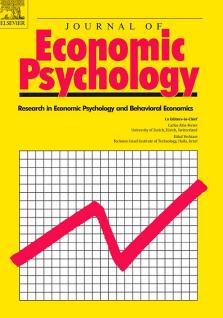
## **Developing trust: First impressions and experience**





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# Introduction





### > First impressions

the snap judgments made regarding a person's trustworthiness based upon their facial appearance.

### > Experience

repeated interactions with a partner, including feedback on

whether the partner tends to reciprocate or betray, trust

## 1.2 previous research

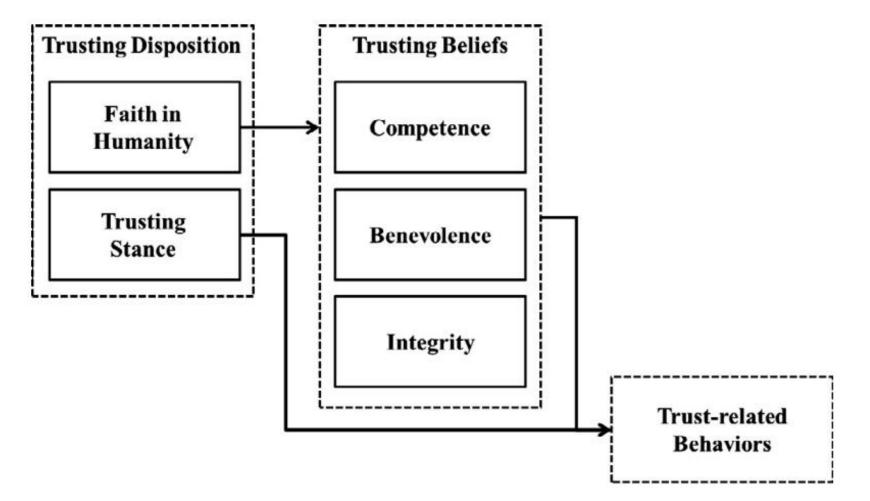
rely on facial appearance to assess the trustworthiness, subjective perceptions to guide to invest.

initially first impressions (based upon facial appearances)
 trust

then by the interactive experience

Facial appearance + experience influence trust , the exact nature?

### 1.3 Trust model



Model adapted from McKnight and Chervany (2002); some components from original model are not included.

Fig. 1. Trust model.

### 1.4 Trust, stereotypes, and snap judgments

stereotypes and group perception research can be

helpful in driving predictions for trust research.

- Human beliefs can influence trust-related behaviors.
- <u>trusting beliefs</u> can be <u>updated</u> through repeated <u>experience</u>.
- judgments based on facial appearances influence

trust-related behaviors.

1.4 Current research
 study 1
 how trusting beliefs
 volve ?
 from first impressions and repeated experience.

# > study 2

✓ trusting beliefs and trust-related behaviors:

- $\rightarrow$ a single partner, change
- $\rightarrow$ new partners, change?
- how trusting dispositions
- ↓ evolve ?

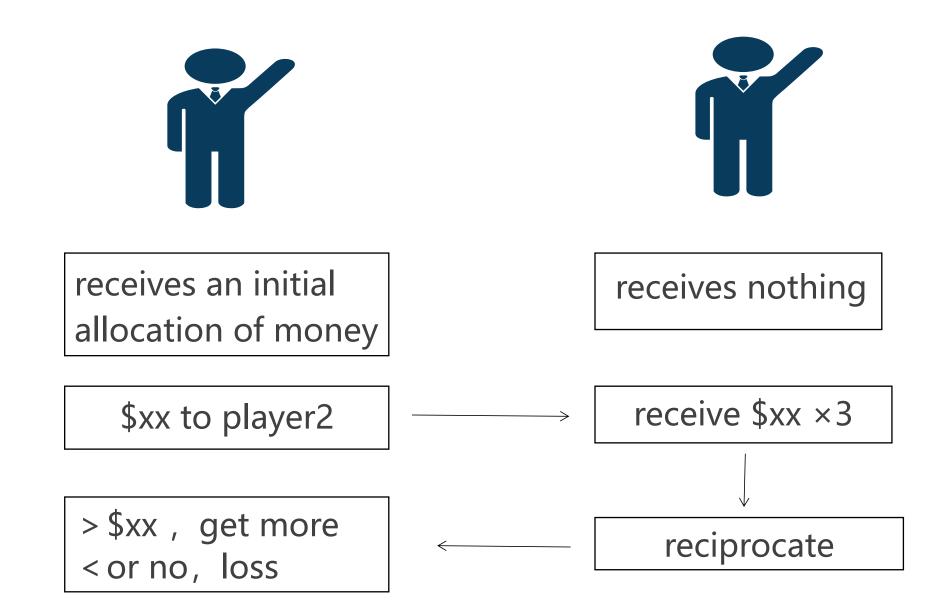
after repeated experiences.



# Study 1



### 2.1 Methods—Trust Game(2010)



### 2.1 Methods—Trust Game for study





✓ 2 points.
✓ choose to send <u>all</u>.
✓ or <u>none</u> of her points to the second mover.

- ✓ 2×3 points.
- ✓ send back <u>half</u> of the points
  - ( "reciprocate" ),
- $\checkmark$  or <u>none</u> of the points ("keep").

## **2.1.1 Participants**

- 391 participants (M-age 31, 45% female)
- \$1.
- bonus: \$0.05 per point,
- \$0.45 to \$3.45.





### > Design:

2×2he partner' s appearance (trustworthy or untrustworthy) and behavior (85% reciprocating/ 85% keeping).

### > the picture of partner:

3 trustworthy, 3 untrustworthy appearance, Mage = 29. evaluate their partners: a 12-item, 7-point Likert scale.

### > practice:

- participant-the first mover; the simulated partner-the second mover;
- The repeated lasted 20 rounds.
- The partner's behavior was determined in advance of the game, 85% reciprocate, 85% keep the points.
- evaluate their partners again after the game.

### **2.1.3 Measures**

The study focused on **two constructs**: <u>trust-related behavior and trusting</u> <u>beliefs</u>.

### **Trust-related behavior**

- was measured for each round of the repeated Trust Game ;
- whether or not to send points to their partner.
- focused on during the first and last rounds to assess first impressions and changes away from that first impression.

### **Overall trusting beliefs**

- > an 11-item, 7-point scale, including 3 separable subscales:
- For competence: intelligent, skillful, and competent;
- for benevolence: greedy, kind, friendly, helpful, and nice;
- > for integrity: dishonest, manipulative, and moral.
- Trusting beliefs were measured before and after playing the repeated Trust Game.



#### Table 1

Study 1: Mean (standard error) of trust-related behavior and trusting beliefs at start and end.

Appearance Trust-related behavior Timing	Trustworthy				Untrustworthy						
	Кеер		Reciprocate		Keep		Reciprocate				
	Start	End	Start	End	Start	End	Start	End			
n	98		106		93		94				
Sharing, % participants	81.63 (3.93)	16.33 (3.75)	75.47 (4.20)	62.26 (4.73)	67.74 (4.87)	16.13 (3.83)	61.70 (5.04)	67.02 (4.88)			
Trusting beliefs	0.30 (0.09)	-1.38(0.12)	0.29 (0.09)	0.36 (0.11)	-0.40(0.11)	-1.86 (0.13)	-0.25 (0.10)	0.39 (0.12)			
Competence	0.27 (0.09)	-0.16 (0.14)	0.23 (0.09)	0.36 (0.11)	-0.34 (0.11)	-0.83 (0.16)	-0.20 (0.11)	0.33 (0.12)			
Benevolence	0.29 (0.09)	-1.88 (0.13)	0.33 (0.09)	0.38 (0.11)	-0.43 (0.10)	-2.17 (0.13)	-0.25 (0.10)	0.40 (0.12)			
Integrity	0.23 (0.10)	-1.32 (0.13)	0.16 (0.09)	0.19 (0.12)	-0.24 (0.11)	-1.63 (0.13)	-0.18 (0.10)	0.30 (0.13)			

*Note*: Trusting beliefs and components are standardized using the means and standard deviations at the start of the game. Standard deviations are pooled by partner appearance and partner behavior.



#### Table 2

Study 1: Regressions of trust-related behavior and trusting beliefs at start and end.

DV	Trust-related behavior		Trusting beliefs		Competence		Benevolence		Integrity	
	Start	End	Start	End	Start	End	Start	End	Start	End
Model type	Logistic	52			Ordinary least squares					
Appearance (Trustworthy)	0.75*	0.01	0.70***	0.47**	0.61***	0.66***	0.71***	0.30	0.48**	0.31
	(0.34)	(0.39)	(0.14)	(0.17)	(0.14)	(0.19)	(0.14)	(0.18)	(0.14)	(0.18)
Reciprocated	-0.27	2.36***	0.15	2.25***	0.14	1.16***	0.18	2.57***	0.06	1.94***
	(0.31)	(0.36)	(0.14)	(0.18)	(0.14)	(0.19)	(0.14)	(0.18)	(0.14)	(0.18)
Appearance × Reciprocated	-0.10	-0.22	-0.16	-0.51*	-0.18	-0.63*	-0.14	-0.31	-0.13	-0.42
	(0.46)	(0.49)	(0.19)	(0.24)	(0.19)	(0.27)	(0.19)	(0.25)	(0.20)	(0.25)
Constant	0.74***	-1.65***	-0.40***	-1.86***	-0.34***	-0.83***	-0.43***	-2.17***	-0.24	-1.63**
	(0.22)	(0.28)	(0.10)	(1.24)	(0.10)	(0.14)	(0.10)	(0.13)	(0.10)	(0.13)
Adjusted R <sup>2</sup>			0.092	0.41	0.06	0.11	0.10	0.49	0.04	0.32

*Note*: Numbers in parentheses are standard errors. Trusting beliefs and components are standardized using the means and standard deviations at the start of the game. Standard deviations are pooled by partner appearance and partner behavior.

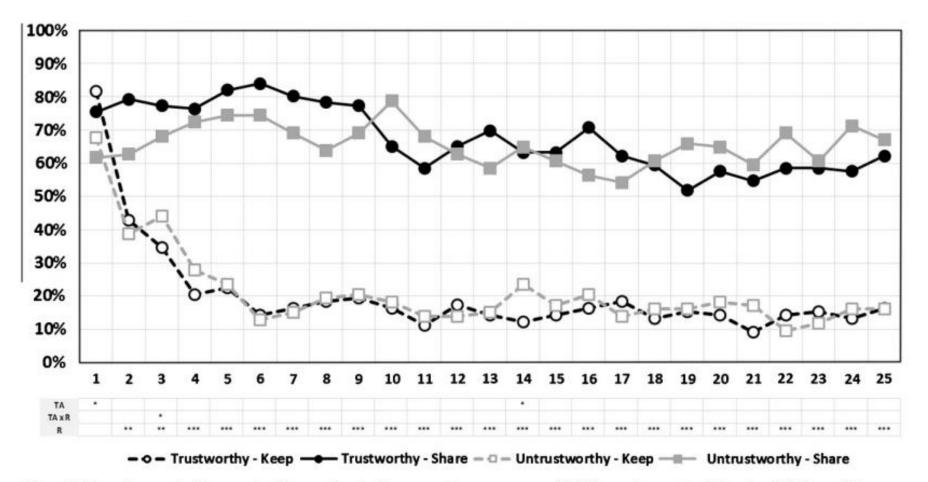
\* p < 0.05.

\*\* p < 0.01.

p < 0.001.

 $\rightarrow$  the effect of partner appearance on trustrelated behavior faded with experience.





Note: Table at bottom indicates significance level of trustworthy appearance ("TA"), reciprocating behavior ("R"), and the interaction ("TA x R") for the partner in a logistic regression. They are included for illustrative purposes and are not adjusted for multiple comparisons. \*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05

Fig. 2. Study 1: Percent participants sending points in each round, by treatment.



### **2.3.1. Trusting beliefs**

- overall trusting beliefs higher:
- at the <u>start</u> of the game for trustworthy <u>appearance</u>.
- at the <u>end</u> of the game for <u>reciprocate</u>.
- Looking at the components:
- competence followed a similar pattern as overall trusting beliefs (with an interaction effect at the end of the game) whereas benevolence and integrity did not.
- suggests that the <u>interaction effect</u> observed <u>in overall trusting beliefs</u> may be attributable to <u>competence</u> judgments, rather than benevolence or integrity judgments.



### 2.3.2. Trust-related behavior

- $\succ$  the first round  $\rightarrow$  appearance;  $\checkmark$
- $\succ$  the last round  $\rightarrow$  behavior.  $\checkmark$
- $\succ$  an interaction effect in the final rounds  $\times$

## $\checkmark$

- previous studies raise concerns about their <u>robustness</u>.
- whether the participant's <u>experiences</u> in the repeated Trust Game simply <u>updated trusting beliefs</u> about <u>the specific</u> partner ?
- if those <u>experiences</u> may have adjusted the participant's faith in humanity?



# Study 2



## 3. Study 2: Developing trusting dispositions

Hypothesis 1. Changes in general faith in humanity.

## ✓ GAME 1 :consistently reciprocates

- participant's general faith in humanity  $\uparrow$  ,
- new partners with greater beliefs in their competence, benevolence, integrity, higher levels of trusting belief

## ✓ GAME1: consistently keeps points

- $\checkmark$
- participant's general faith in humanity  $\downarrow$
- decreased beliefs in new partners' competence, benevolence, and integrity, lower levels of trusting belief.

### 3. Study 2: Developing trusting dispositions

Hypothesis 2. Changes in appearance-specific faith in humanity.

Previously matched trustworthy-reciprocate / untrustworthy-keep

- ✓ reaffirm stereotypes
- $\checkmark$  on structing trusting beliefs: the appearance.

### <u>untrustworthy-reciprocates / trustworthy-keep:</u>

- $\checkmark$  disprove the stereotypes
- ✓ forming initial trusting beliefs: less appearance.



### 3.1.1. Participants

- ≽ \$2.
- > \$0.03/ point, with \$0 to \$2.70.
- > 265 participants, Mage 31, 50% female.

### 3.1.2. Design

- > participants played the Trust Game with two different partners.
- used a <u>2×2×2</u> between-subjects design : varying <u>the first partner's appearance</u> (trustworthy or untrustworthy), the <u>first partner's behavior</u> (reciprocate or keep), <u>the second partner's appearance</u> (trustworthy or untrustworthy).



### 3.1.2. Design

- picture of one of <u>four partners</u> 2 trustworthy, 2 untrustworthy (mean age
  - = 26), <u>differed from Study 1</u>.
- <u>evaluate</u> their partner based upon these pictures.
- practice.
- participant-the first mover, simulated partner-the second mover.
- The repeated Trust Game lasted <u>15 rounds</u> (fewer than Study 1).
- partner's behavior : <u>all reciprocate / all keep the points.</u>
- then asked to <u>evaluate</u> their partners a second time after the game.
- a picture of a different person, and <u>repeated the process</u> with the <u>new</u> <u>partner</u>.



### 3.1.3. Measures

- Faith in humanity : looking for <u>changes in trusting beliefs</u> in the second game resulting from experiences in the first game.
- Overall trusting beliefs : study 1. During the first three and last three rounds, if they were sent points, their partner reciprocate?
- Trust-related behavior : each round of the repeated Trust Game, based upon the participant's decision of whether or not to send points to their partners.



### Table 3

Study 2, Game 1: Mean (standard error) of trust-related behavior, trusting beliefs, and reciprocating beliefs at start and end.

Appearance Behavior Timing	Trustworthy			Untrustworthy					
	Keep		Reciprocate		Кеер		Reciprocate		
	Start	End	Start	End	Start	End	Start	End	
n	76		62		66		61		
Sharing, % participants	88.16	25.00	90.32	88.71	51.52	12.12	42.62	85.25	
	(3.73)	(5.00)	(3.79)	(4.05)	(6.20)	(4.05)	(6.38)	(4.58)	
Trusting beliefs	1.01 (0.11)	-1.17	1.03 (0.12)	1.89 (0.14)	-1.03	-1.86	-1.18	0.69 (0.17)	
5	0 0300 10	(0.12)	27 28		(0.13)	(0.14)	(0.13)	201-002821 8	
Competence	0.74 (0.11)	0.05 (0.13)	0.70 (0.12)	1.25 (0.13)	-0.76	-1.19	-0.81	0.25 (0.15)	
Contraction of the Internet and a		and the same of the second	the first second second second		(0.14)	(0.17)	(0.13)		
Benevolence	1.03 (0.10)	-1.83	1.05 (0.12)	1.85 (0.13)	-1.05	-2.11	-1.22	0.67 (0.18)	
		(0.14)			(0.14)	(0.12)	(0.14)		
Integrity	0.84 (0.11)	-1.29	0.92 (0.12)	1.80 (0.14)	-0.87	-1.53	-1.05	0.88 (0.17)	
0 0		(0.14)			(0.13)	(0.14)	(0.13)		
Belief reciprocating, %	86.84	21.05	93.55	93.55	43.63	9.09 (3.57)	36.07	85.25	
participants	(3.90)	(4.71)	(3.15)	(3.15)	(6.16)		(6.20)	(4.58)	

Note: Trusting beliefs and components are standardized using the means and standard deviations at the start of the game. Standard deviations are pooled by partner appearance and partner behavior.

### **3.2 Results**

#### Table 4

Study 2, Game 1: Regression of trust-related behavior and trusting beliefs at start and end.

Model type	Logistic Sharing behavior		Ordinary least squares								
DV			Trusting beliefs		Competence		Benevolence		Integrity		
	Start	End	Start	End	Start	End	Start	End	Start	End	
Appearance (Trustworthy)	1.95***	0.88	2.04***	0.69***	1.50***	1.23***	2.09***	0.28	1.71**	0.25	
	(0.43)	(0.46)	(0.17)	(0.20)	(0.17)	(0.20)	(0.17)	(0.20)	(0.17)	(0.20)	
Reciprocated	-0.36	3.74***	-0.15	2.56***	-0.05	1.44***	-0.16	2.79***	-0.87	2.42***	
	(0.36)	(0.52)	(0.17)	(0.21)	(0.18)	(0.21)	(0.18)	(0.21)	(0.12)	(0.22)	
Appearance × Reciprocated	-0.58	-0.58	0.17	0.50	-0.05	-0.24	0.18	0.90**	0.26	0.67*	
	(0.66)	(0.71)	(0.25)	(0.29)	(0.18)	(0.29)	(0.25)	(0.29)	(0.25)	(0.30)	
Constant	0.06***	-1.98***	-1.03***	-1.86***	-0.76***	-1.19***	-1.05***	-2.11***	-0.87	-1.54	
	(0.25)	(0.38)	(0.12)	(0.14)	(0.25)	(0.11)	(0.12)	(0.14)	(0.12)	(0.15)	
Adjusted R <sup>2</sup>	ed need-1941 U		0.53	0.61	0.36	0.34	0.54	0.67	0.46	0.57	

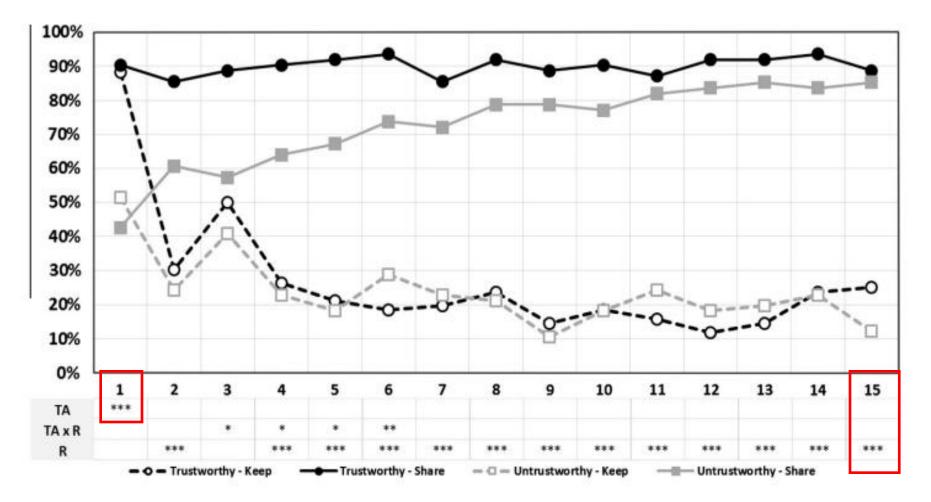
Note. Numbers in parentheses are standard errors. Trusting beliefs and components are standardized using the means and standard deviations at the start of the game. Standard deviations are pooled by partner appearance and partner behavior.

\* p < 0.05.

\*\* *p* < 0.01.

•••• p < 0.001.





Note: Table at bottom indicates significance level of trustworthy appearance ("TA"), reciprocating behavior ("R"), and the interaction ("TA x R") for the partner in a logistic regression. They are included for illustrative purposes and are not adjusted for multiple comparisons. \*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05

Fig. 3. Study 2, Game 1: Percent participants sending points in each round, by treatment.

#### Table 5

Study 2, Game 2: Mean (standard error) of trust-related behavior, trusting beliefs, and reciprocating beliefs at start.

Game:	First		Sec	ond		First	ond				
First Partner Appearance:	1	, 1	Frustworth	у			U	ntrustwort	ny		
First Partner Response:	N/A	Keep	Return	Keep	Return	N/A	Keep	Return	Keep	Return	
Second Partner Appearance:	N/A	Trustv	Trustworthy Untrustworthy N/A		Trustworthy Untrustworthy N/A Trustworthy		worthy	Untrustworthy			
n	138	31	27	45	35	127	36	33	30	28	
Sharing, % Participants	89.13 (2.66)	90.32 (5.40)	88.89 (6.16)	80.00 (6.03)	74.29 (7.50)	47.24 (4.45)	94.44 (3.87)	90.91 (5.08)	76.67 (7.85)	78.57 (7.90)	
Trusting beliefs	0.69 (0.05)	0.60 (0.14)	0.31 (0.17)	-0.51 (0.15)	-0.75 (0.19)	-0.81 (0.06)	0.45 (0.10)	0.30 (0.10)	-0.62 (0.17)	-0.57 (0.13)	
Belief Reciprocating, % Participants	89.86 (2.58)	77.42 (7.63)	81.48 (7.62)	64.44 (7.22)	60.00 (8.40)	40.16 (4.37)	91.67 (4.67)	75.76 (7.58)	63.33 (8.95)	53.57 (9.60)	

**1.in Game 2:** The likelihood of sending points to a partner with an **untrustworthy** appearance is higher, p < 0.001.

**2.in Game 2:** believing that the partner will not return them increases , p = 0.002.

#### Table 6

DV Model type	Sharing b Logistic	ehavior		Trusting b Ordinary l	eliefs east squares	Belief in reciprocating Logistic			
Model number	(1A)	(1B)	(1C)	(2A)	(2B)	(2C)	(3A)	(3B)	(3C)
P2 Appearance (Trustworthy)	1.11**	1.11**	1.14*	1.51***	1.51***	1.50***	1.08***	1.08***	1.08**
	(0.38)	(0.38)	(0.44)	(0.15)	(0.15)	(0.18)	(0.29)	(0.29)	(0.34)
P1 Appearance (Trustworthy)	-0.13	-0.03	-0.03	0.04	0.18	0.18	-0.03	-0.35	-0.35
त्य प्रतिविधित्रं के विद्या के प्रति के दिने प्रति के प्रति के प्रति के सिन्द्रिय के प्	(0.35)	(0.49)	(0.49)	(0.15)	(0.21)	(0.21)	(0.28)	(0.40)	(0.40)
P1 Reciprocated	-0.20	-0.09	-0.09	-0.24	-0.08	-0.08	-0.35	-0.70	-0.70
	(0.34)	(0.52)	(0.52)	(0.15)	(0.22)	(0.22)	(0.28)	(0.42)	(0.42)
P1 Appearance × P1 Reciprocated	A - A	-0.19	-0.16		-0.30	-0.32	32 - 33	0.65	0.65
and and an and a second		(0.69)	(0.73)		(0.31)	(0.35)		(0.56)	(0.61)
P2 Appearance $\times$ P1			-0.12		(1997) (1997) (1997) (1997)	0.05			0.00
Trustworthy × P1 Reciprocated			(0.85)			(0.37)			(0.69)
Constant	1.41	1.35	1.34	-0.88	-0.88	-0.87	0.62	0.81	0.81
	(0.34)	(0.39)	(0.40)	(0.16)	(0.17)	(0.18)	(0.28)	(0.33)	(0.34)
Adjusted R <sup>2</sup>				0.27	0.27	0.26			
AIC	229.41	231.33	233.31	874.55	875.6	877.58	311.32	311.97	313.9

Study 2, Game 2: Regressions of trust-related behavior, trusting beliefs and reciprocating beliefs at the start.

*Note*: Numbers in parentheses are standard errors. Trusting beliefs standardized using the mean and standard deviation of the first partner at the start of the game. Standard deviations are pooled by first partner appearance, first partner behavior, and second partner appearance.

p < 0.05.

<sup>••</sup> p < 0.01.

••• p < 0.001.

### no evidence for changes in general faith in humanity.

no evidence of changes in appearance-specific faith in humanity.



- > 3.3.1. Replication of Study 1
- ✓ reciprocation increasing trust-related behavior in the last round not the appearance.
- ✓ competence updates more slowly than benevolence and integrity.

### > 3.3.2. Trusting disposition

- $\checkmark$  experiences  $\times$  , appearance  $\checkmark$   $\rightarrow$  initial trusting beliefs in a new partner.
- participants are adopting a trusting stance, and are choosing to engage in trust-related behaviors.

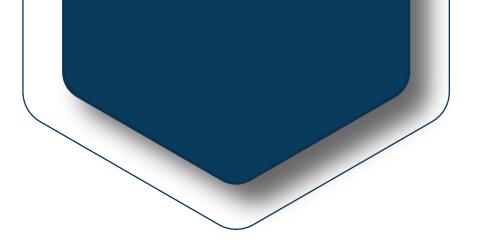


# Conclusions



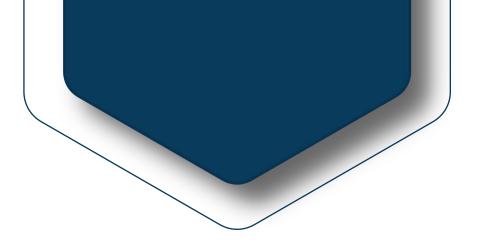


- ✓ <u>1. first impressions and experience</u> have <u>similar effects</u> across the different dimensions of <u>trusting belief</u>.
- ✓ <u>2.</u> <u>a single experience</u> in the repeated Trust Game <u>does not affect</u> our reliance on <u>facial appearance</u> in forming initial trusting beliefs.
- ✓ <u>3.</u> <u>a single experience</u> in the repeated Trust Game can <u>influence</u> <u>trusting-behavior</u> independent of trusting beliefs.



# THANKS!











专硕:

1.组内应用心理目前正在进行的研究方向有哪些?

2.老师接下来在应用心理主要的比较详细的方向和计划是

什么?

3.每周几篇文献,主要是英文文献吗?

4.老师对学生的希望或要求是什么?

5.在本组学习需要重点加强哪些专业课程的学习?



学硕:

- 1、进行组会文献汇报的内容范围?是自己选择还是需要 老师把关?有没有期刊水平的要求?
- 2、对汇报文献ppt有没有字数要求?
- 3、如何迅速融入组内研究?需要快速提升哪些技能(或
- 工具)?有没有什么较好的学习方式或学习平台?

4、是否有可以参加的项目?