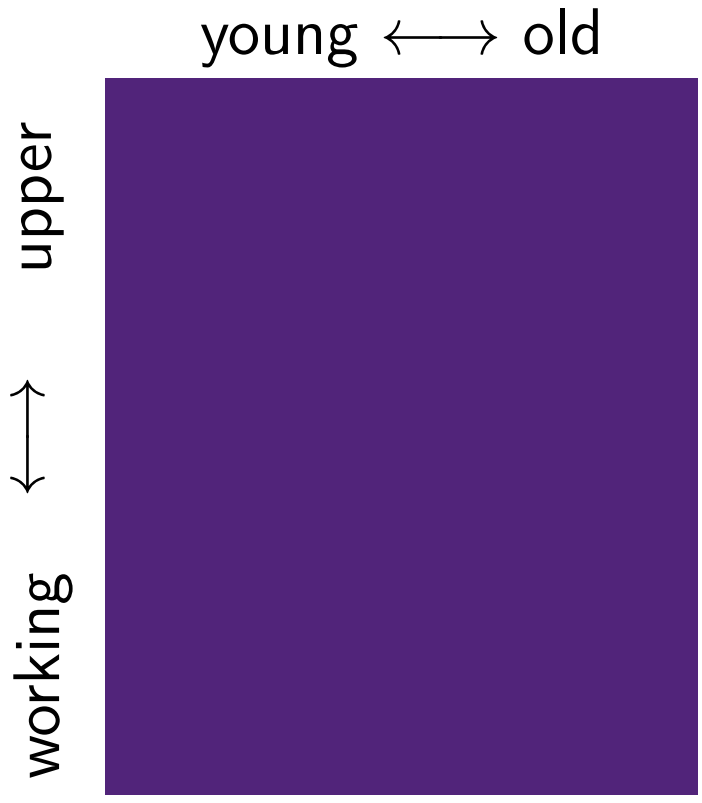

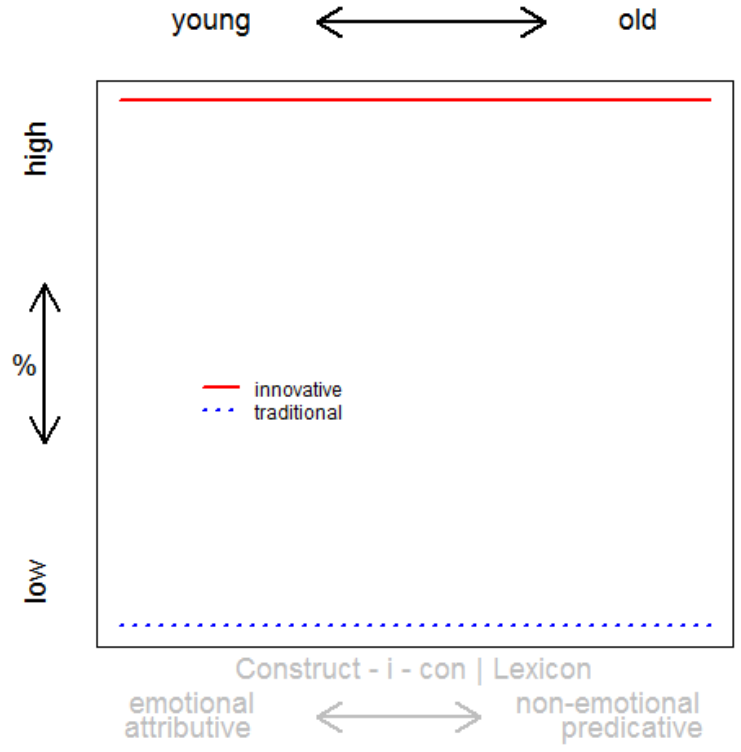

Mixed-Effects Binomial Logistic Regression

(??)

Figure 10: Difference between models without grouping/nesting and mixed-effects models (with grouping/nesting).