Exploring new methods to measure implicit language attitudes

SB – ST – Implicit Association Test

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RU Quantitative Lexicology and Variational Linguistics

outline

1. introduction
2. implicit measures: choosing the right method
3. SB – ST – IAT
4. pilot experiment: a case study on regional varieties of Dutch in Belgium

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introduction

- language attitude research can provide important insights into language variation and change, e.g. (de)standardisation processes (Kristiansen & Grondelaers 2013, etc.)

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

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implicit measures of automatic associations

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implicit measures

measure	paradigm	in linguistics
IAT	response interference	Redinger 2010 Pantos 2010; 2012 Campbell-Kibler 2012; 2013
SB-IAT	response interference	?
IAT-RF	response interference	?
ST-IAT	response interference	?
SB-ST-IAT	response interference	?
(ID-)EAST	response interference	?
GNAT	response interference	?
affective priming	sequential priming	Speelman, Spruyt, Impe & Geeraerts 2013
semantic priming	sequential priming	?
AMP	sequential priming	?
SMP	sequential priming	?
…	…	…

implicit measures

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…	…	…

implicit measures

Single-Block Single-Target Implicit Association Test
(SB-ST-IAT)

Zinkernagel et al. (2011); (2013)

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SB-ST-IAT

- combination of two varieties of the IAT:
  - Single-Block IAT
  - Single-Target IAT

SB-ST-IAT

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- IAT?

SB-ST-IAT

- combination of two variaties of the IAT:
  - Single-Block IAT
  - Single-Target IAT

- IAT?
  - how does it work?

IAT: how it works

IAT

IAT: how it works

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

IAT

IAT: how it works

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IAT

IAT: how it works

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IAT

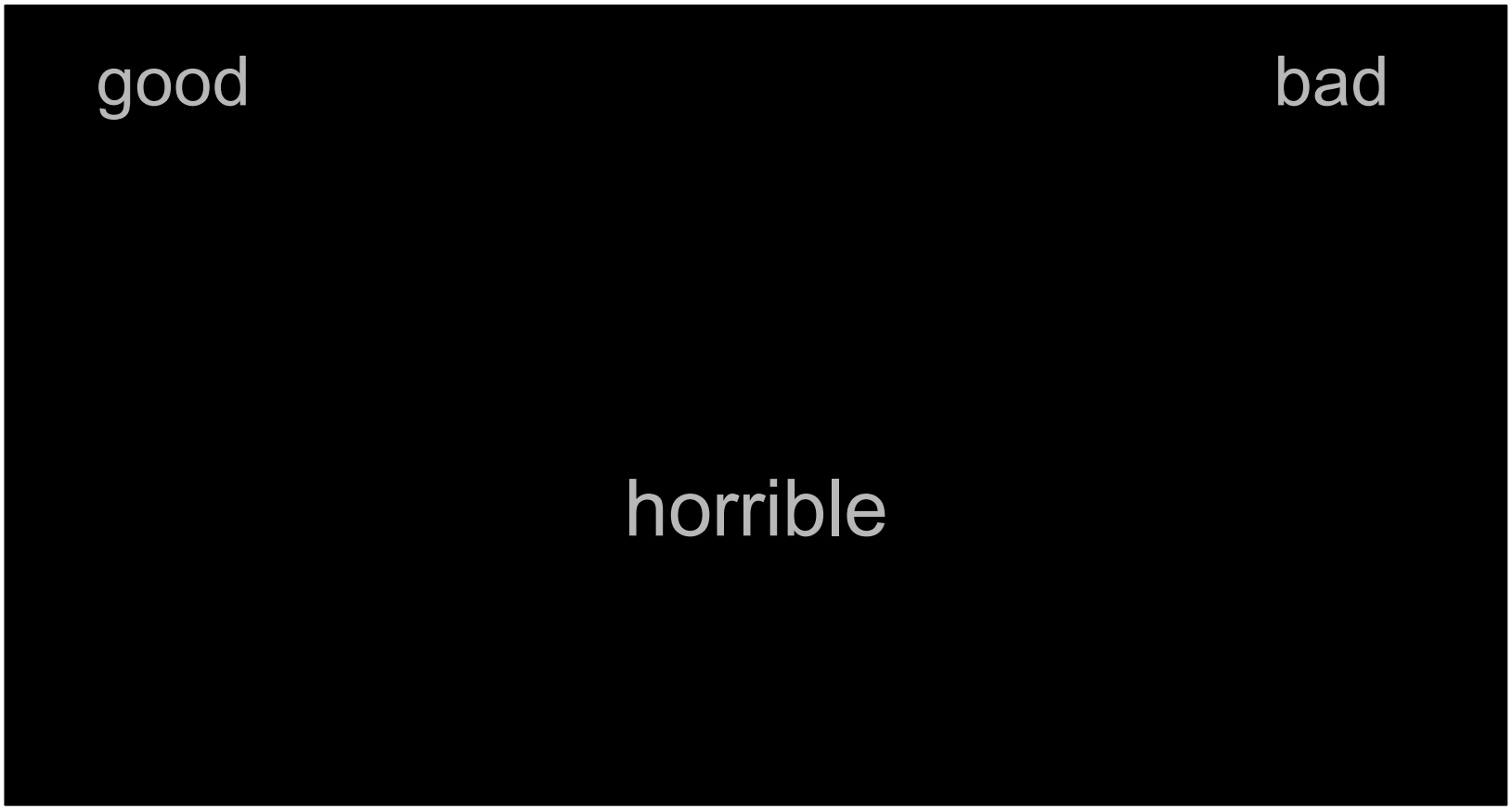
block 1 – target discrimination

black

white

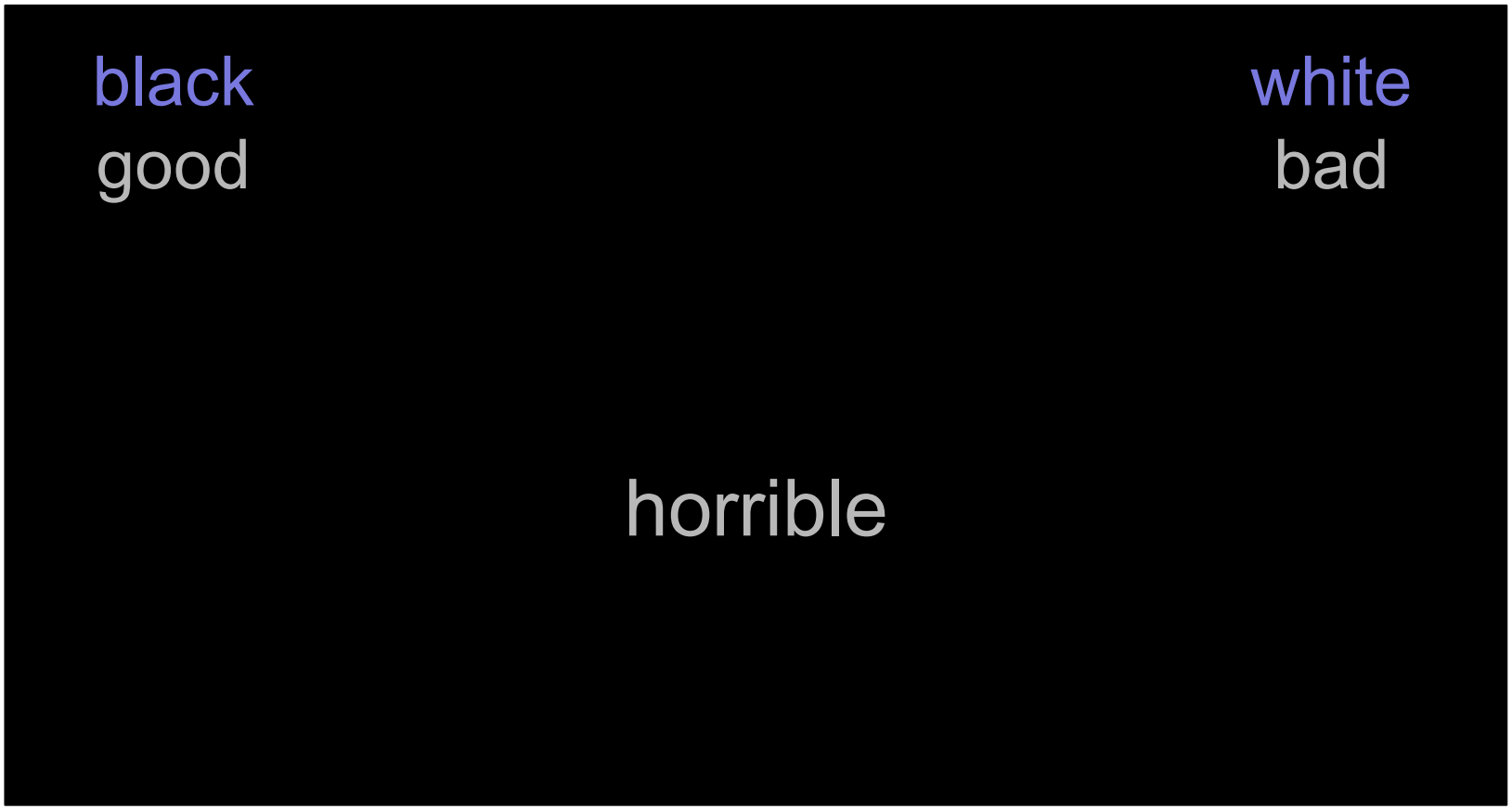
IAT

block 2 – attribute discrimination



IAT

block 3 – critical block: combined task



IAT

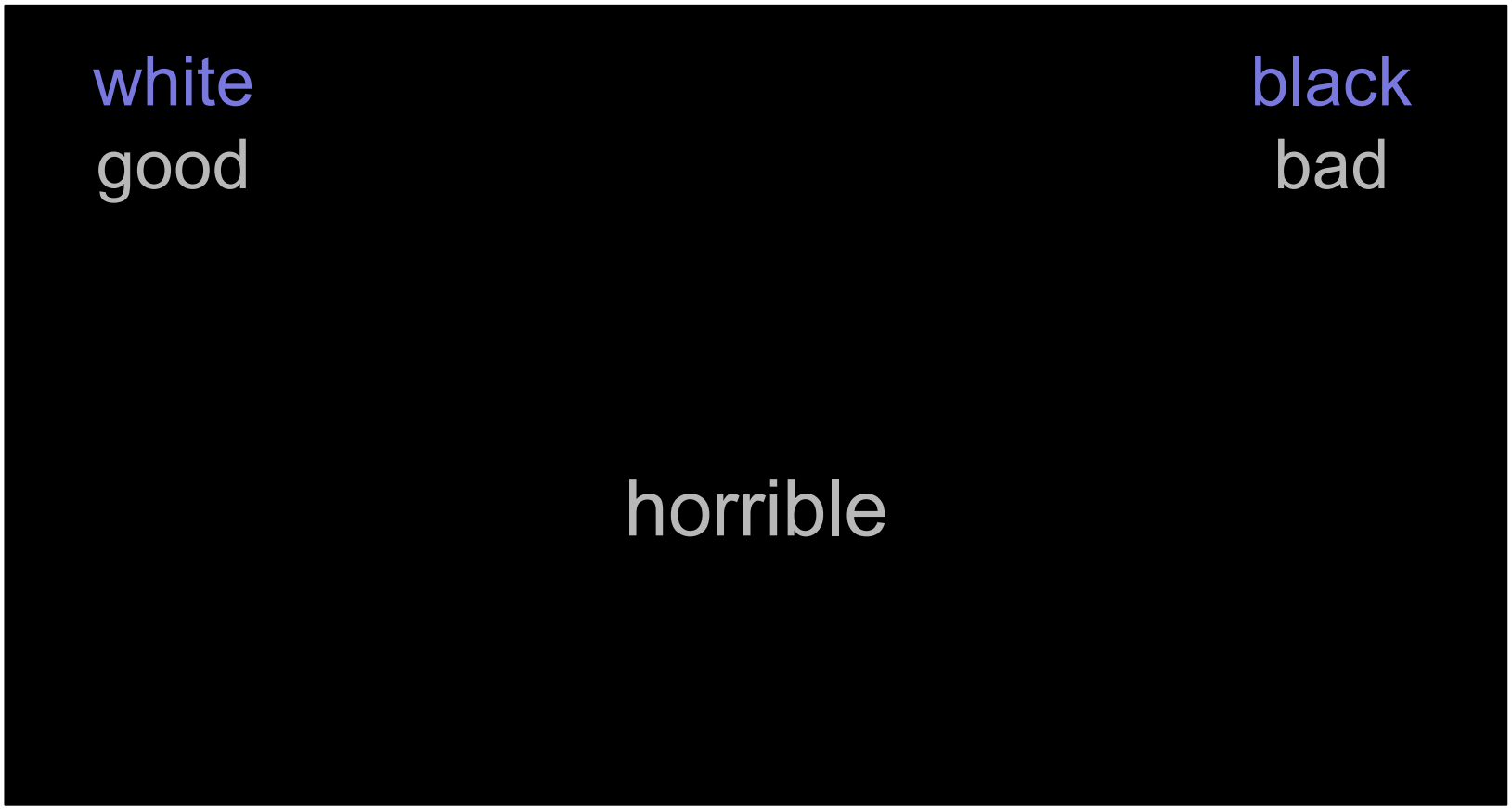
block 4 – target concept discrimination reversed

white

black

IAT

block 5 – critical block: combined task reversed



SB-ST-IAT

- problems with the IAT:
  - binary structure
  - comparative structure
  - practice effect
  - recoding

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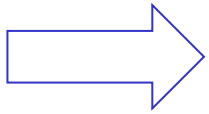
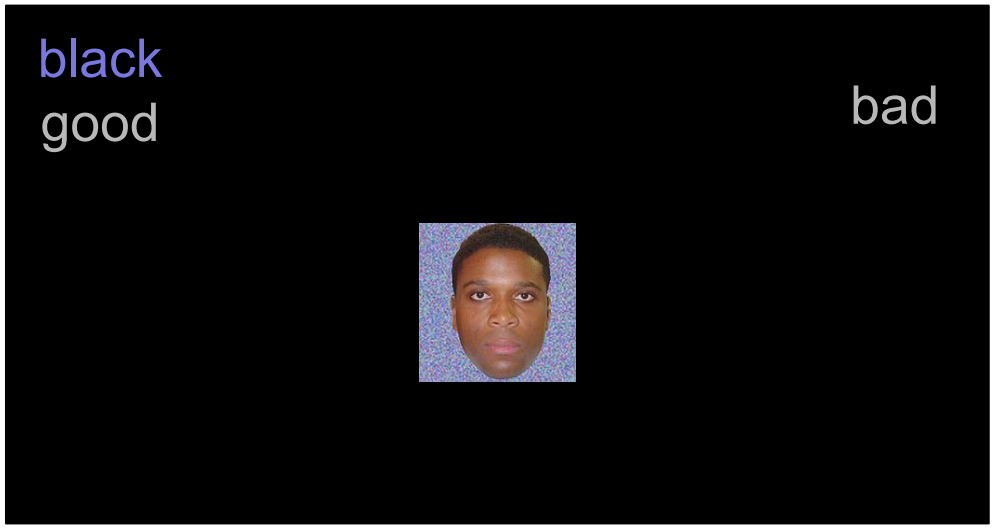


ST-IAT

SB-ST-IAT

- problems with the IAT:
  - binary structure
  - comparative structure
  - practice effect
  - recoding

→ ST-IAT



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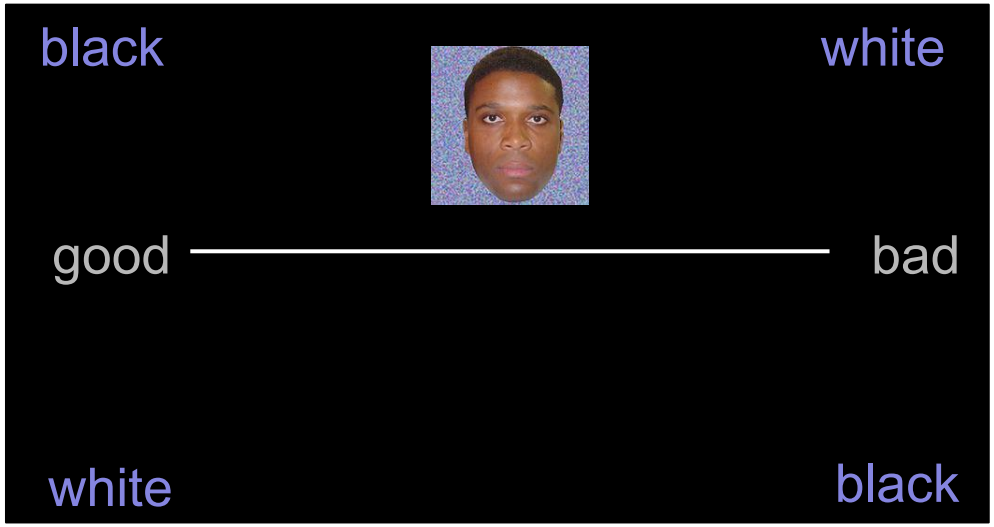
SB-IAT



SB-ST-IAT

- problems with the IAT:
  - binary structure
  - comparative structure
  - practice effect
  - recoding

→ multiple single target assessment: SB-ST-IAT

SB-ST-IAT: how it works

SB-ST-IAT: how it works

	TARGET CONCEPT	ATTRIBUTE	
category names	black	good/bad	
stimuli			

SB-ST-IAT

block 1 – attribute discrimination

good ——————————————— bad

SB-ST-IAT

block 2 – target discrimination

black

black

SB-ST-IAT

block 3 – combined task

black

good ——————————————— bad

black

SB-ST-IAT

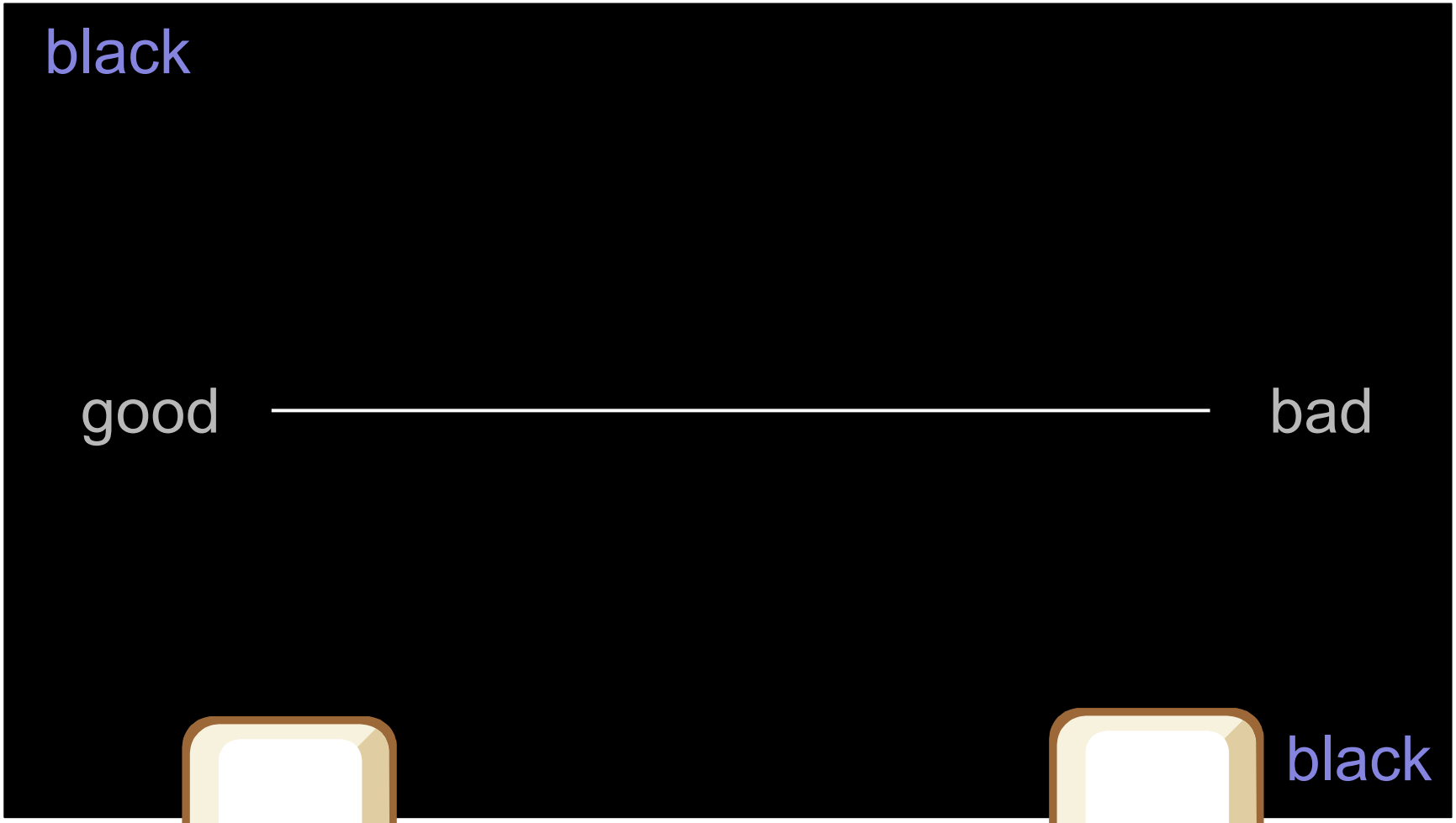
some examples

SB-ST-IAT

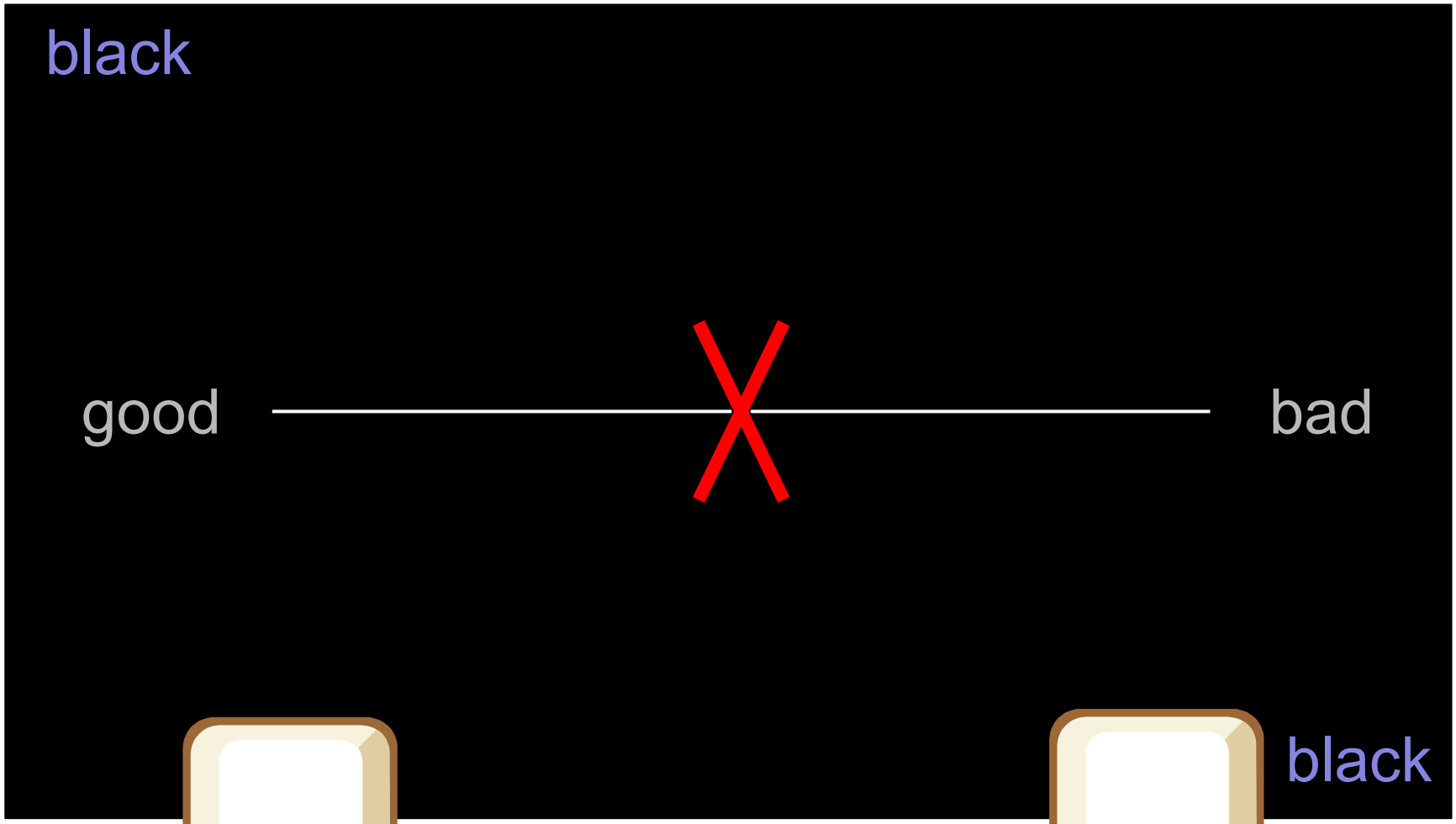
some examples

combined task

SB-ST-IAT



SB-ST-IAT



SB-ST-IAT

black

good

bad

black

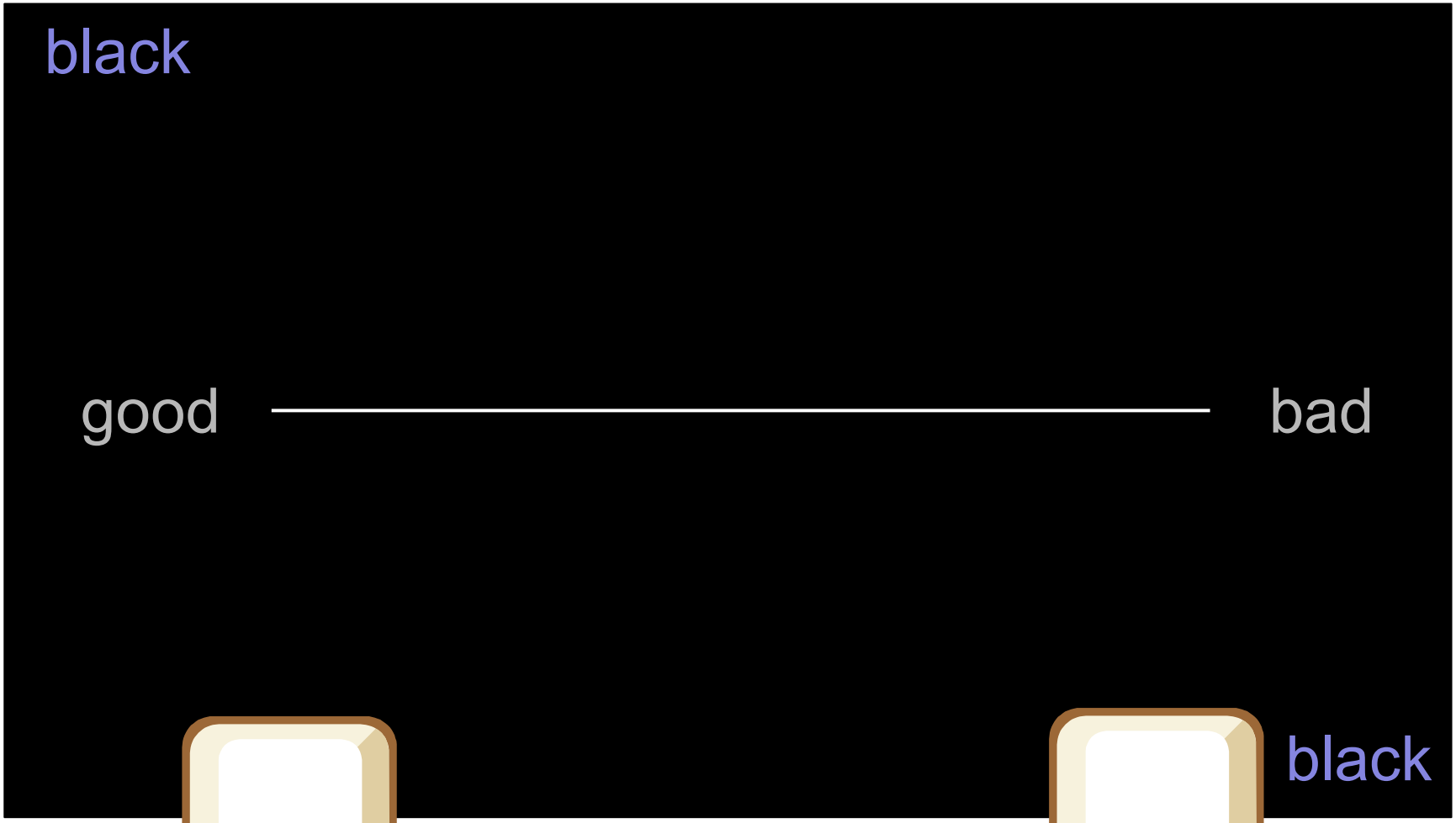
SB-ST-IAT

black

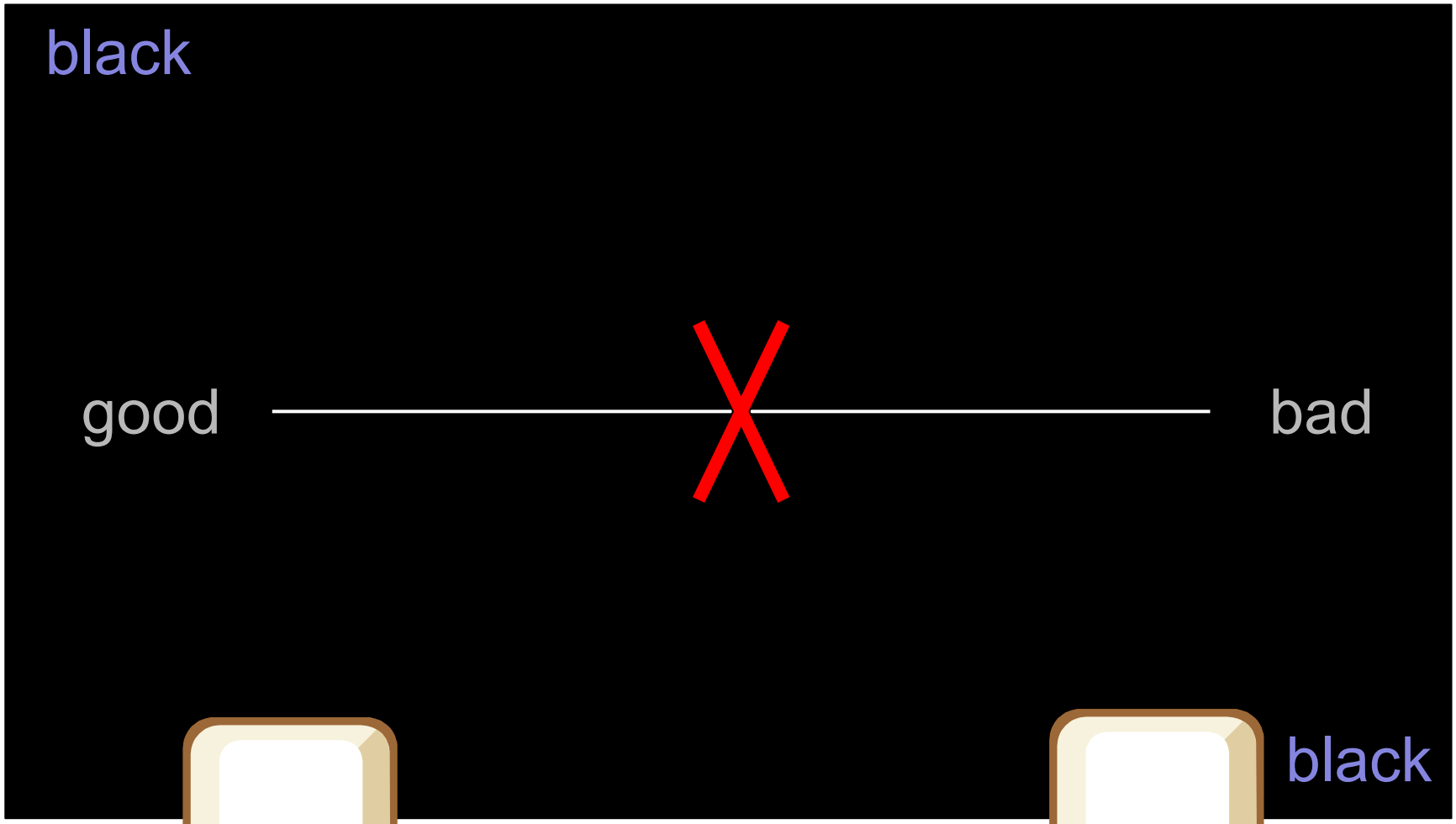
good ——————————————— bad

black

SB-ST-IAT



SB-ST-IAT



SB-ST-IAT

black

good

bad

black

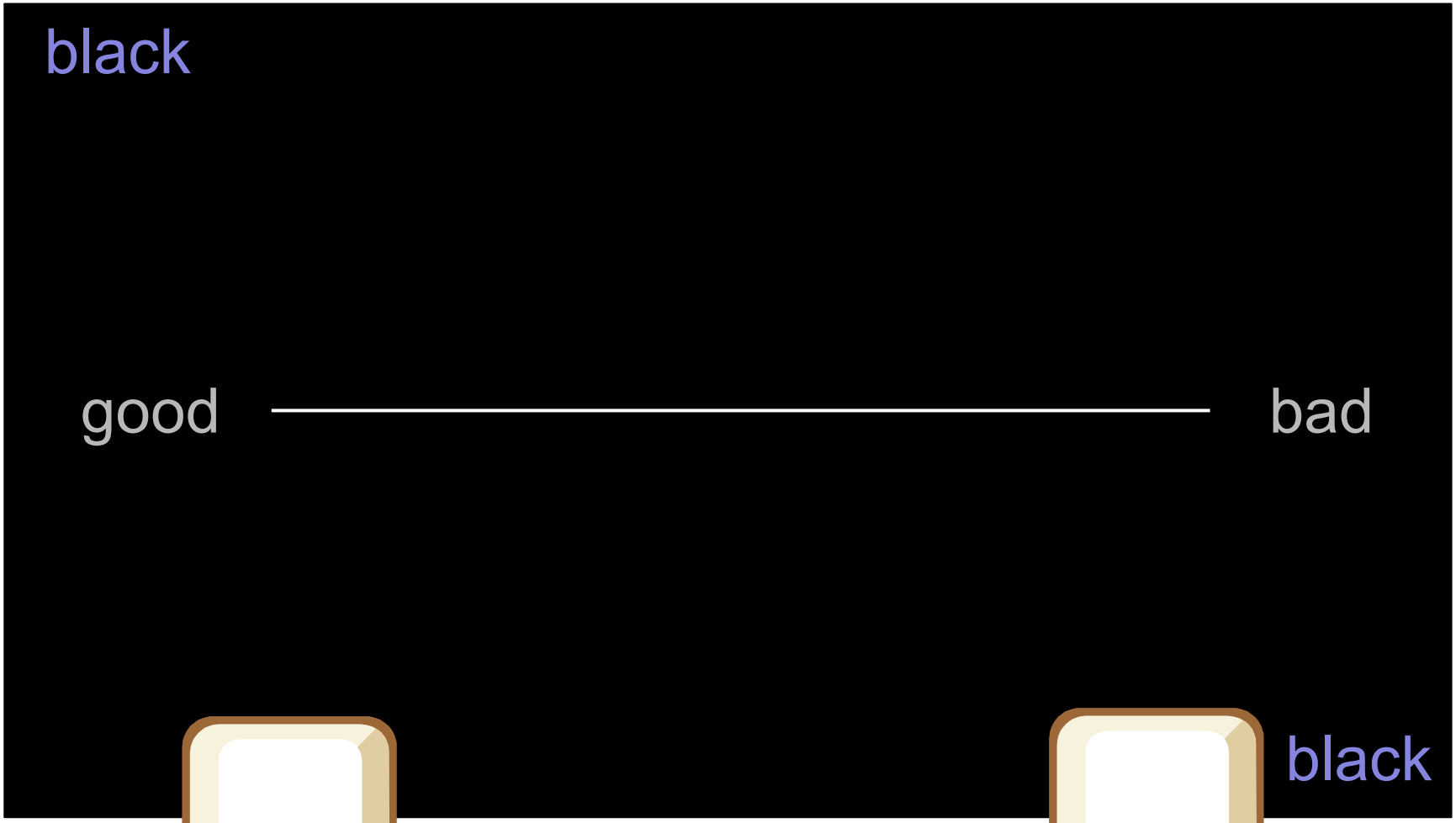
SB-ST-IAT

black

good ——————————————— bad

black

SB-ST-IAT



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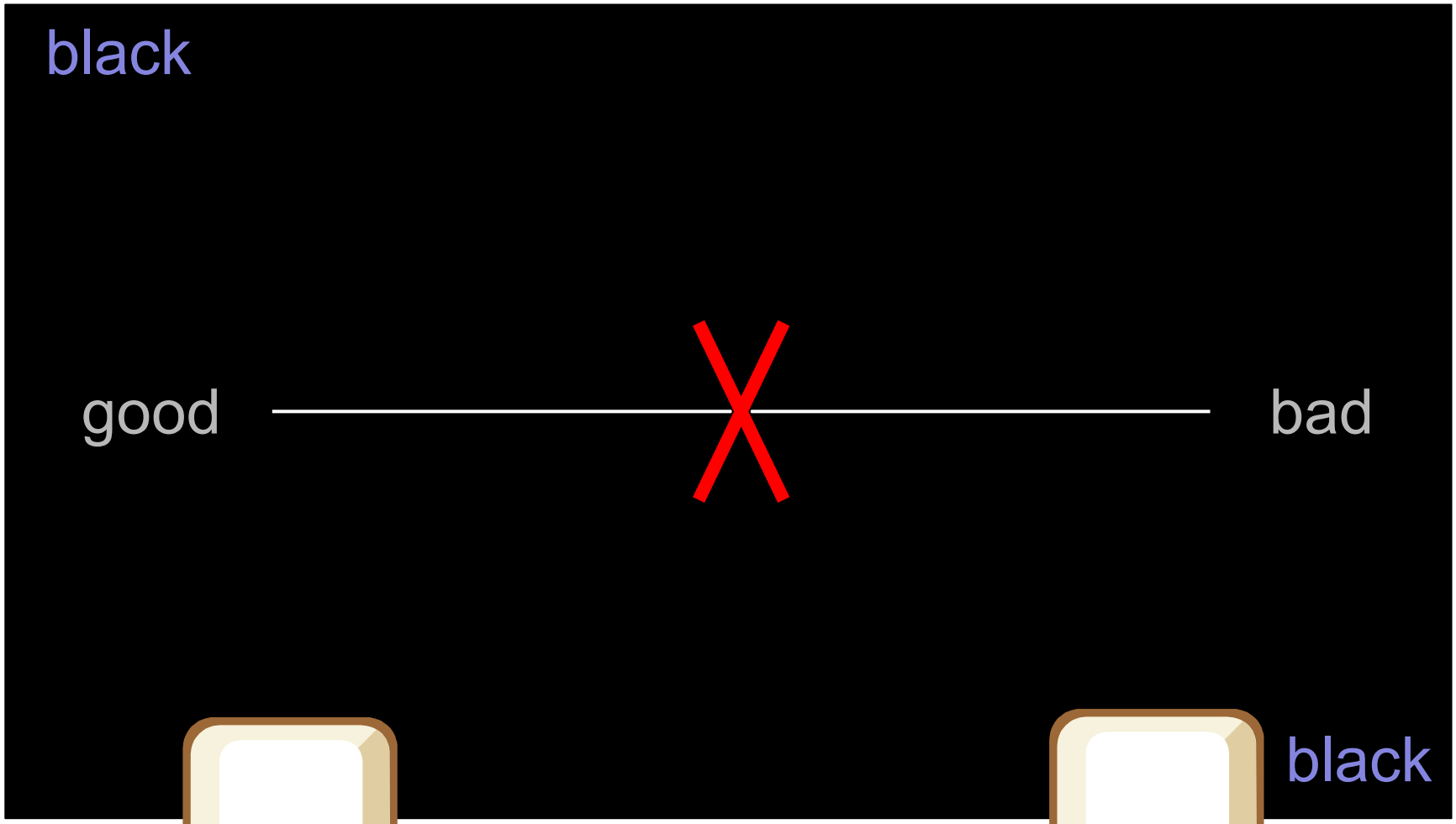


SB-ST-IAT

black

good

bad

black

SB-ST-IAT

black

good

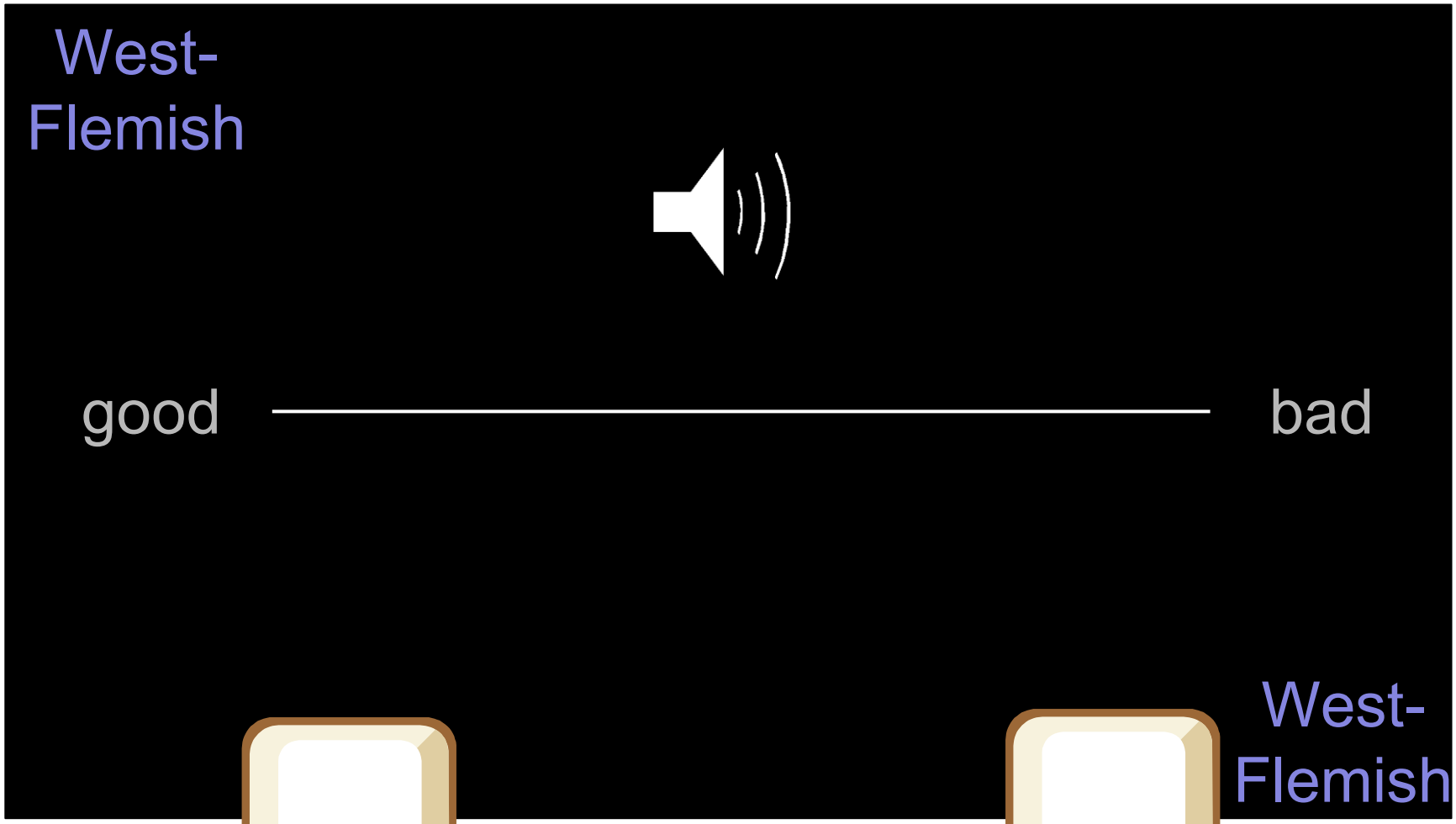
bad

black

SB-ST-IAT: introducing linguistic stimuli

SB-ST-IAT

SB-ST-IAT: introducing linguistic stimuli

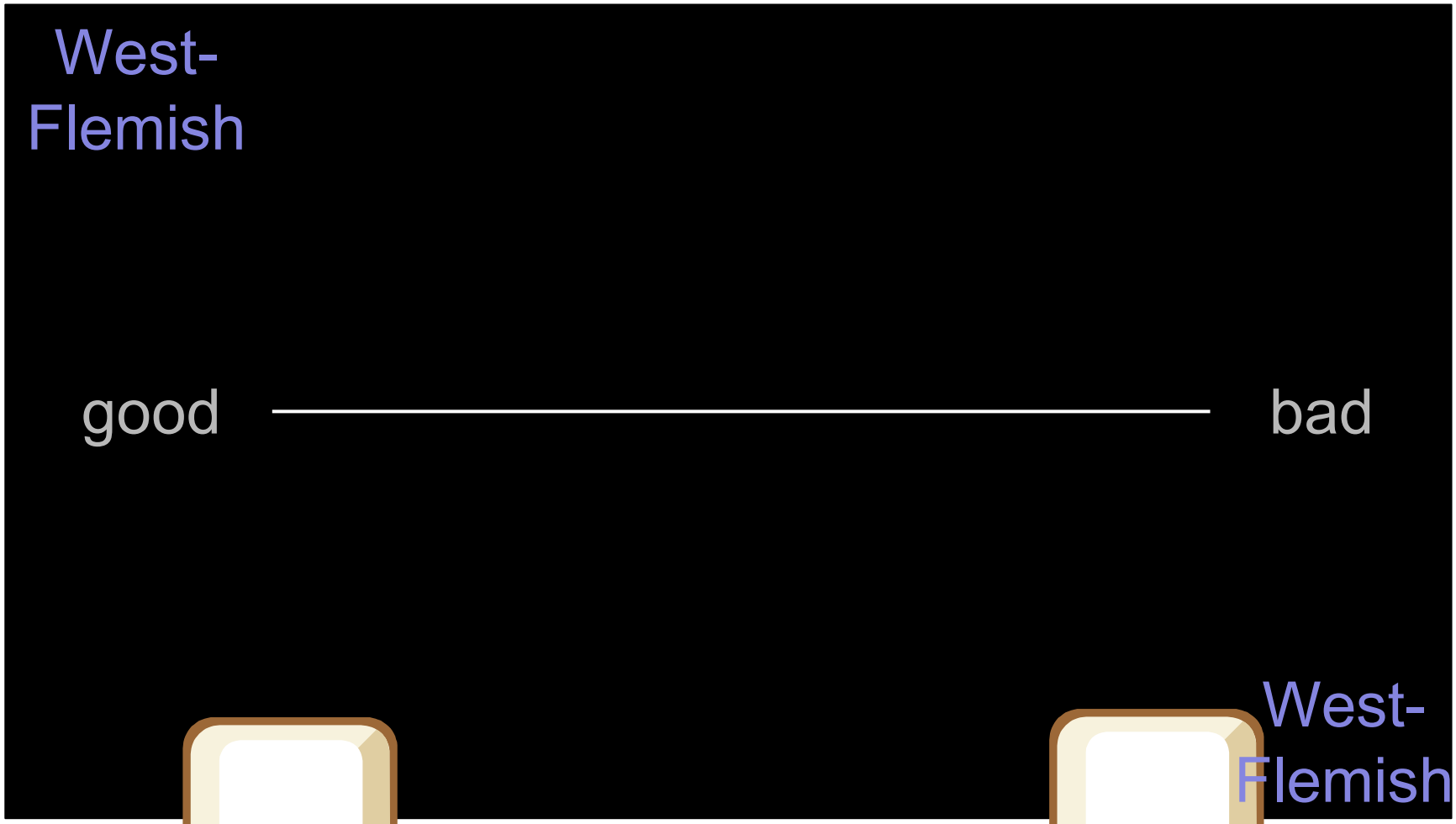


SB-ST-IAT: introducing linguistic stimuli

example of a trial

SB-ST-IAT

SB-ST-IAT: introducing linguistic stimuli



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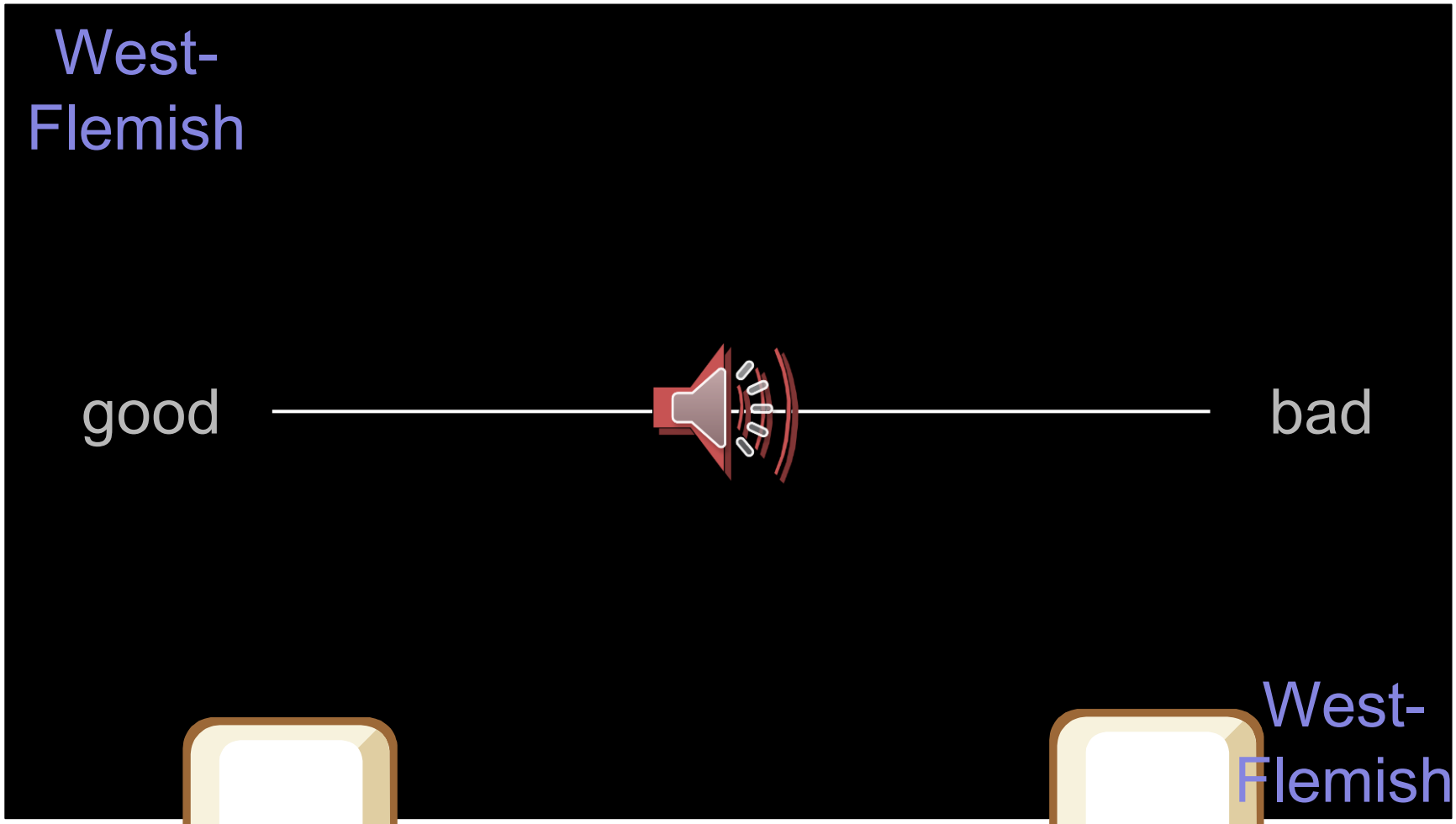
SB-ST-IAT: introducing linguistic stimuli



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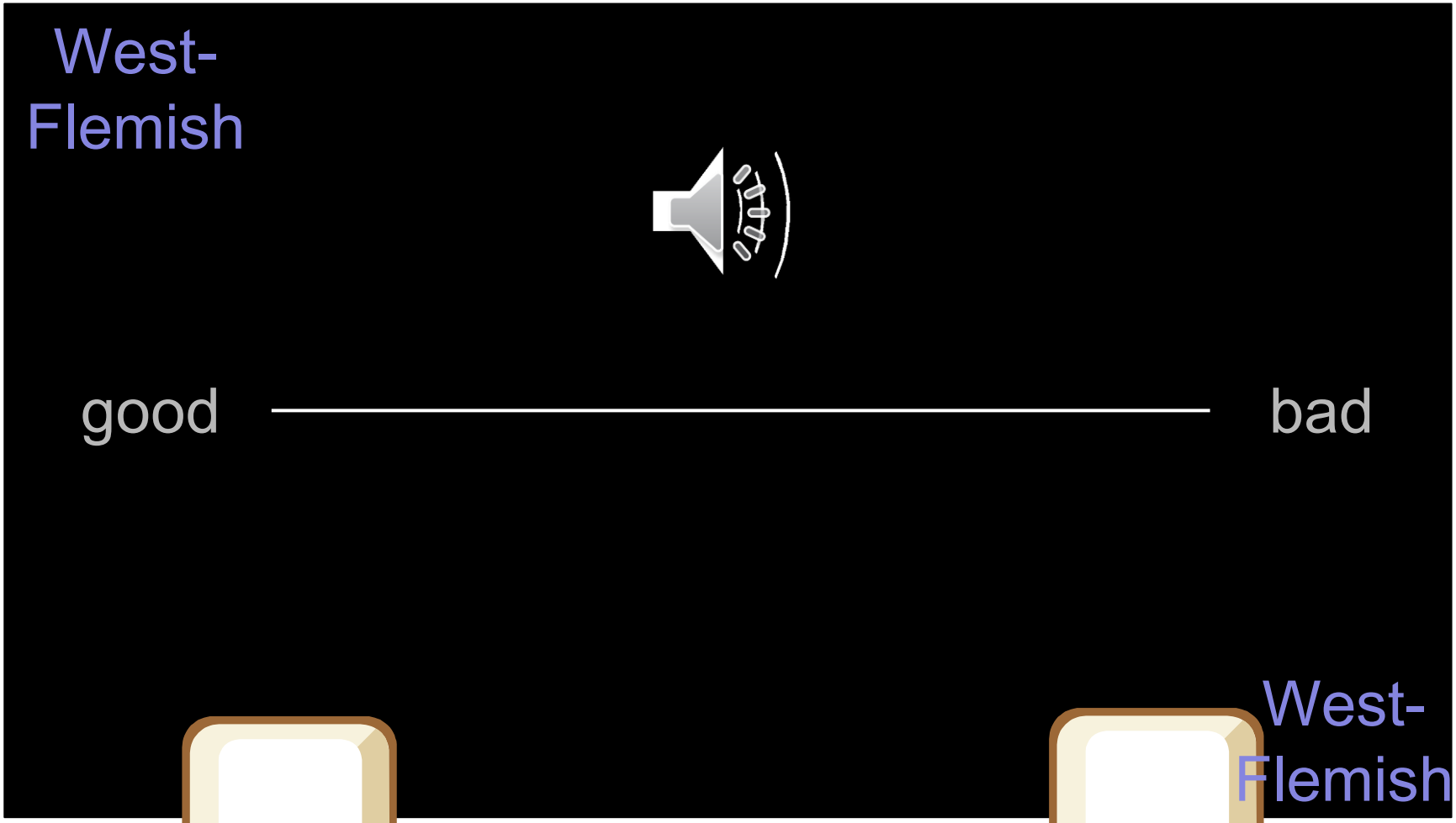

SB-ST-IAT

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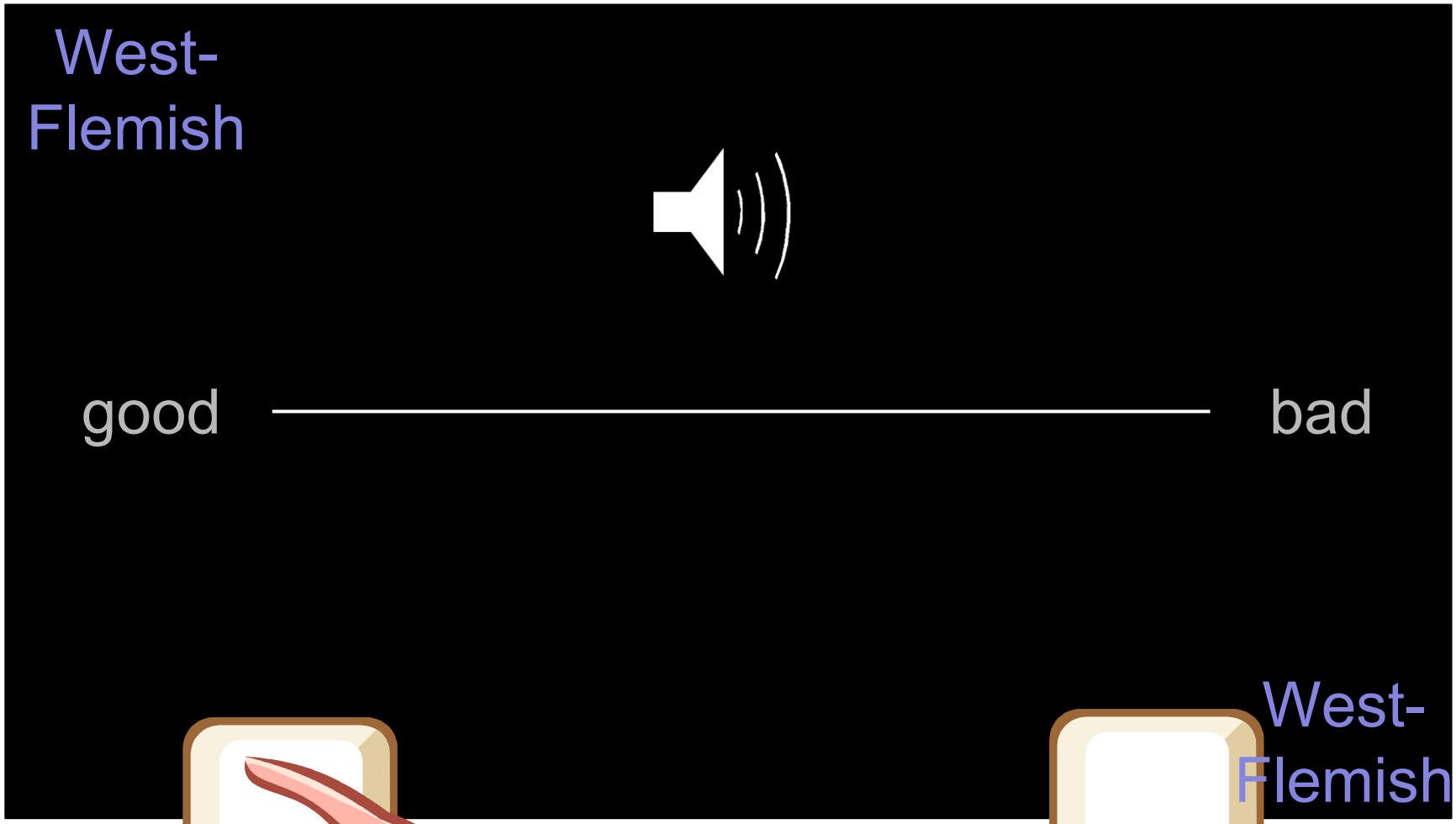

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4. pilot experiment: a case study on regional varieties of Dutch in Belgium

pilot experiment

- aim: test SB-ST-IAT as a technique to measure language attitudes
- case study: replication of Speelman, Spruyt, Impe & Geeraerts (2013)

pilot experiment

- replication of Speelman, Spruyt, Impe & Geeraerts (2013)
  - attitudes towards 3 varieties of Dutch in Belgium
  - Standard Dutch, central variety (Antwerp), peripheral variety (West-Flanders)
  - auditory affective priming
  - results
    for periphery:
    standard > own (peripheral) > central variety
    for centre:
    own (central) > standard > peripheral variety

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pilot experiment

- experiment design

pilot experiment

- experiment design

	racial	linguistic
target stimuli	 	 West-Flemish Antwerp Standard Dutch
attribute stimuli	 	 positive negative
target labels	black, white	West-Flemish, Antwerp? variety A, B? accent A, B?

pilot experiment

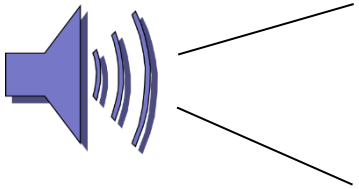
- experiment design

	racial	linguistic
target stimuli	 	 West-Flemish Antwerp Standard Dutch

auditory stimuli: spoken words
multiple speakers per variety, demographically similar
representative speakers (pretests)
neutral words
controlled for length, frequency, arousal, part of speech, etc.

pilot experiment

- experiment design

	racial	linguistic
positive & negative words modality (at least partly) the same as target: auditory controlled for length, frequency, etc.		
attribute stimuli	 	 positive negative
accent?		

pilot experiment

- experiment design

	racial	linguistic
label common in speech community? → pretest possible to use ‘accent A’, ‘accent B’, etc. ?		
target labels	black, white	West-Flemish, Antwerp? variety A, B? accent A, B?

pilot experiment

participants:

- ½ from periphery, ½ from centre
- demographically homogeneous, e.g. student population

→ prestudies required:

- labels
- representativeness speakers
- (valence stimuli)

experiment	blocks	task	left hand	right hand	# trials attr. 1	# trials attr. 2	# trials target
	1	attribute discrimination	attr. 1	attr. 2	30	30	0
exp. A variety 1	2	target discrimination	target A ----------	---------- target A	0	0	15 30: ----- 15
	3-6	combined task	target A attr. 1 + ----------	attr. 2 + ---------- target A	30	30	15 30: ----- 15
exp. B variety 2	7	target discrimination	---------- target B	target B ----------	0	0	15 30: ----- 15
	8-11	combined task	attr. 1 + --------- target B	target B attr. 2 + ----------	30	30	15 30: ----- 15
exp. C variety 3	12	target discrimination	target C ----------	---------- target C	0	0	15 30: ----- 15
	13-16	combined task	target C attr. 1 + ---------	attr. 2 + --------- target C	30	30	15 30: ----- 15

conclusion

despite limitations, e.g.:

- limited context in stimuli
- importance of labels

hopeful to provide a useful addition to the toolbox of language attitude research

suggestions? comments? questions?

thank you!

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