Implicit measures of automatic evaluation

Exploring new methods to measure attitudes towards language varieties

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Introduction

- since 1960s/1980s little methodological innovation in language attitudes research (until recently)

- traditional methods:
    - surveys (direct)
    - speaker evaluation paradigm (indirect)
    - societal treatment

- problems: self-presentation, limited introspection, artificiality, lack of semantic & syntactic control

Introduction

➔ innovation: inspired by attitude research in **social psychology**

Outline

1. implicit measures
2. overview of techniques
3. AAP & IAT: success stories?
4. AMP & ST-IAT: new possibilities?
5. conclusion

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Implicit measures

implicit techniques measure automatic associations

- association object & evaluation in memory = attitude (Fazio 2007)

- automaticity?

  four horsemen of automaticity (Bargh 1994)
  - unconscious
  - unintentional
  - efficient
  - uncontrollable

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what have they been used for so far?

- various fields:

  marketing, psychiatry, (social) psychology,…

- wide variety of topics:

  advertising, sexual preference, alcoholism, self-mutilation, self-esteem, racism, gender stereotypes,...

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Overview of techniques

two paradigms:

1. response interference paradigm

2. sequential priming paradigm

= measure implicit attitudes
= two congruent stimuli → faster response

≠ presentation of stimuli: simultaneous vs. sequential
≠ underlying mechanisms

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	response interference	sequential priming
previously introduced to linguistics	implicit association test (IAT)	auditory affective priming (AAP)
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Implicit Association Test

how it works

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	TARGET CONCEPT	ATTRIBUTE
category names	black/white	good/bad
stimuli		lovely, terrific, horrible, disgusting

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Implicit Association Test

block 1 – target discrimination

black   white

Implicit Association Test

block 2 – attribute discrimination

good   bad

horrible

Implicit Association Test

black   white
good   bad

horrible

Implicit Association Test

block 4 – target concept discrimination reversed

white   black

Implicit Association Test

block 5 – critical block: combined task reversed

white   black
good   bad

horrible

Implicit Association Test

in linguistics:

    Redinger (2010)

    Pantos (2010, 2012)

    Campbell-Kibler (2012, 2013)

Implicit Association Test

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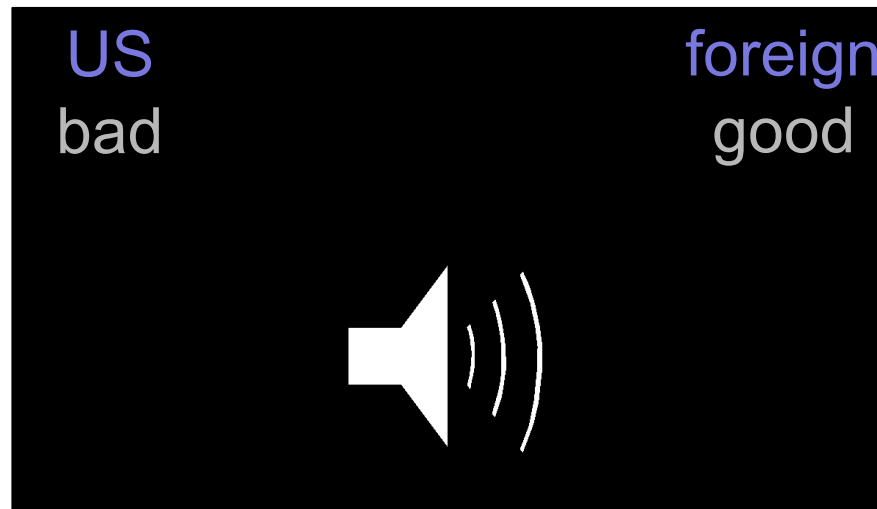
Implicit Association Test

Pantos (2010, 2012)

- attitudes towards foreign accented vs. US English
- auditory stimuli + written pos/neg adjectives
- clear preference for US English <-> explicit attitudes

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Implicit Association Test

evaluation

practical complexity	- participant - researcher (reaction times)
linguistic / auditory stimuli	+ OK (labels & auditory stimuli) + length: rather flexible
psychometric qualities	+ good reliability & validity
relation attribute – target	+ valence & semantic
other	- binary structure / comparative structure - practice effect: max. 1 test - extra-personal associations → P-IAT - naming of categories + inspiration development model of cognitive processes underlying attitudes

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Affective Priming

how it works

Affective Priming

prime

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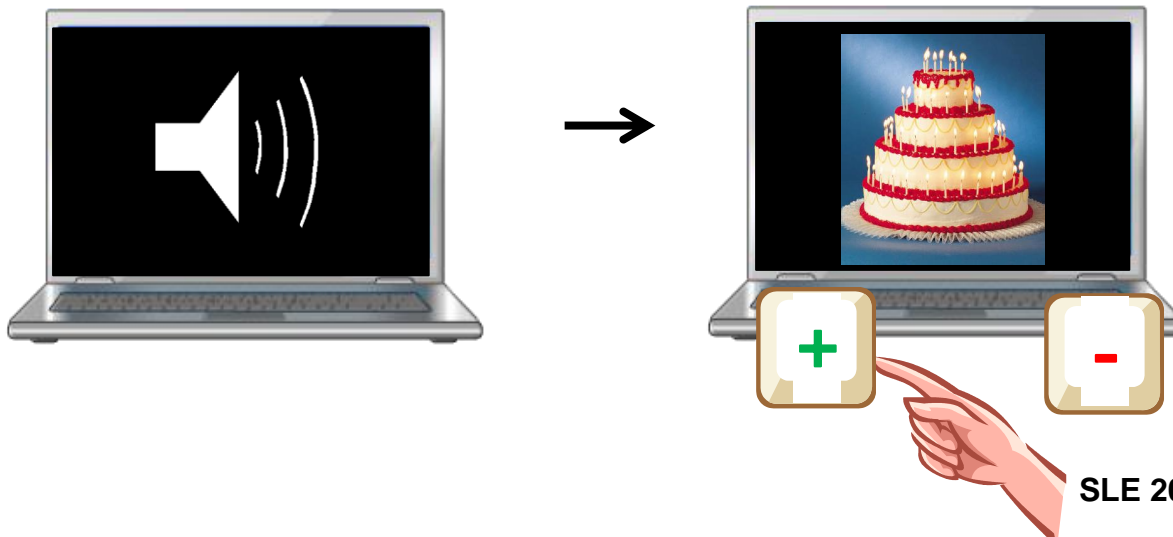| prime	target	congruence	response speed
+	+	congruent	faster
+	-	incongruent	slower
-	+	incongruent	slower
-	-	congruent	faster

Auditory Affective Priming

in linguistics? Speelman et al. (2013)

- attitudes towards 3 varieties of Dutch in Belgium
- auditory primes, pictures as targets
- for periphery: standard > own (peripheral) > central variety
  For centre: own (central) > standard > peripheral variety

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- for periphery: standard > own (peripheral) > central variety
  for centre: own (central) > standard > peripheral variety

Affective Priming

evaluation

practical complexity	+ simple for participant - difficult to programme (reaction times) - neutral primes necessary
linguistic / auditory stimuli	+ OK - length: very limited
psychometric qualities	- not satisfactory, low reliability
relation prime – target	+ valence (& semantic)
other	- few prime categories per experiment → limited number of attitude objects can be compared - very sensitive procedure + publications: many + no naming of categories

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Overview of techniques

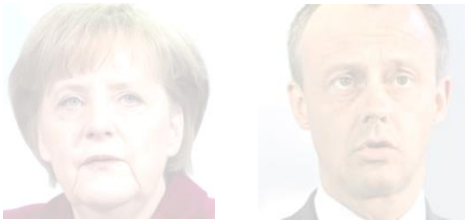|	response interference	sequential priming
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Single target IAT

how it works

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	TARGET CONCEPT	ATTRIBUTE
category names	CDU	good/bad
stimuli	Schäuble, Koch CDU	love, vacation, health, disease, death, pain

(Bluemke & Friese 2008)

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Single target IAT

block 1 – attribute discrimination

good   bad

vacation

Single target IAT

block 2 – critical block: combined task

CDU

good   bad

Single target IAT

block 3 – critical block: combined task reversed

CDU

bad   good

Single target IAT

evaluation

practical complexity	+ rather simple for the participant - difficult to programme (reaction times)
linguistic / auditory stimuli	+ (OK) + length: rather flexible
psychometric qualities	+ good reliability & validity
relation attribute – target	+ valence & semantic
other	+/- publications: moderate + not binary / comparative + multiple subsequent tests possible

Overview of techniques

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Affect misattribution procedure

how it works

Affect misattribution procedure

how it works

prime

Affect misattribution procedure

how it works

prime   target

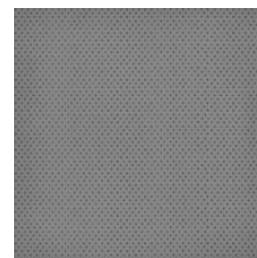# Affect misattribution procedure

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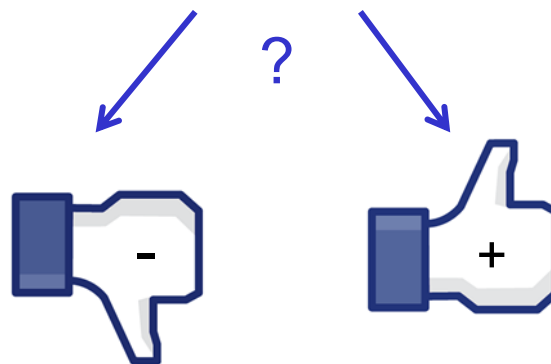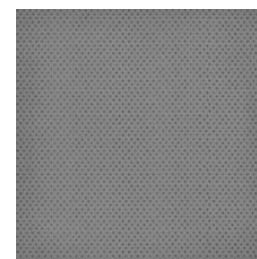# Affect misattribution procedure

how it works

prime   target   backward mask

?

−   +

Affect misattribution procedure

Affect misattribution procedure

target

Affect misattribution procedure
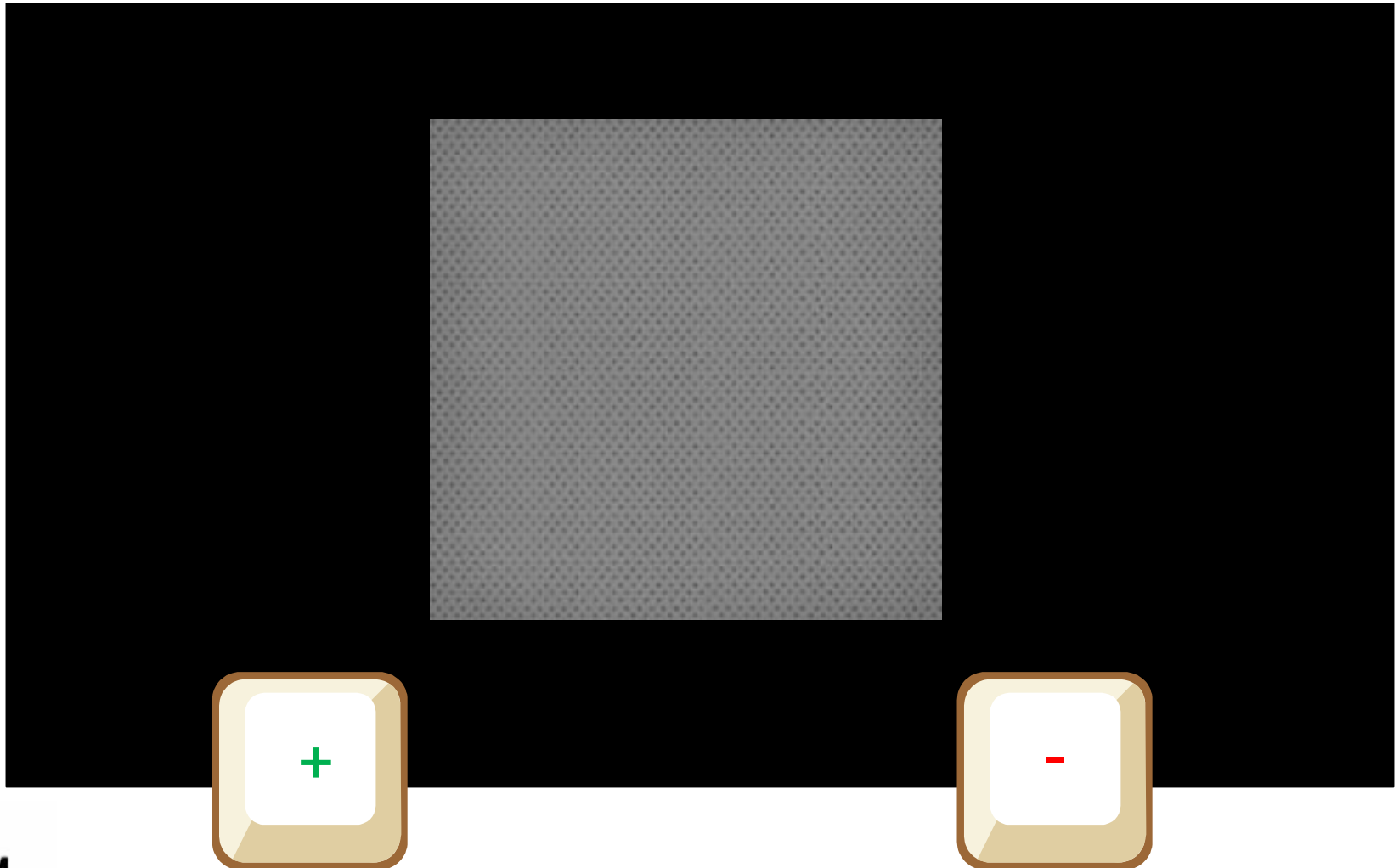
Affect misattribution procedure

evaluation

practical complexity	+ rather simple for the participant + simple to programme / measure (no reaction times)
linguistic/auditory stimuli	- ? - length: limited
psychometric qualities	+ good reliability & validity
relation prime – target	+ valence & semantic
other	- implicitness questioned + publications: moderate – many + no neutral primes + multiple prime categories (attitudes objects) in one experiment

measure	practical complexity	linguistic/ auditory stimuli	psychometric qualities	relation prime - target	other
IAT	- participant - researcher	+OK + length: rather flexible	+ good	Valence & semantic	**- binary / comparative structure** **- practice effect: max. 1 test** - extra-personal associations+ publications: many
AAP	+ participant - researcher	+OK - length : very limited	**- not very good**	Valence & (semantic)	**- few prime categories / experiment** **- very sensitive procedure** **- neutral primes** + publications (AP): many
ST-IAT	+ participant - researcher	+(OK) + length : rather flexible	+ good	Valence & semantic	- extra-personal associations → P-IAT **+ not binary/comparative** -/+ publications: moderate **+ several subsequent tests**
AMP	+ participant **+ researcher**	-? - length : limited	**+ good**	Valence & semantic	- implicitness questioned **+ multiple prime categories** **+ no neutral primes** + publications: moderate-many

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limitations implicit measures

- sensitive to many procedural details

- no gold standard

- lack of context in prime stimuli

advantages

- extensive literature from psychology → ample evidence for validity & reliability

- limit the influence of social desirability & lack of introspection

- fairly short and easy to administer

- inspiration in implicit measures paradigms to help sociolinguistics to develop a cognitive model of language attitudes

- method to test hypotheses, not an exploratory technique

Conclusion

- early for any definitive conclusions, but promising if:
  more research to develop a gold standard so techniques become easier to implement

- no technique is perfect
  → choose technique in function of research question
  → methods can complement each other

→ implicit measures as a valuable addition to be used in addition to other (traditional) methods to make up for each other's limitations

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