Disentangling statistical discrimination from false stereotypes

A trust experiment between participants of high-brow and low-brow culture

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March 21, 2013

Purpose of the talk

- Discrimination typology and its operationalization in the trust game
- Usefulness of strategy method trust games for disentangling different types of group-based discrimination
- Preliminary data analyses covering
  - Estimates of relative frequencies of discrimination types
  - Some substantial findings about trust in groups with low-brow and high-brow cultural participation

Types of discrimination

- Taste for discrimination
  - People who are willing to bear costs to preferentially fill positions or perform exchanges with people who have a certain gender, social class, or who belong to a certain milieu, speak a certain dialect or have a certain taste with respect to music, sports, or cultural activities.
- Belief-based discrimination
  - Not evoked “directly” by preference, but “indirectly” by acting contingent on subjective beliefs about average qualities or performance of social groups
  - For example, belief that people with a certain gender, social class etc. work harder, are more productive, cooperative, trustworthy or enduring.
  - Preferential choice of people for vacant jobs, as potential business partners, friends, mates or trustees given subjective beliefs that people from certain social groups have better qualities or show better performance
- Statistical discrimination vs. false stereotypes
  - Correct beliefs: statistical discrimination
  - Mistaken beliefs: false stereotypes

Discrimination typology

Discrimination typology

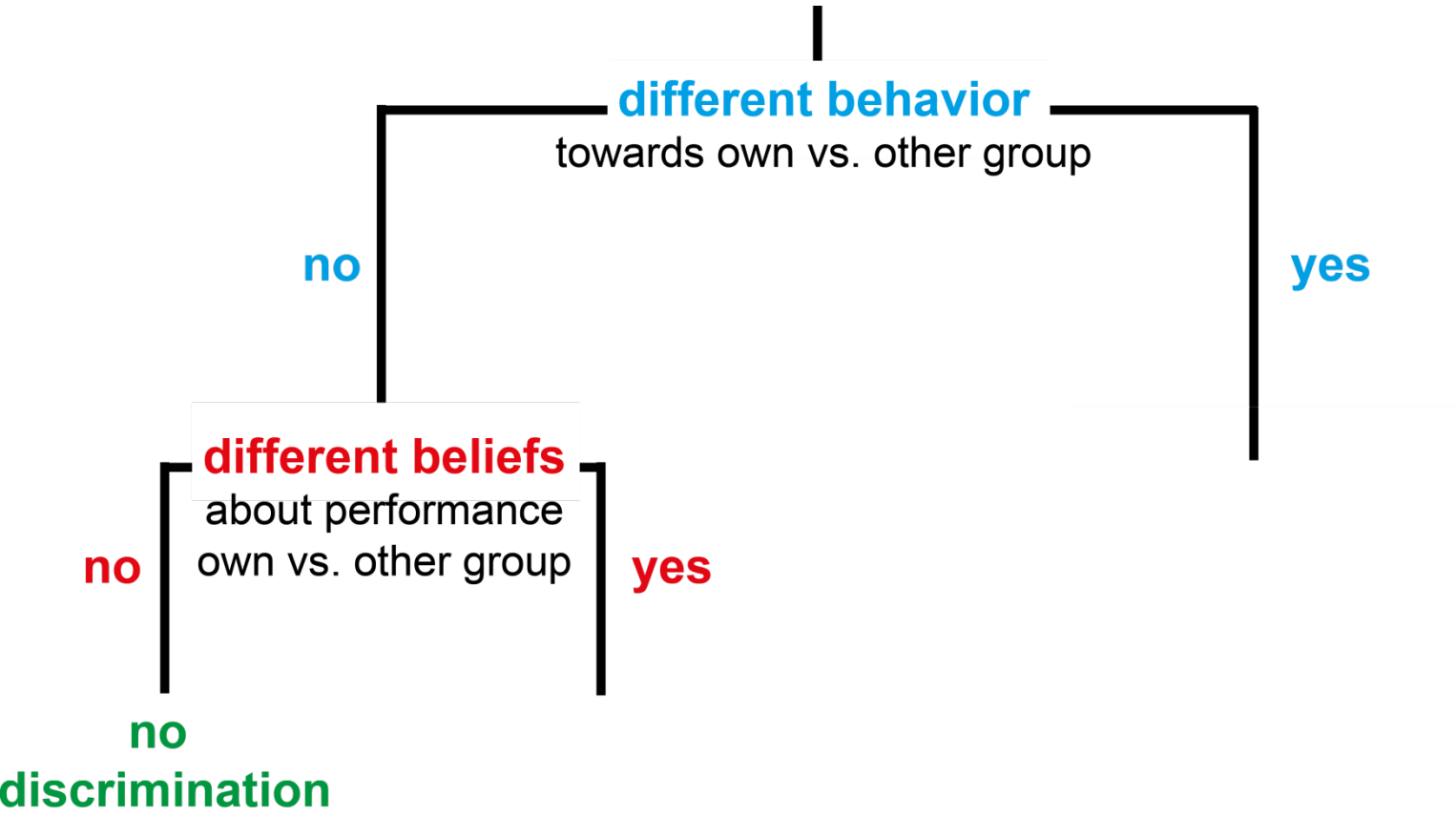
different behavior

towards own vs. other group

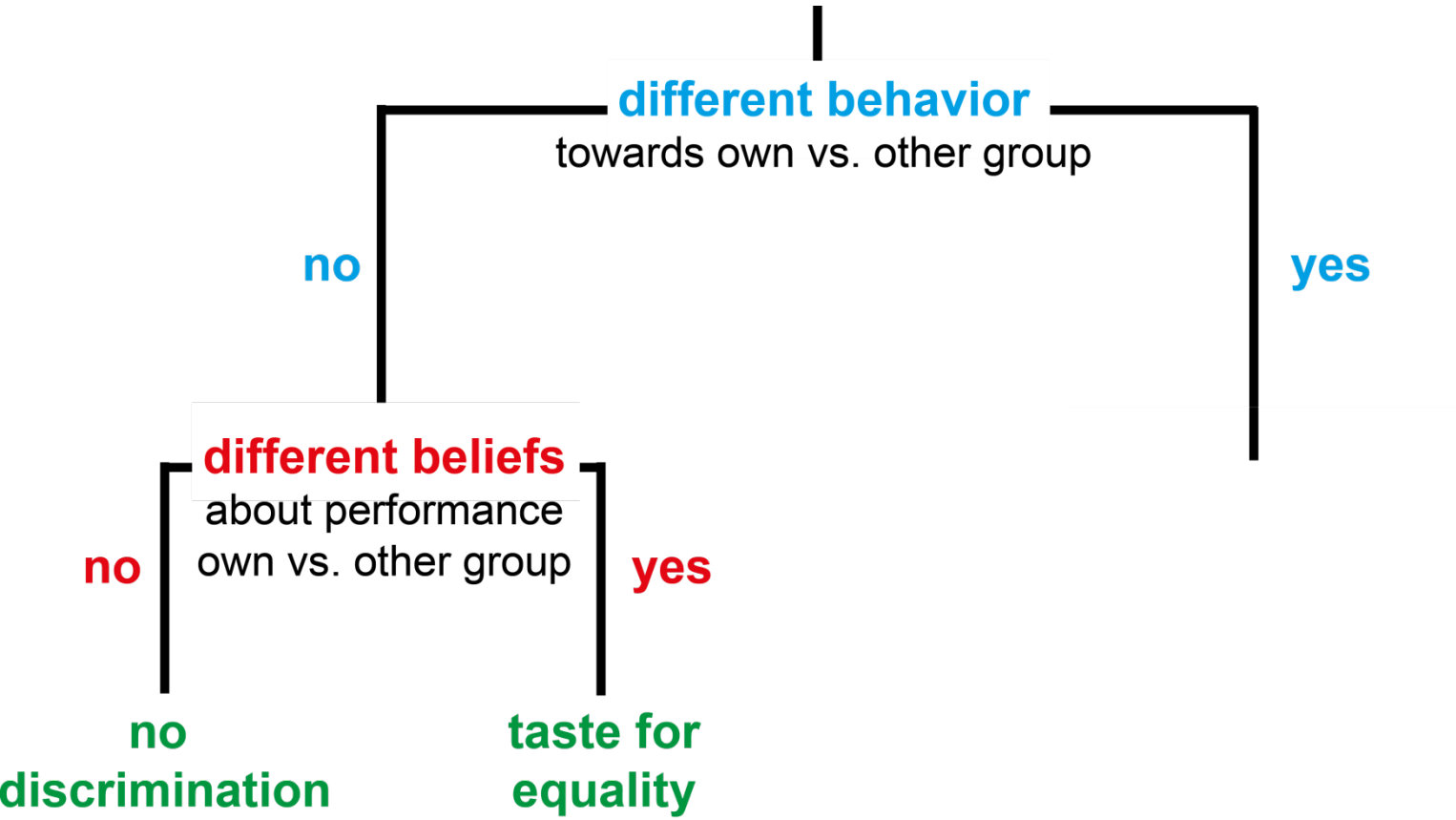
no

yes

Discrimination typology



Discrimination typology



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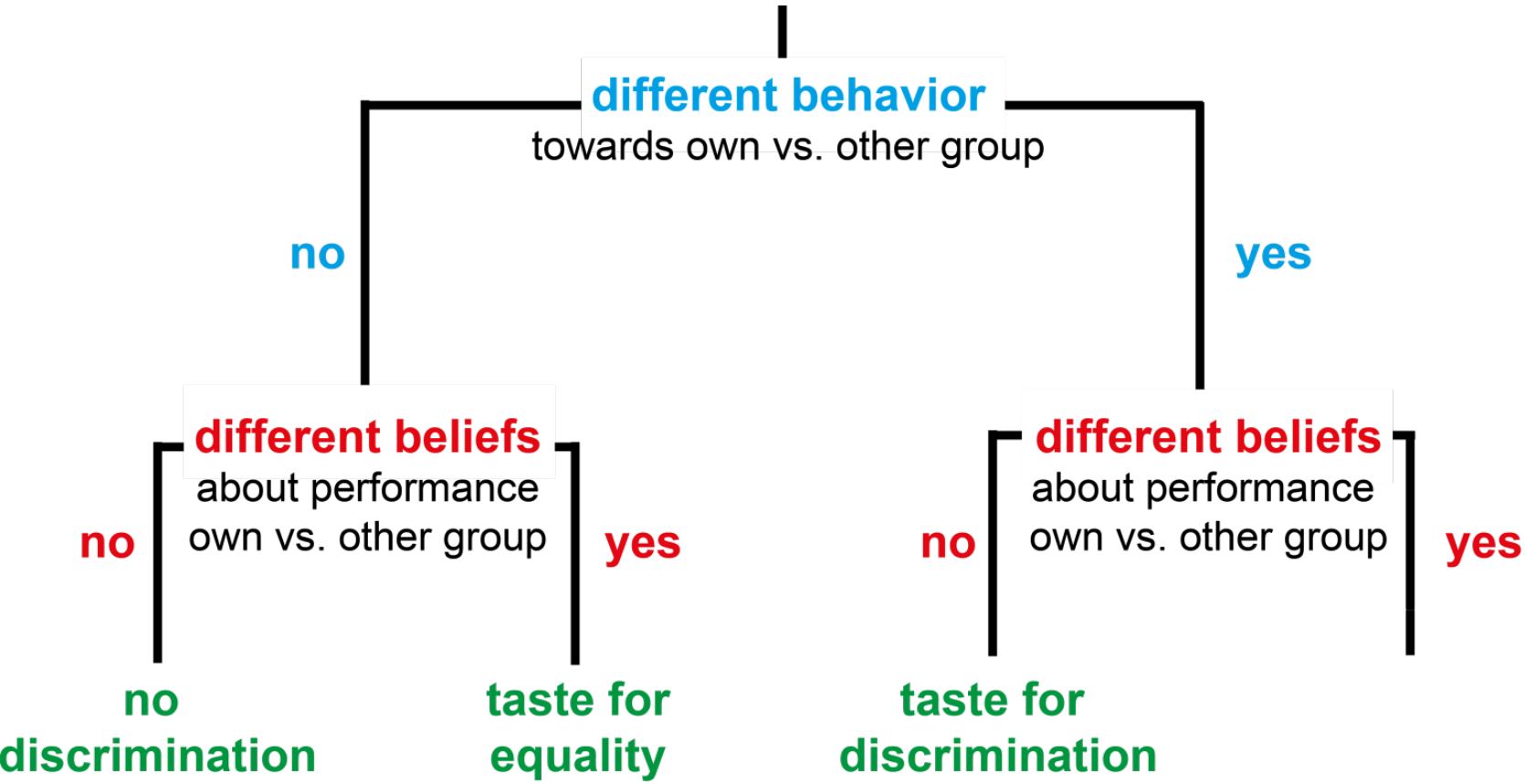

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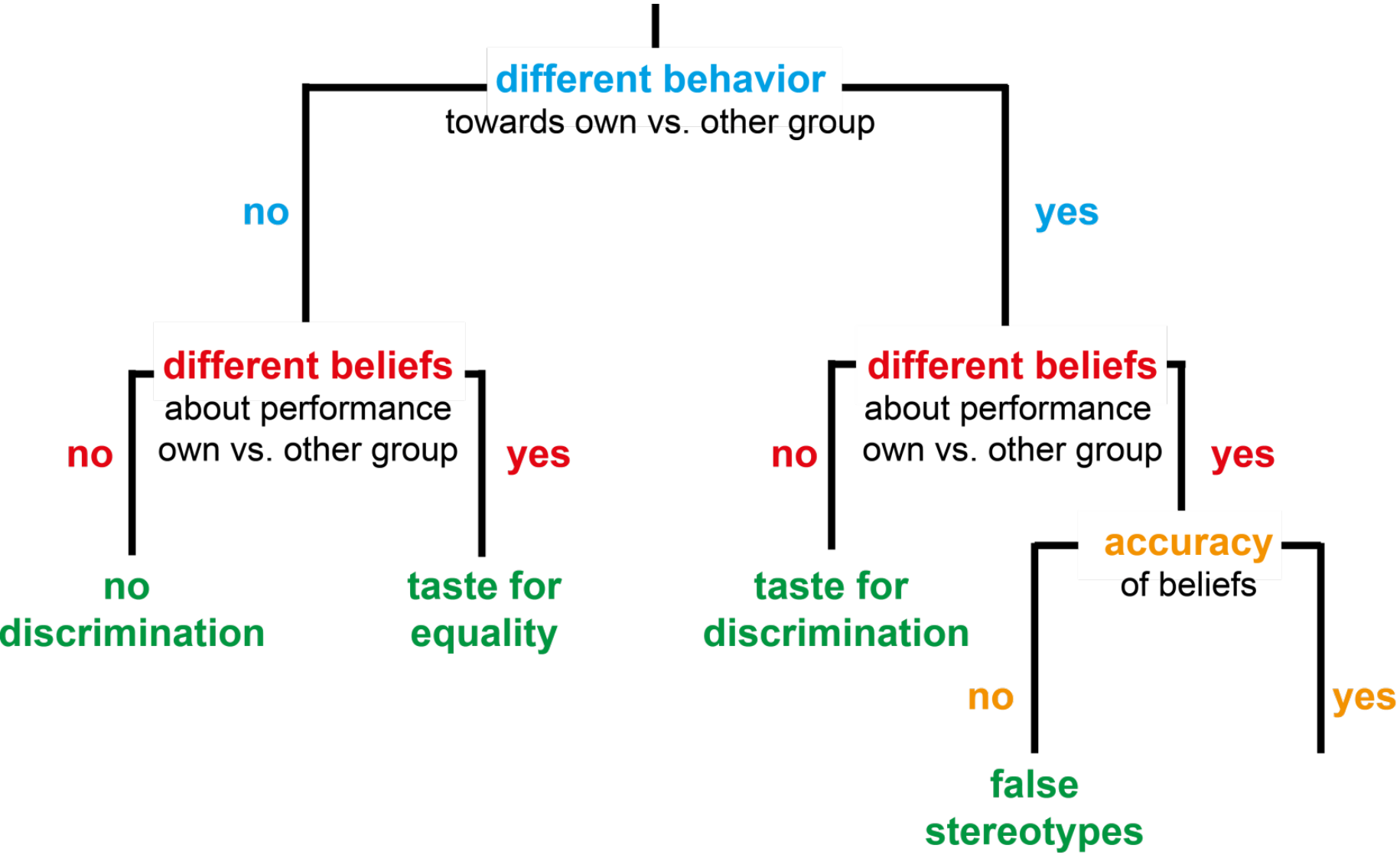
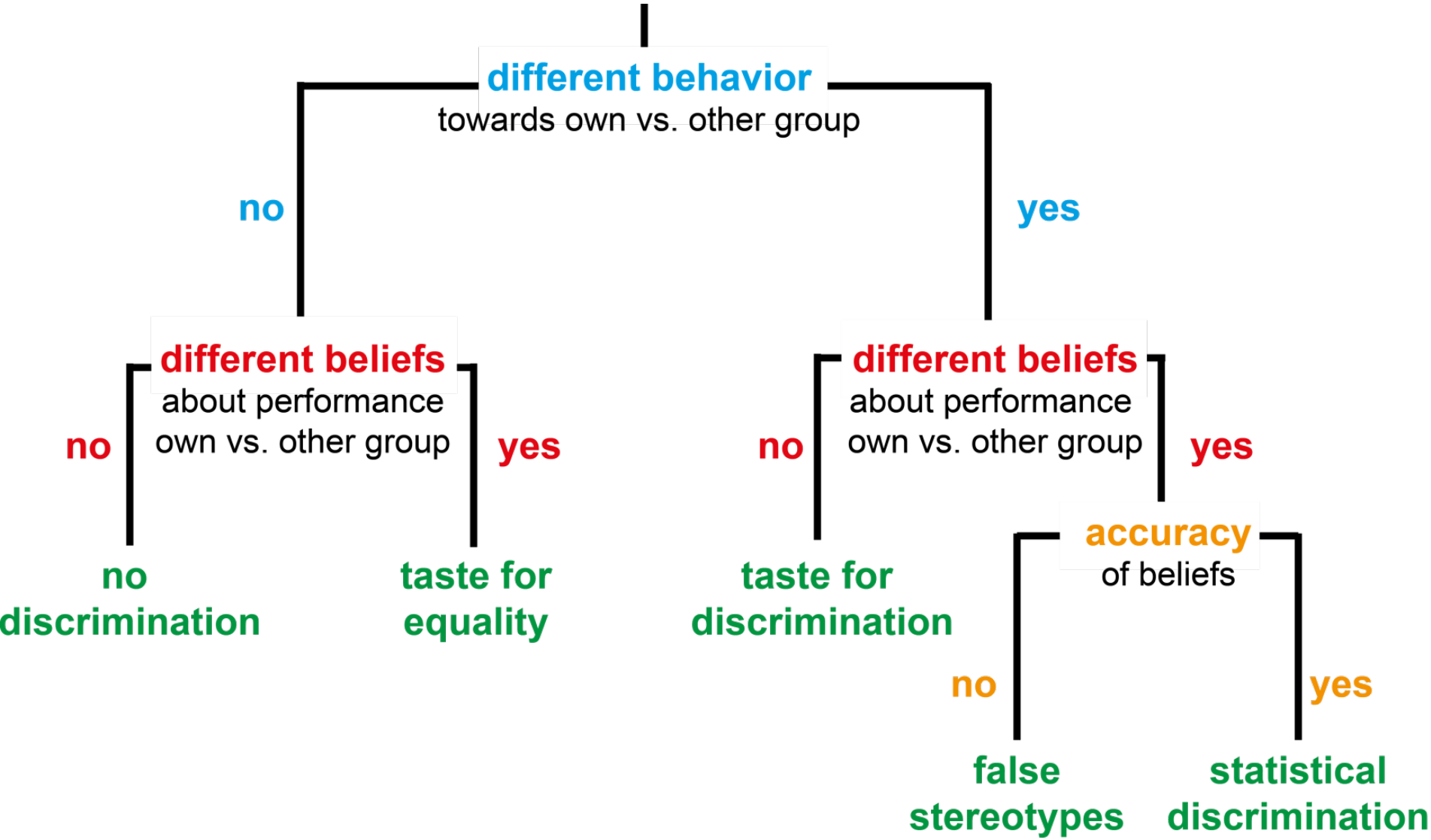


Discrimination typology



Group-based trust game for disentangling discrimination by tastes and beliefs

- More trust in strangers with same salient social category
  - In-group members judged more positively
    - better, nicer, more helpful
      (Brewer & Silver, 1978; Platow, McClintock, & Liebrand, 1990)
    - more generous, trustworthy, fair
      (Brewer & Silver, 1978; Platow, McClintock, & Liebrand, 1990)
  - Naive theory: in-group members help to promote group's interests
    (Foddy, Platow, Yamagishi, 2009)

- *Evidence for group-based trust*
  - More trust in own city district members, Zurich *(Falk & Zehnder, 2013)*
  - More trust in own clan members, Papua New Guinea *(Bernhard et al., 2006)*
  - More cooperative to own platoon members, Swiss army *(Götte et al., 2006)*

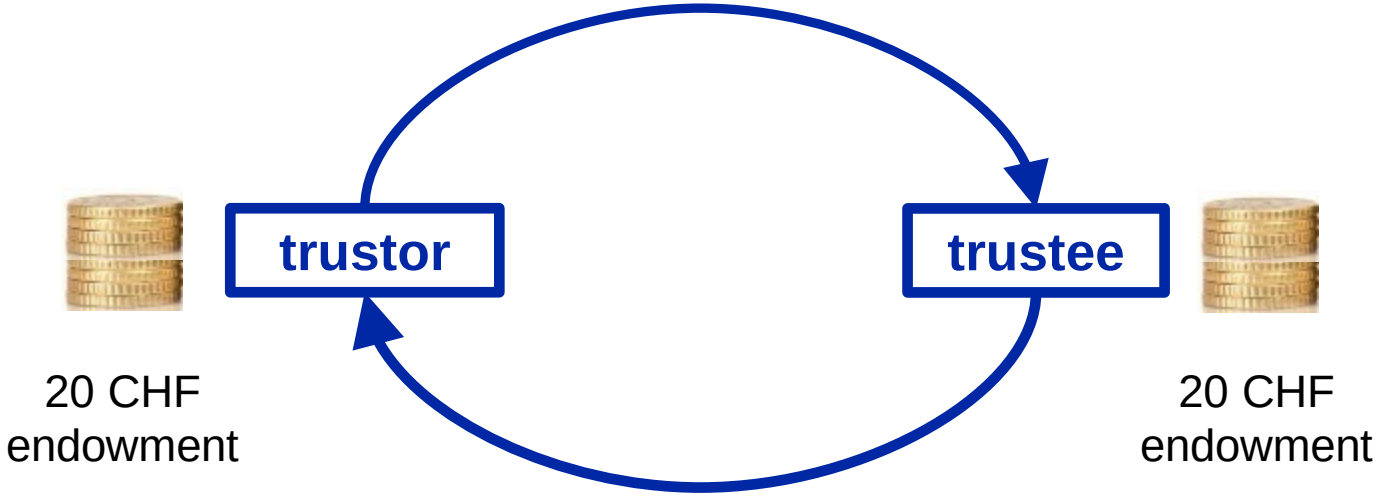
“High-brow” culture: classical music lovers

“Low-brow” culture: folk music lovers

Research design and data collection *(on-going…)*

- Online trust experiment
- Recruitment by classic and folk specific newsletters, advertisements at websites and newspapers
- Current sample size: 27 classic, 25 folk
- Target sample size: 125 classic, 125 folk
- Additional variables *(not covered in this talk)*
  - musical tastes
  - engagement in musical activities
  - stereotypes about classic and folk lovers
  - attitudes on trust
  - altruism (donation of earnings to Red Cross)
  - social demographics

Experimental design I: trust game



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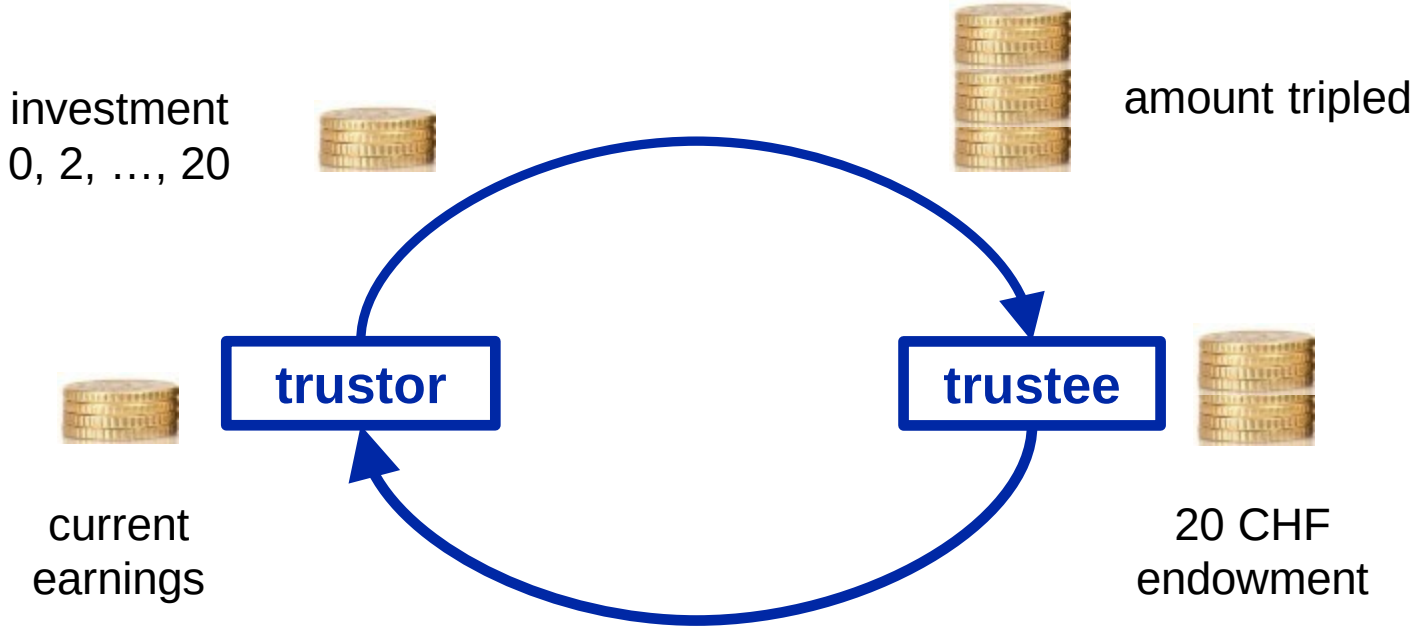

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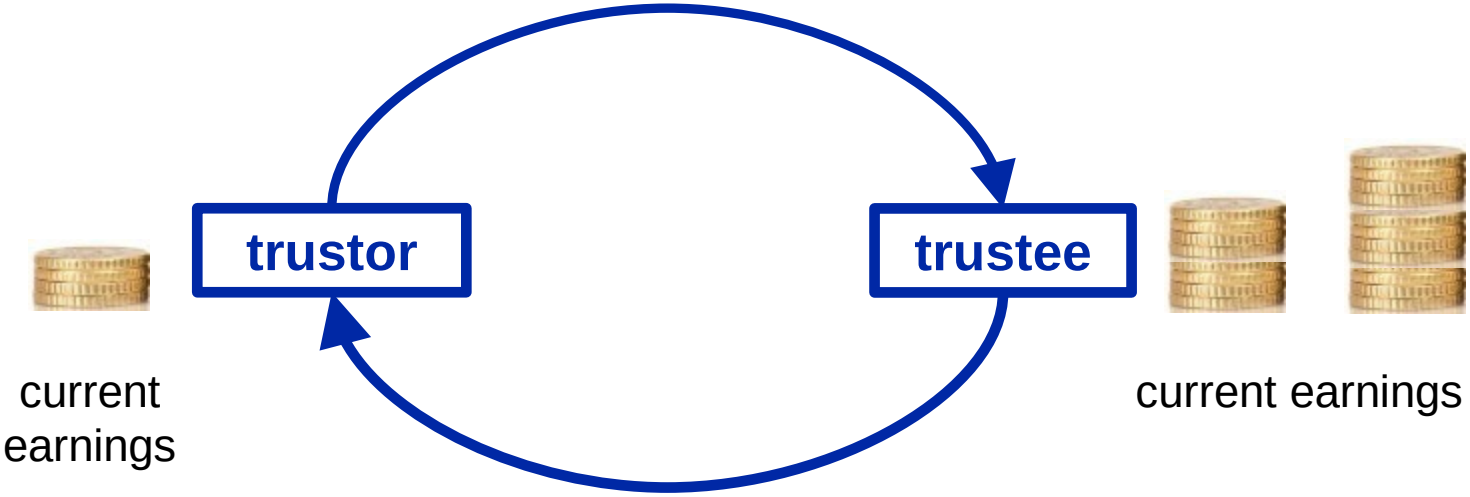

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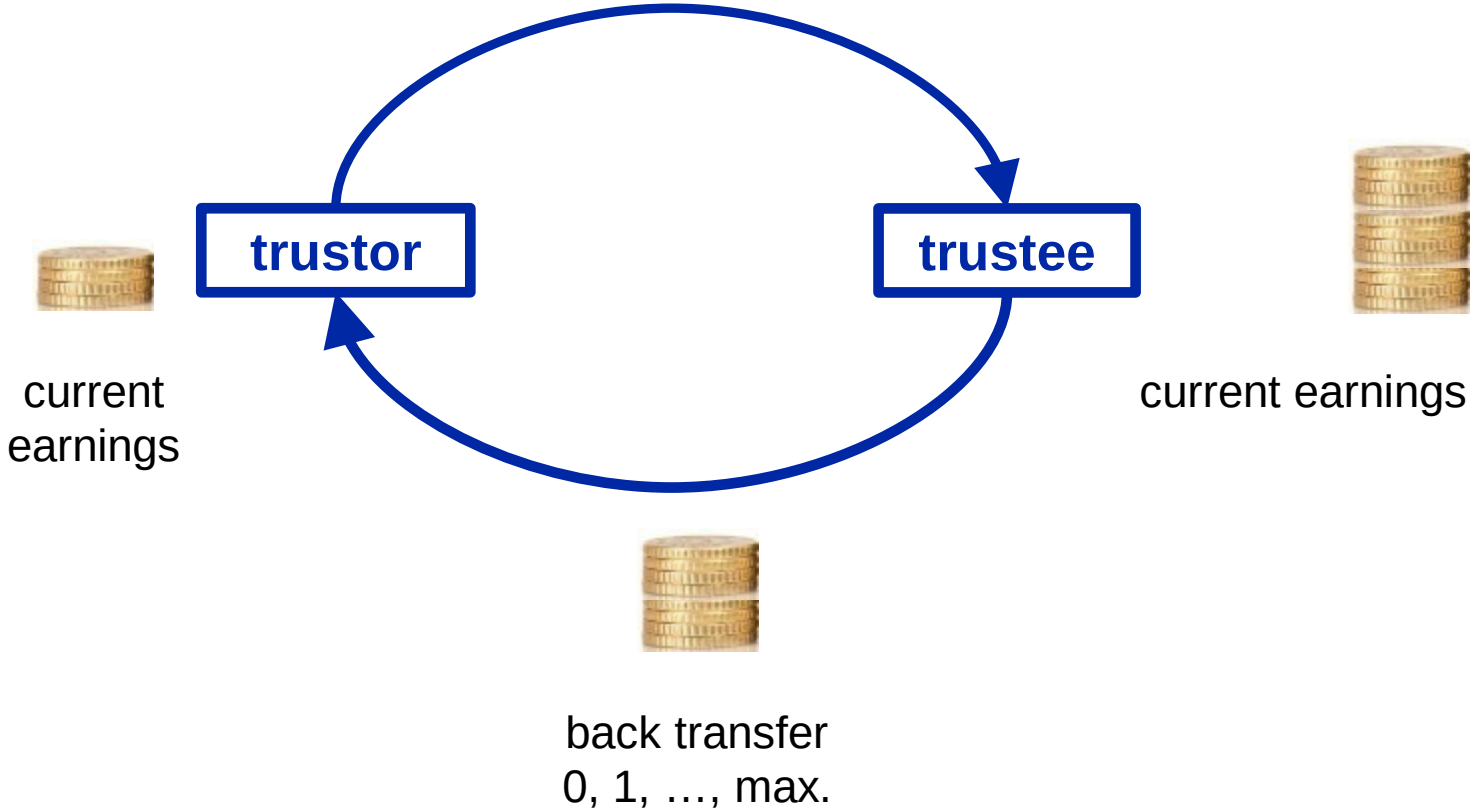

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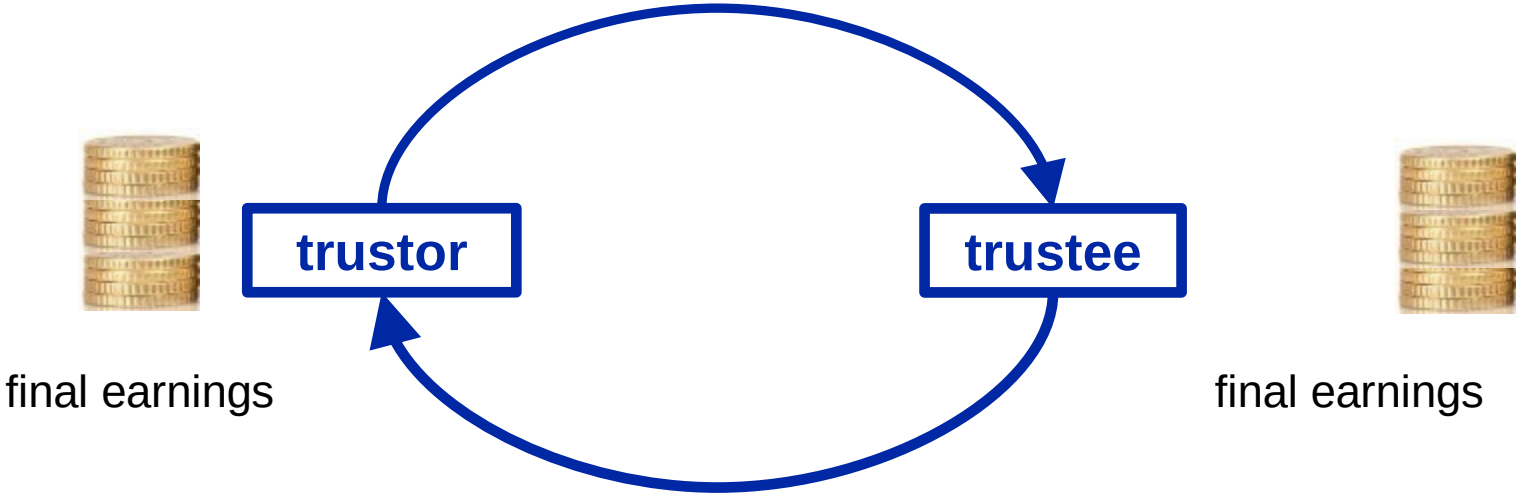

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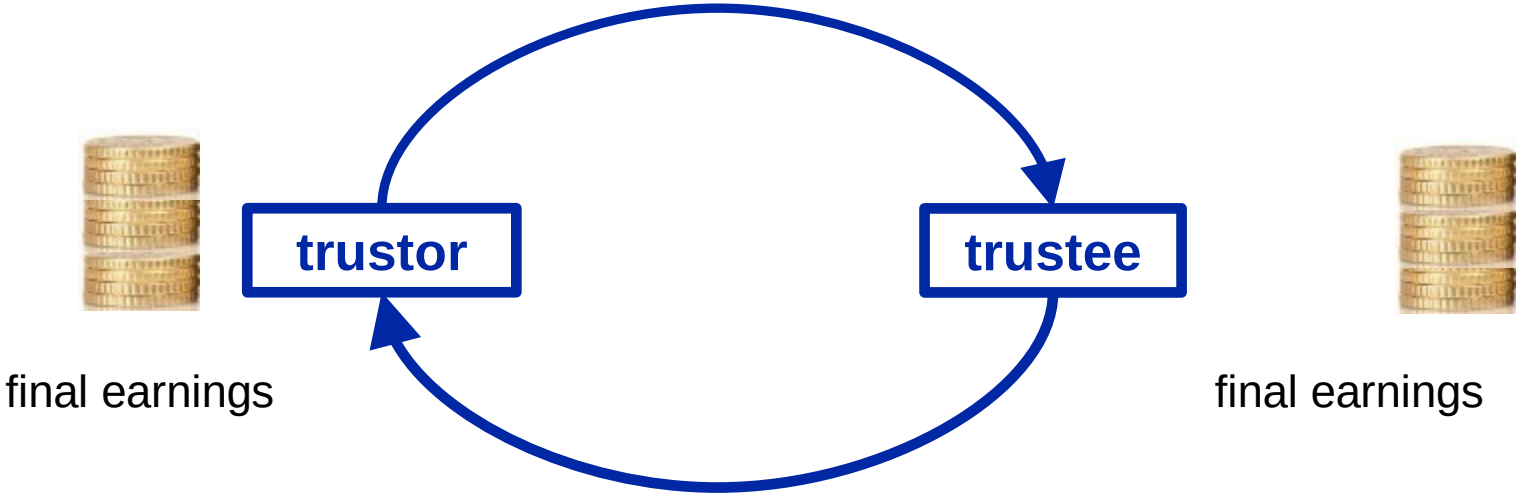
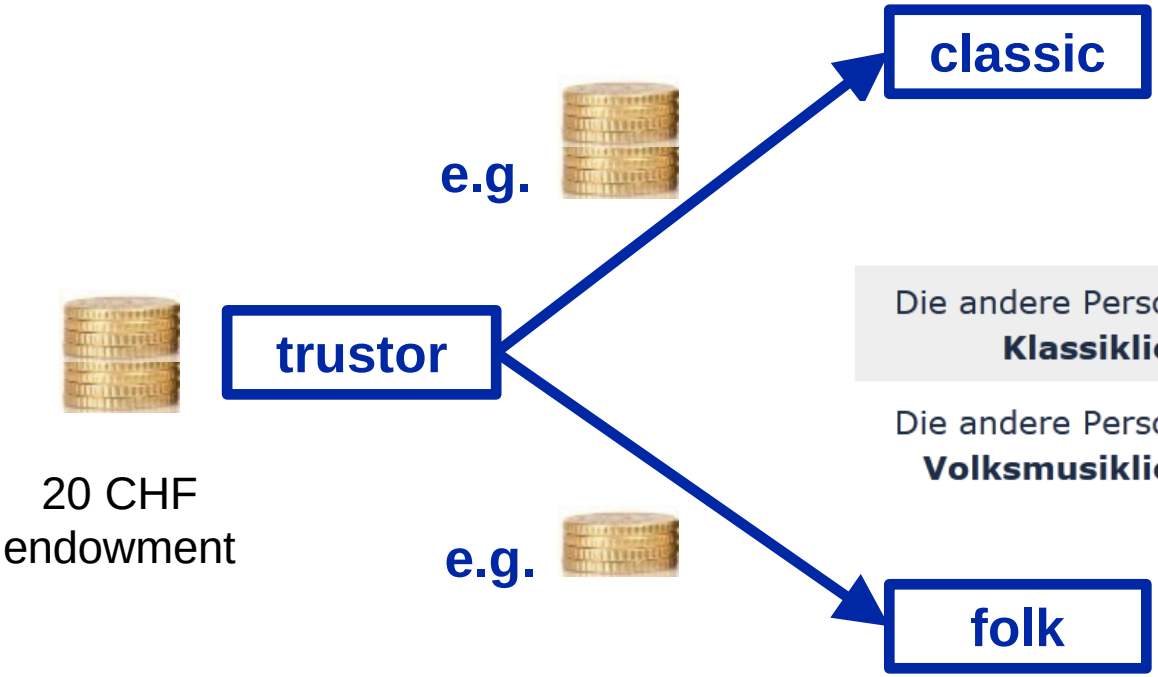


Rewards for honoured trust this example
(half investment and "fair" back transfer)

initial endowment

final earnings

Experimental design II: strategy method (trustors)



Welchen Betrag von Ihren 20 CHF überweisen Sie?

Die andere Person ist ein **Klassikliebhaber**	0 CHF
Die andere Person ist ein **Volksmusikliebhaber**	4 CHF

Experimental design III: beliefs (trustors)

	Welchen Betrag von Ihren 20 CHF überweisen Sie?	Welcher Betrag glauben Sie, wird Ihnen zurückgegeben?
Die andere Person ist ein **Klassikliebhaber**	0 CHF	0 CHF
Die andere Person ist ein **Volksmusikliebhaber**	4 CHF	0 CHF

Experimental design IV: strategy method (trustees)

Angenommen, Sie sind der **Empfänger** und der Sender ist ein **Klassikliebhaber**.

classic

Angenommen der Klassikliebhaber überweist Ihnen	Was ist der Kontostand vor Ihrer Rücküberweisung?		Welchen Betrag überweisen Sie an den Klassikliebhaber zurück?
	Kontostand des Klassikliebhabers	Ihr Kontostand	
0 CHF	20 CHF	20 CHF	0 CHF

Experimental design IV : strategy method (trustees)

Angenommen, Sie sind der **Empfänger** und der Sender ist ein **Klassikliebhaber**.

classic

Angenommen der Klassikliebhaber überweist Ihnen	Was ist der Kontostand vor Ihrer Rücküberweisung?		Welchen Betrag überweisen Sie an den Klassikliebhaber zurück?
	Kontostand des Klassikliebhabers	Ihr Kontostand	
0 CHF	20 CHF	20 CHF	0 CHF
2 CHF	18 CHF	26 CHF	0 CHF
4 CHF	16 CHF	32 CHF	0 CHF
6 CHF	14 CHF	38 CHF	0 CHF
8 CHF	12 CHF	44 CHF	0 CHF
10 CHF	10 CHF	50 CHF	0 CHF
12 CHF	8 CHF	56 CHF	0 CHF
14 CHF	6 CHF	62 CHF	0 CHF
16 CHF	4 CHF	68 CHF	0 CHF
18 CHF	2 CHF	74 CHF	0 CHF
20 CHF	0 CHF	80 CHF	0 CHF

Experimental design IV: strategy method (trustees)

folk

Angenommen, Sie sind der **Empfänger** und der Sender ist ein **Volksmusikliebhaber**.

Angenommen der Volksmusikliebhaber überweist Ihnen	Was ist der Kontostand vor Ihrer Rücküberweisung?		Welchen Betrag überweisen Sie an den Volksmusikliebhaber zurück?
	Kontostand des Volksmusikliebhabers	Ihr Kontostand	
0 CHF	20 CHF	20 CHF	0 CHF
2 CHF	18 CHF	26 CHF	0 CHF
4 CHF	16 CHF	32 CHF	0 CHF
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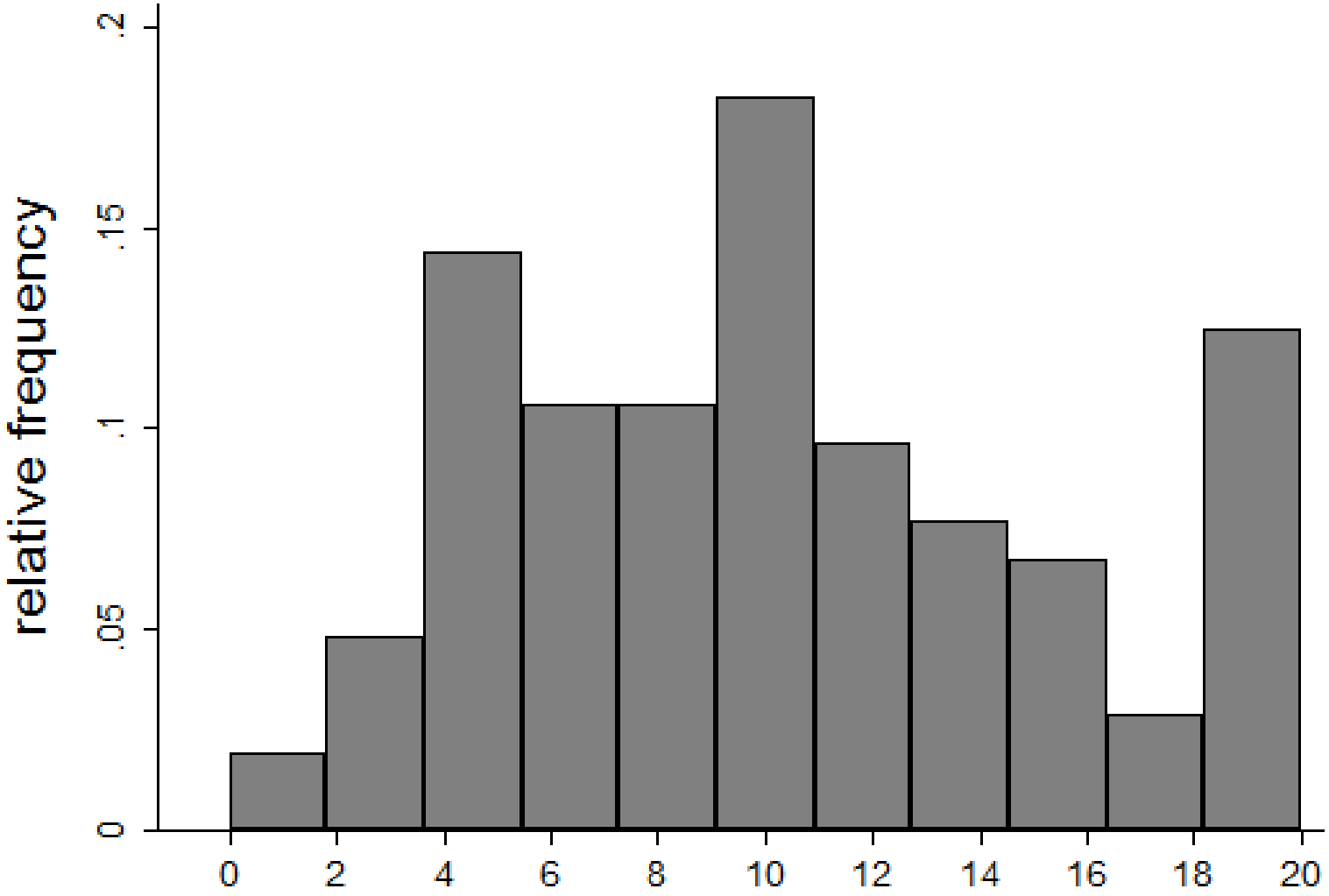
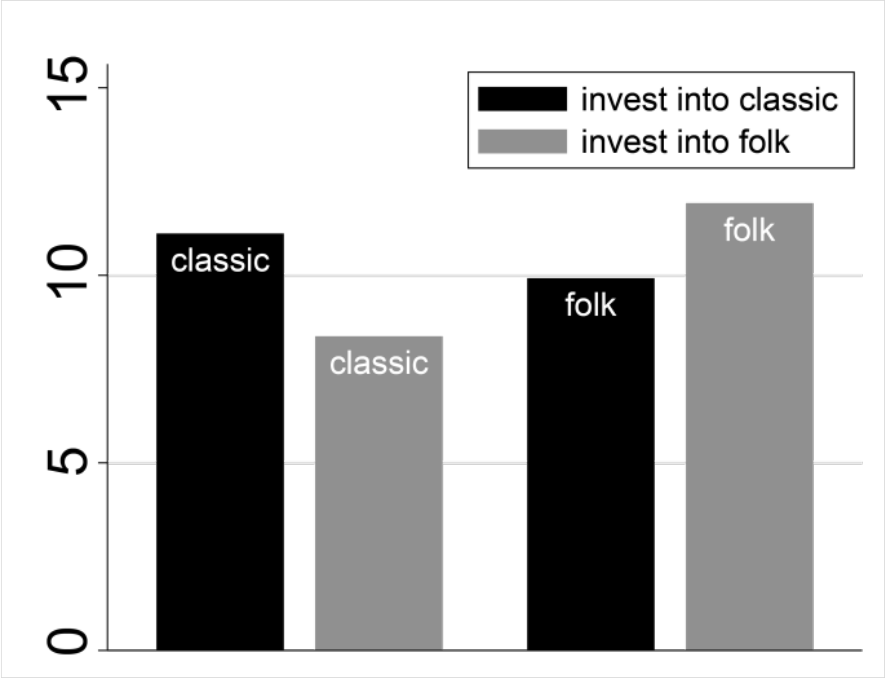
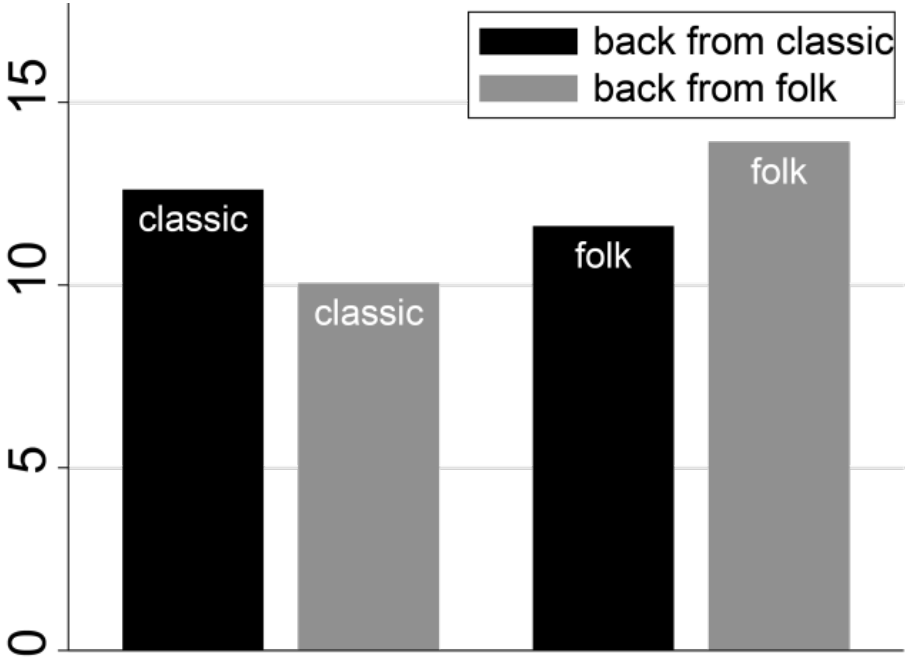
investment decisions



investments



beliefs back transfers



	(1) investment	(2) belief back transfer
sender and receiver same type	2.385***	3.096**
	(4.53)	(2.70)
_cons	9.115***	11.35***
	(12.13)	(6.97)
N	104	104

t statistics in parentheses

Clustered standard errors by n=52 subjects

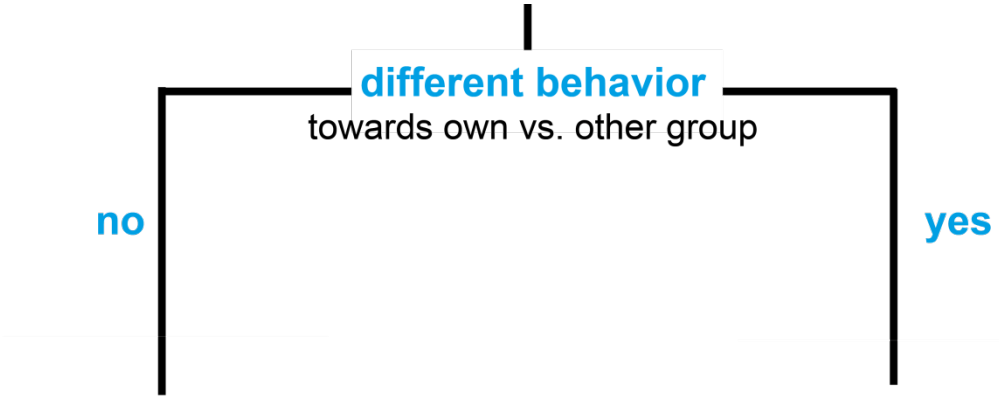
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Operationalization of types

behavior-based discrimination :=

$$\frac{\text{invest own type}}{\text{invest other type}} \neq 1$$

(i.e. own type privileging)



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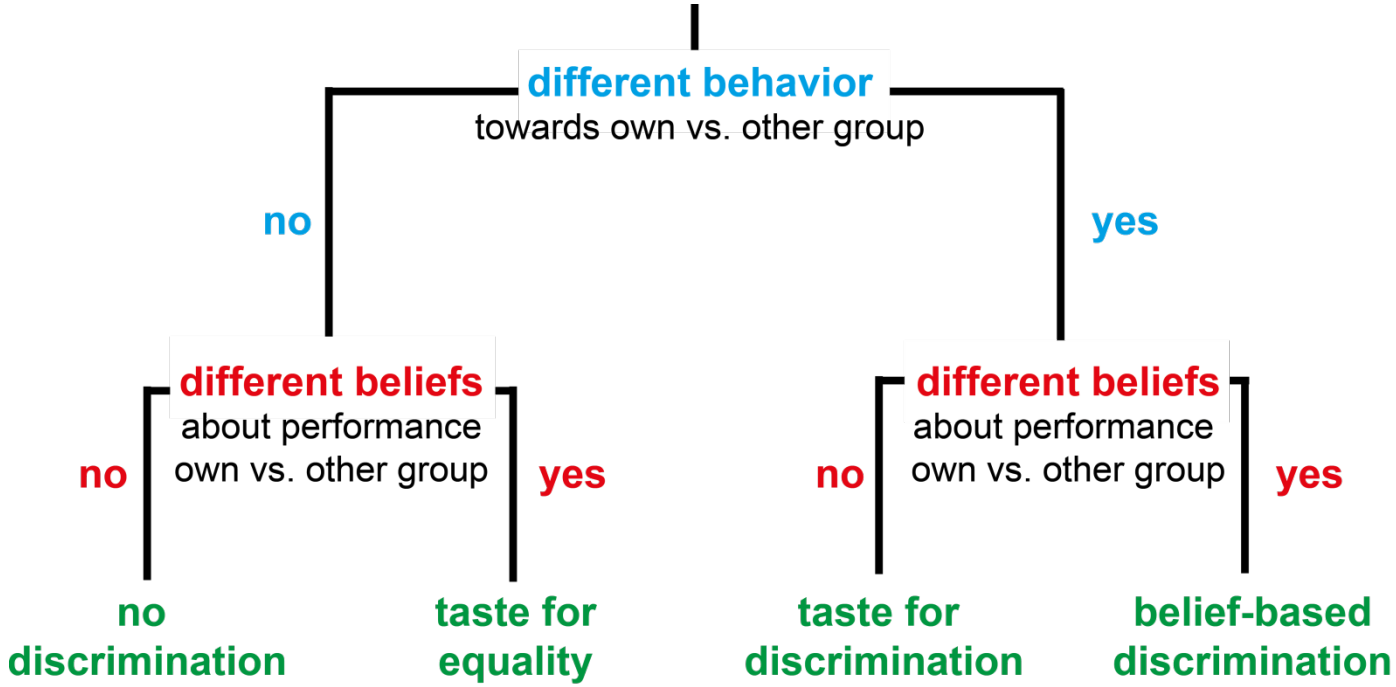
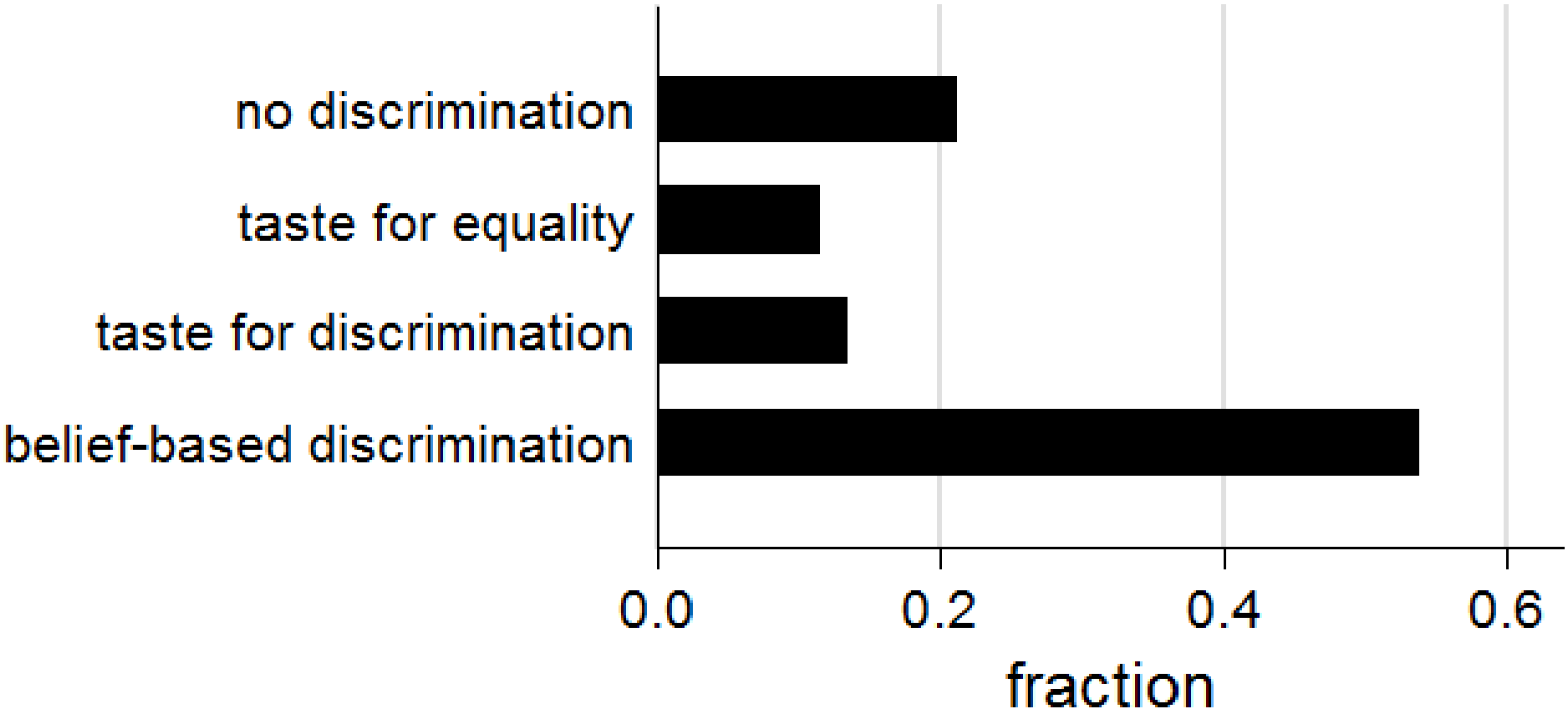


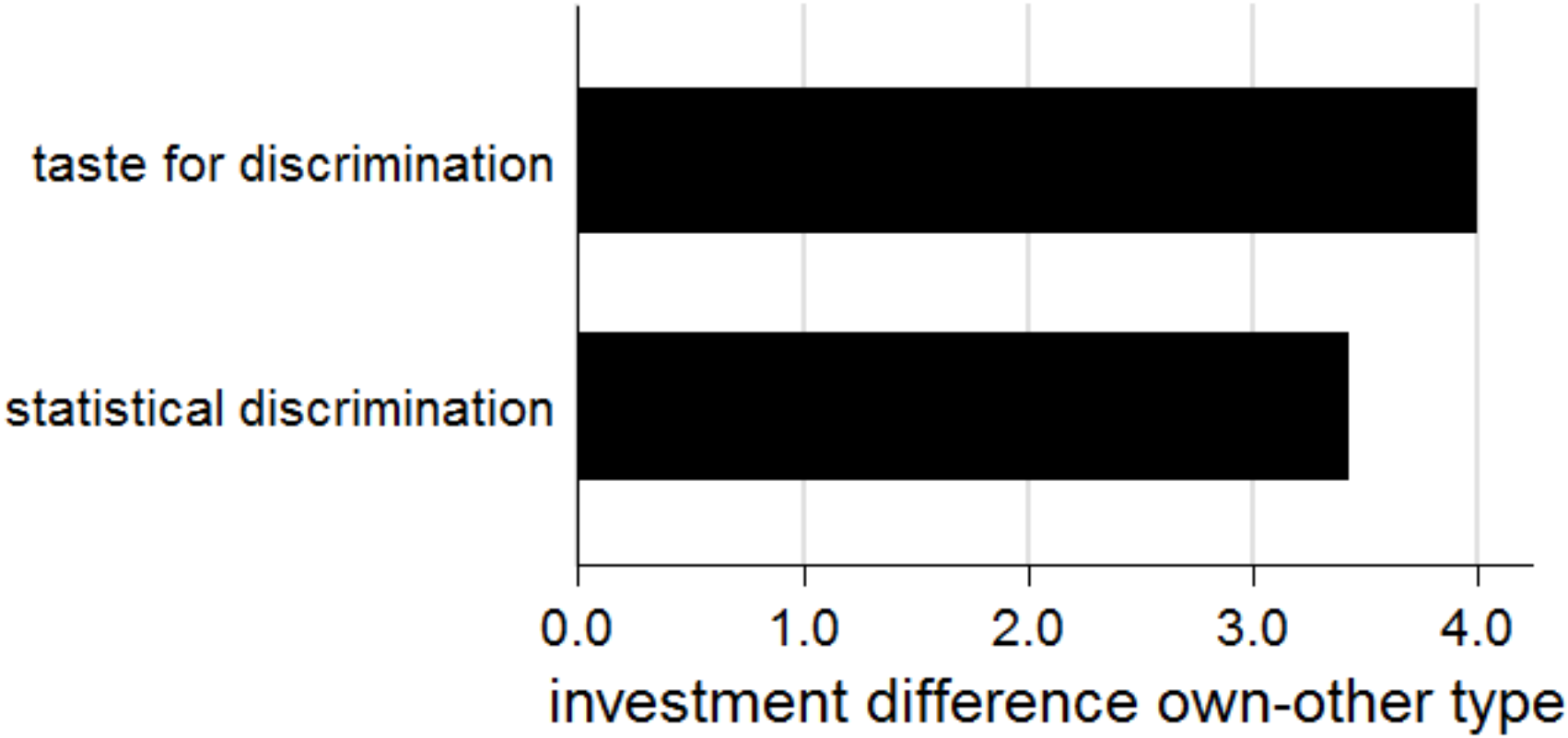
$$\text{belief -based discrmination} := \frac{\dfrac{\text{belief back transfer own type}}{\text{invest own type}}}{\dfrac{\text{belief back transfer other type}}{\text{invest other type}}} \neq 1$$

(i.e. belief in own type advantage)

Relative frequencies of discrimination types



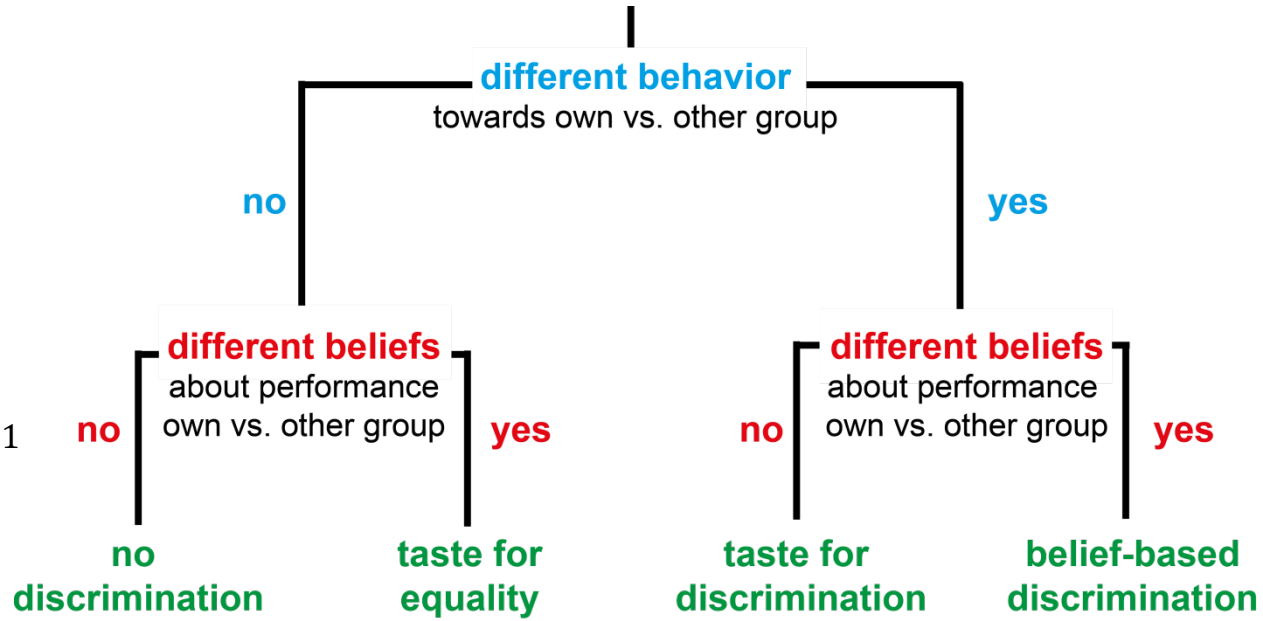
Degree of discrimination by types



Accuracy of beliefs

$$\frac{\text{invest own type}}{\text{invest other type}} \neq 1$$

$$\frac{\dfrac{\text{belief back transfer own type}}{\text{invest own type}}}{\dfrac{\text{belief back transfer other type}}{\text{invest other type}}} \neq 1$$



Accuracy of beliefs

$$\frac{\text{invest own type}}{\text{invest other type}} \neq 1$$

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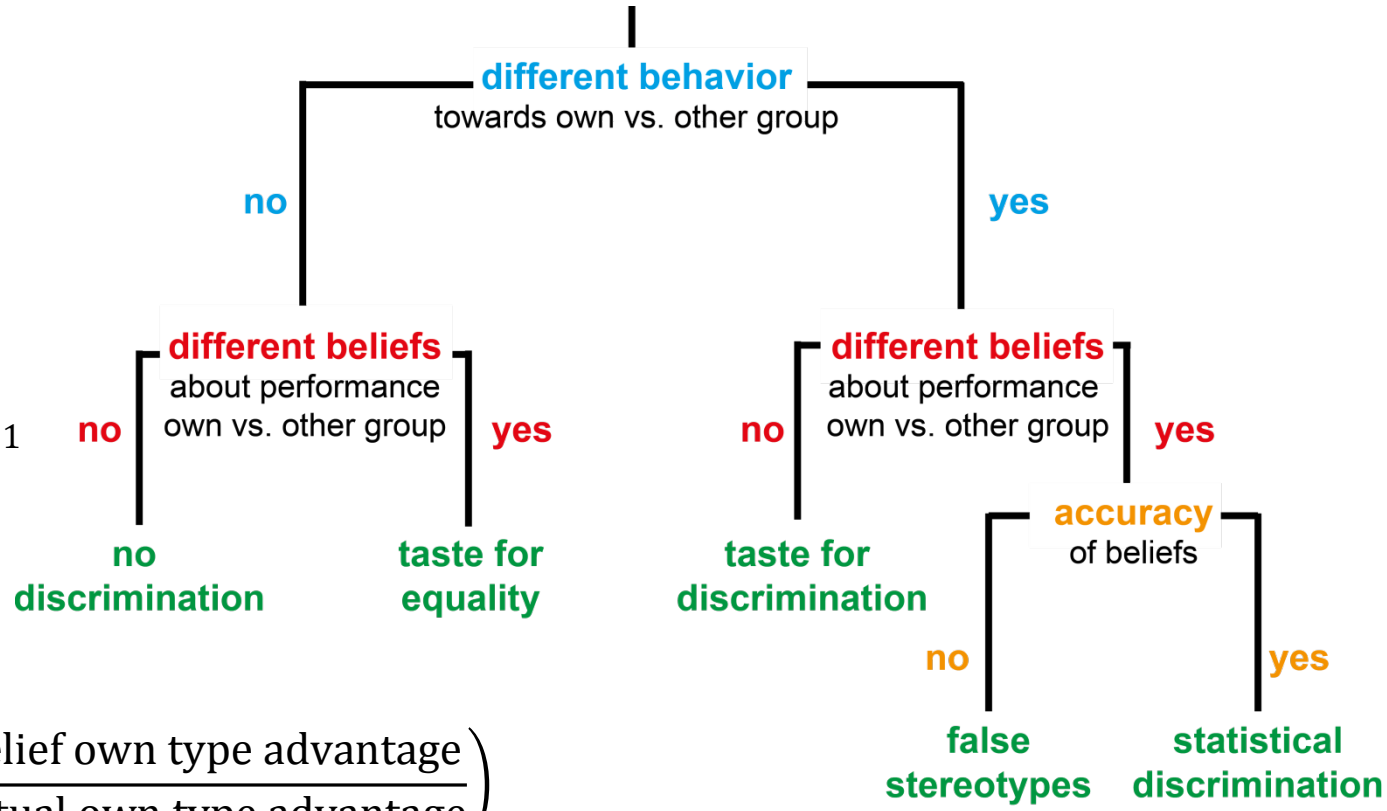
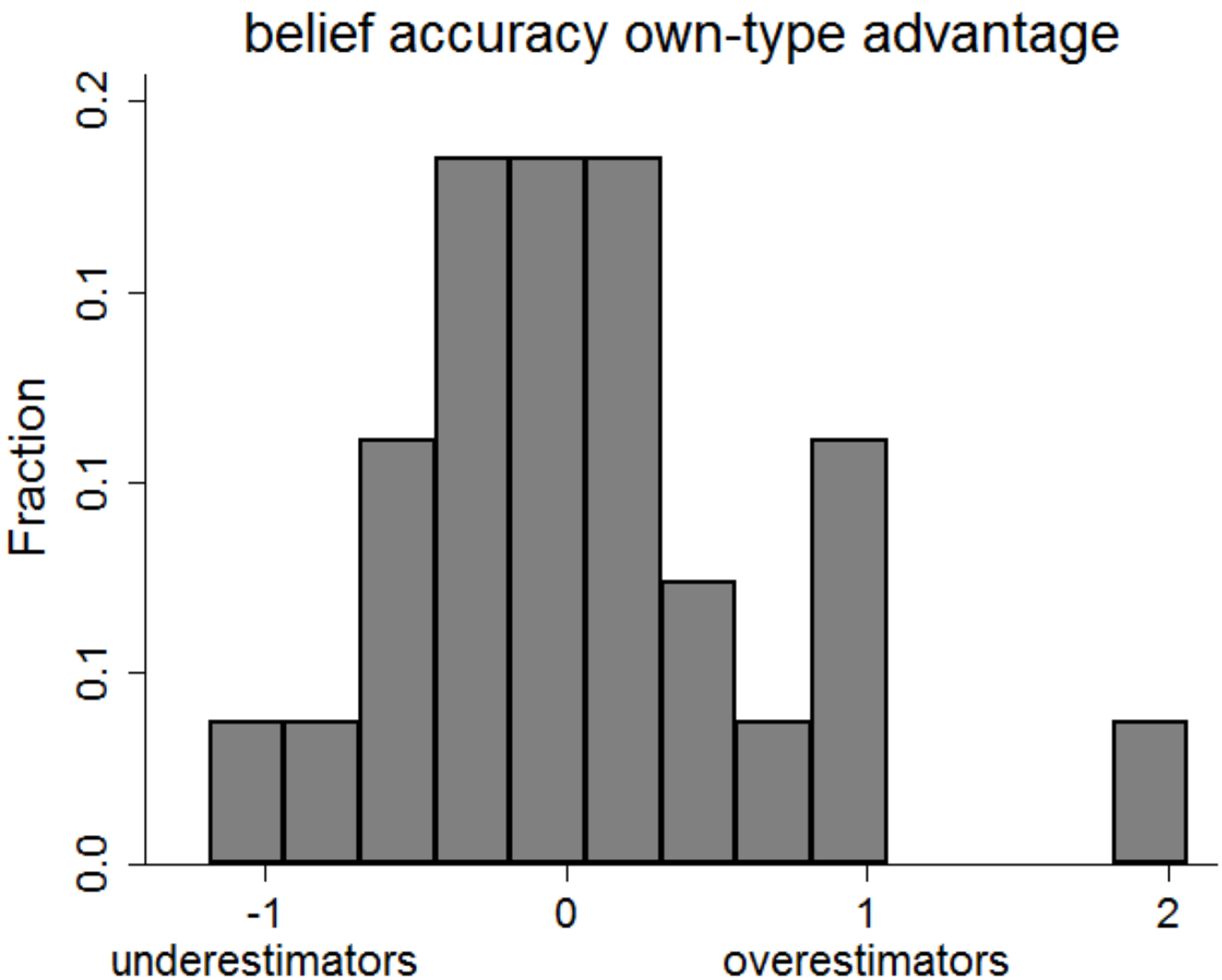


$$\text{belief accuracy} = \log\left(\frac{\text{belief own type advantage}}{\text{actual own type advantage}}\right)$$

$$= \log\left(\frac{\dfrac{\dfrac{\text{belief back transfer own type}}{\text{invest own type}}}{\dfrac{\text{belief back transfer other type}}{\text{invest other type}}}}{\dfrac{\dfrac{\text{average back transfer own type} \mid \text{invest own}}{\text{invest own type}}}{\dfrac{\text{average back transfer other type} \mid \text{invest other}}{\text{invest other type}}}}\right)$$



false stereotypes **statistical discrimination** **false stereotypes**

$$\text{belief accuracy} = \log\left(\frac{\text{belief own type advantage}}{\text{actual own type advantage}}\right)$$

Summary and discussion *(tentative)*

- **Discrimination typology**
  - Operationalization of discrimination types in trust game
  - Most people are statistical discriminators (~ 50%)
  - Taste for discrimination, taste for equality and no discrimination types about similar size (~ 15 - 20%)
  - Taste-based discriminators show slightly stronger degree of discrimination than statistical discriminators
  - Statistical discriminators subdivided about equally into under and overestimators of own-type advantage
- **High-brow culture and trust**
  - Classic trusts classic and folk trusts folk
  - Driven by taste for discrimination and statistical discrimination
- **Construct validity of attitudinal vs. behavioral measurements:**
  - Comparison of behavioral and attitudinal discrimination measures: stereotpyes about classic and folk musik lovers
  - Comparing explanatory power for attitudinal vs. behavioral discrimination models