

Peer Advice on Financial Decisions: A Case of the Blind Leading the Blind?

Sandro Ambuehl,

University of Toronto and CESifo

Douglas Bernheim,

Stanford University

Fulya Ersoy,

Stanford University

Donna Harris

University of Oxford

2017 North American Regional Society for Experimental
Finance Meeting
October 22, 2017

Motivation

People often consult non-expert advice for financial decisions

(Lusardi, 2003, 2008; van Rooij et al., 2011; Lusardi and Mitchell, 2014; Bernheim, 1998)

Social interaction affects personal financial decision making

(Beshears et al., 2015; Brown et al., 2014; Bursztyn et al., 2014; Cai et al., 2015; Duflo and Saez, 2003; Hvide and Ostberg, 2014; Hong et al., 2004, 2005; Kast et al., 2016; Ivkovic and Weisbenner, 2007)

Motivation

People often consult non-expert advice for financial decisions

(Lusardi, 2003, 2008; van Rooij et al., 2011; Lusardi and Mitchell, 2014; Bernheim, 1998)

Social interaction affects personal financial decision making

(Beshears et al., 2015; Brown et al., 2014; Bursztyn et al., 2014; Cai et al., 2015; Duflo and Saez, 2003; Hvide and Ostberg, 2014; Hong et al., 2004, 2005; Kast et al., 2016; Ivkovic and Weisbenner, 2007)

Are the effects beneficial / harmful?



Breaking taboo: Ask your friends and family for financial advice

by J.D. Roth

Updated on October 6th, 2016

49 Comments



INVESTOR TOOLKIT

FA HUB | ADVISOR INSIGHT | FA PLAYBOOK | INVESTMENT STRATEGIES | INVESTOR TOOLKIT

Beware of bad financial advice from friends and family

Deborah Nason | @dnason
16 Hours Ago



Motivation

People often consult non-expert advice for financial decisions

(Lusardi, 2003, 2008; van Rooij et al., 2011; Lusardi and Mitchell, 2014; Bernheim, 1998)

Social interaction affects personal financial decision making

(Beshears et al., 2015; Brown et al., 2014; Bursztyn et al., 2014; Cai et al., 2015; Duflo and Saez, 2003; Hvide and Ostberg, 2014; Hong et al., 2004, 2005; Kast et al., 2016; Ivkovic and Weisbenner, 2007)

Are the effects beneficial / harmful?

Motivation

People often consult non-expert advice for financial decisions

(Lusardi, 2003, 2008; van Rooij et al., 2011; Lusardi and Mitchell, 2014; Bernheim, 1998)

Social interaction affects personal financial decision making

(Beshears et al., 2015; Brown et al., 2014; Bursztyn et al., 2014; Cai et al., 2015; Duflo and Saez, 2003; Hvide and Ostberg, 2014; Hong et al., 2004, 2005; Kast et al., 2016; Ivkovic and Weisbenner, 2007)

Are the effects beneficial / harmful?

Case of the blind leading the blind? (Bernheim, 1998)



Motivation

People often consult non-expert advice for financial decisions

(Lusardi, 2003, 2008; van Rooij et al., 2011; Lusardi and Mitchell, 2014; Bernheim, 1998)

Social interaction affects personal financial decision making

(Beshears et al., 2015; Brown et al., 2014; Bursztyn et al., 2014; Cai et al., 2015; Duflo and Saez, 2003; Hvide and Ostberg, 2014; Hong et al., 2004, 2005; Kast et al., 2016; Ivkovic and Weisbenner, 2007)

Are the effects beneficial / harmful?

Case of the blind leading the blind? (Bernheim, 1998)

Motivation

People often consult non-expert advice for financial decisions

(Lusardi, 2003, 2008; van Rooij et al., 2011; Lusardi and Mitchell, 2014; Bernheim, 1998)

Social interaction affects personal financial decision making

(Beshears et al., 2015; Brown et al., 2014; Bursztyn et al., 2014; Cai et al., 2015; Duflo and Saez, 2003; Hvide and Ostberg, 2014; Hong et al., 2004, 2005; Kast et al., 2016; Ivkovic and Weisbenner, 2007)

Are the effects beneficial / harmful?

Case of the blind leading the blind? (Bernheim, 1998)

- ▶ Even carefully designed, professional communication can fail to improve decision making (Ambuehl, Bernheim, Lusardi, 2016) , so why would the average peer to succeed?

Motivation

People often consult non-expert advice for financial decisions

(Lusardi, 2003, 2008; van Rooij et al., 2011; Lusardi and Mitchell, 2014; Bernheim, 1998)

Social interaction affects personal financial decision making

(Beshears et al., 2015; Brown et al., 2014; Bursztyn et al., 2014; Cai et al., 2015; Duflo and Saez, 2003; Hvide and Ostberg, 2014; Hong et al., 2004, 2005; Kast et al., 2016; Ivkovic and Weisbenner, 2007)

Are the effects beneficial / harmful?

Case of the blind leading the blind? (Bernheim, 1998)

- ▶ Even carefully designed, professional communication can fail to improve decision making (Ambuehl, Bernheim, Lusardi, 2016) , so why would the average peer to succeed?

“Two heads are better than one”?

- ▶ Often decision making is better in groups (Charness and Sutter, 2012)

Research Questions

Does face-to-face communication with a randomly chosen peer improve **decision making quality** in settings where best choice depends on preferences?

Context: A laboratory experiment in the UK, decisions involving both preferences and the concept of compound interest

Research Questions

Does face-to-face communication with a randomly chosen peer improve **decision making quality** in settings where best choice depends on preferences?

Context: A laboratory experiment in the UK, decisions involving both preferences and the concept of compound interest

Mechanisms:

- ▶ Do subjects merely mimic others' choices? Do they acquire skills they can apply to new problems?
- ▶ Between whom is communication most / least beneficial?

Research Questions

Does face-to-face communication with a randomly chosen peer improve **decision making quality** in settings where best choice depends on preferences?

Context: A laboratory experiment in the UK, decisions involving both preferences and the concept of compound interest

Mechanisms:

- ▶ Do subjects merely mimic others' choices? Do they acquire skills they can apply to new problems?
- ▶ Between whom is communication most / least beneficial?

Spillovers:

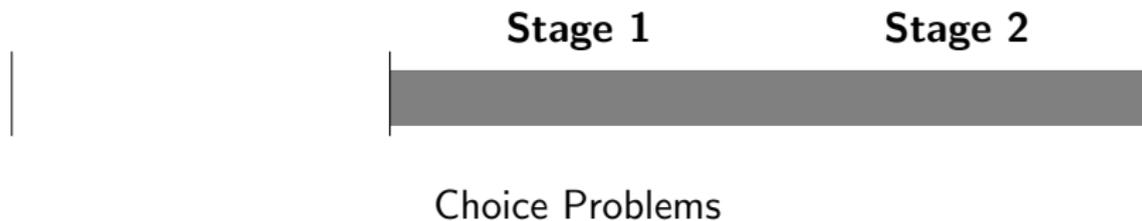
- ▶ Can we use communication to leverage financial education?

Experimental choices

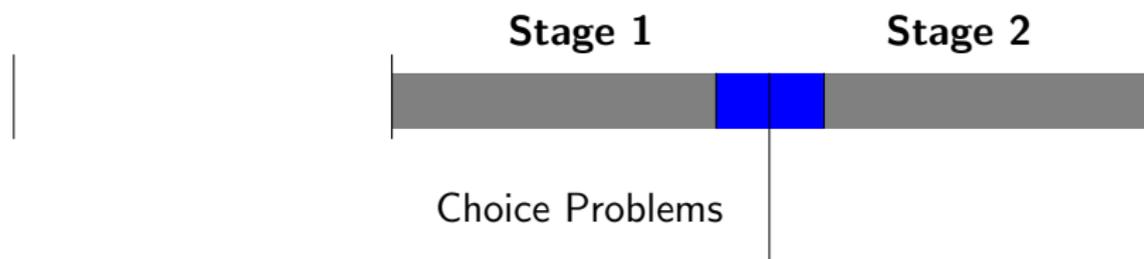
Each subject makes each choice twice, in two frames. Example:

- ▶ **Complex framing:** What amount $£v^{\text{complex}}$ today is as good as receiving £5, invested at 1%, compounded daily, after 72 days?
- ▶ **Simple framing:** What amount $£v^{\text{simple}}$ today is as good as receiving £10 in 72 days?

Timeline



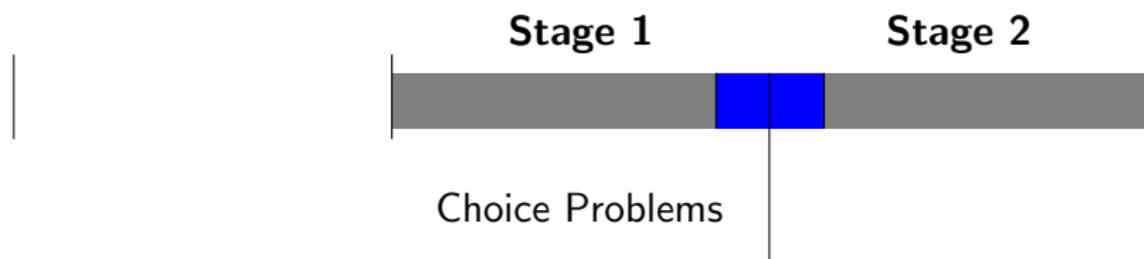
Timeline



Communication:

Discussion

Timeline



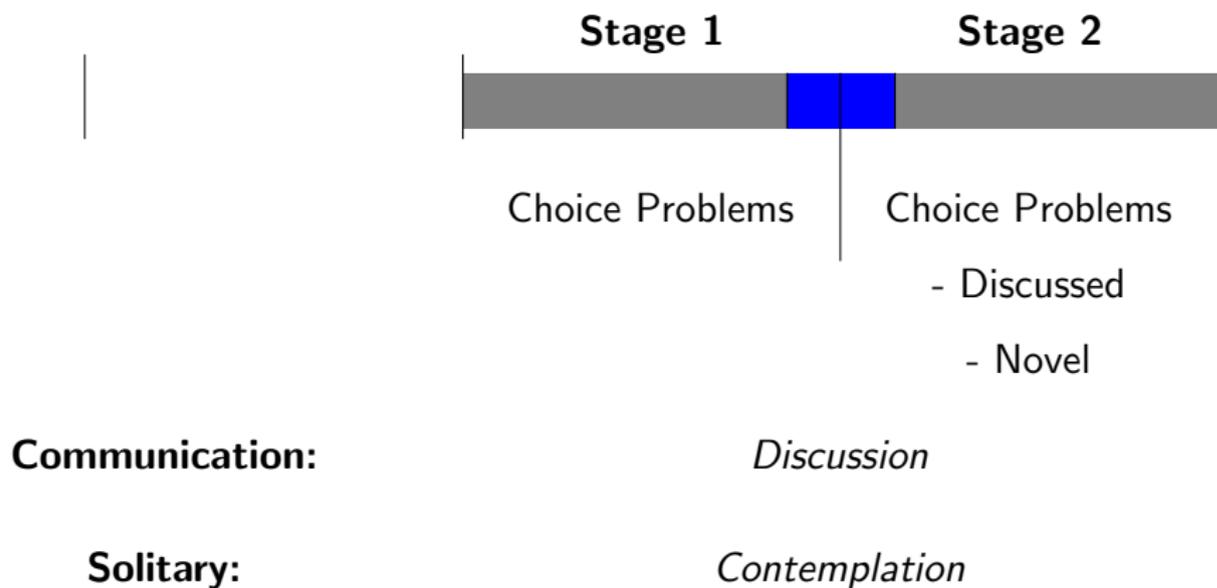
Communication:

Discussion

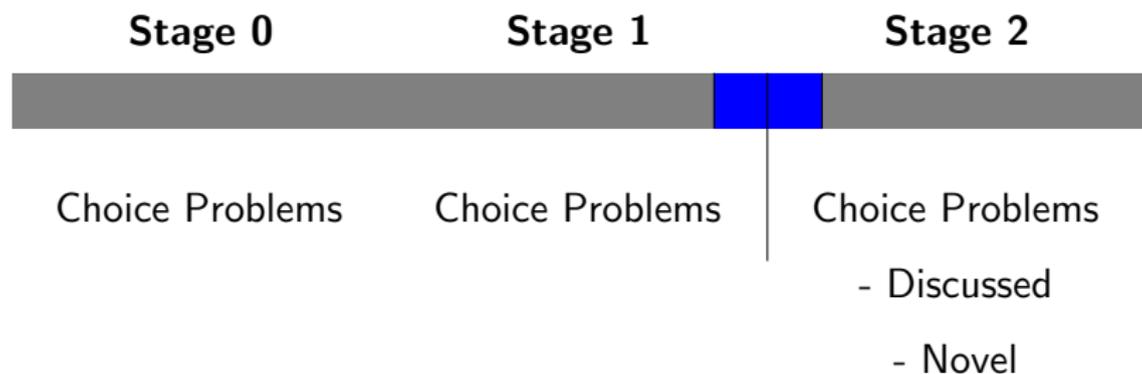
Solitary:

Contemplation

Timeline



Timeline



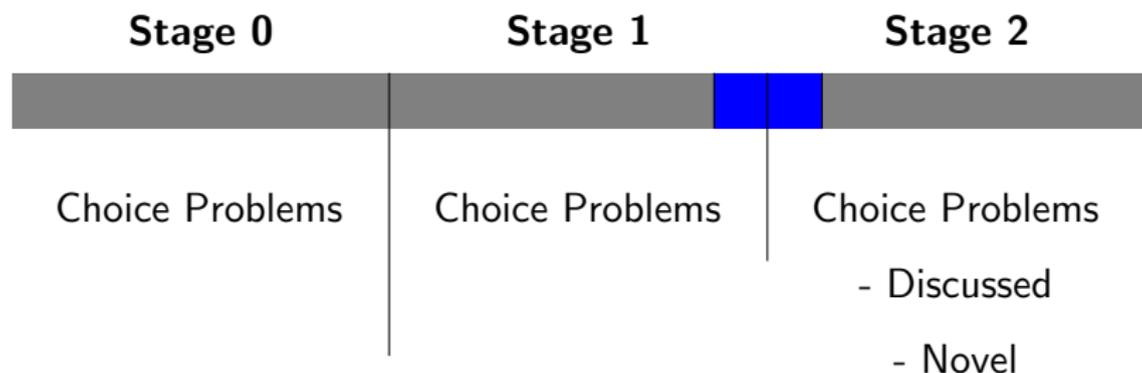
Communication:

Discussion

Solitary:

Contemplation

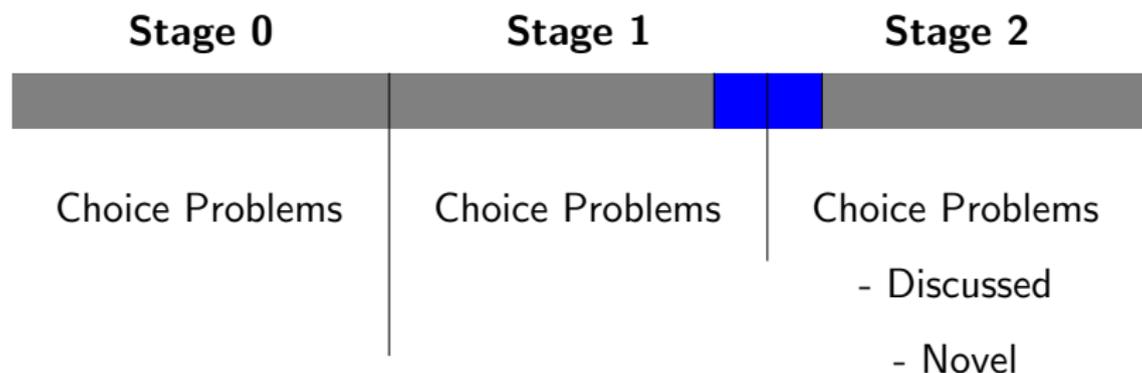
Timeline



Communication: Documentary *Discussion*

Solitary: Documentary *Contemplation*

Timeline



Communication: Documentary *Discussion*

Solitary: Documentary *Contemplation*

Comm. with Educ. Documentary *Discussion*
(Education for partner)

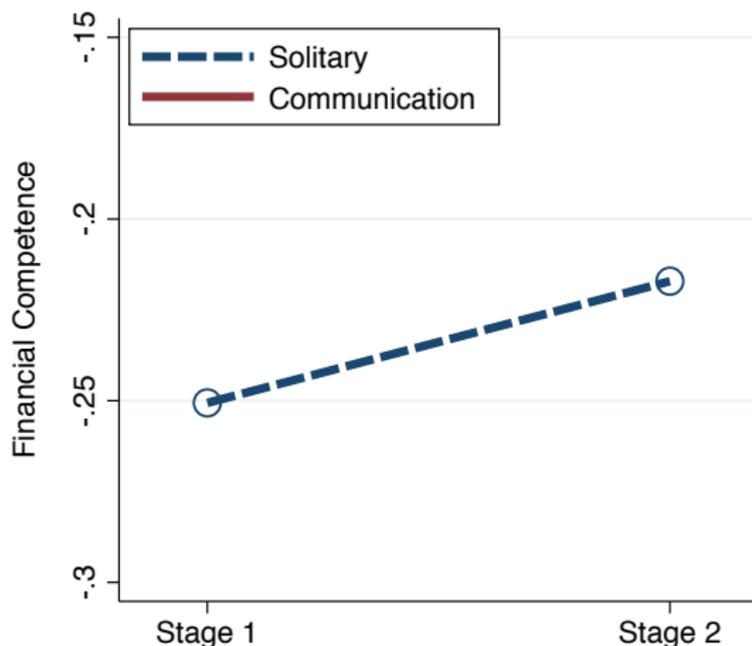
Data

- ▶ 263 subjects
- ▶ University of Birmingham, UK, Fall 2015-Spring 2016
- ▶ Mean completion time: 123.75 minutes (s.d. 20.01 minutes)
- ▶ Mean payment: £26.55

Dependent Variable

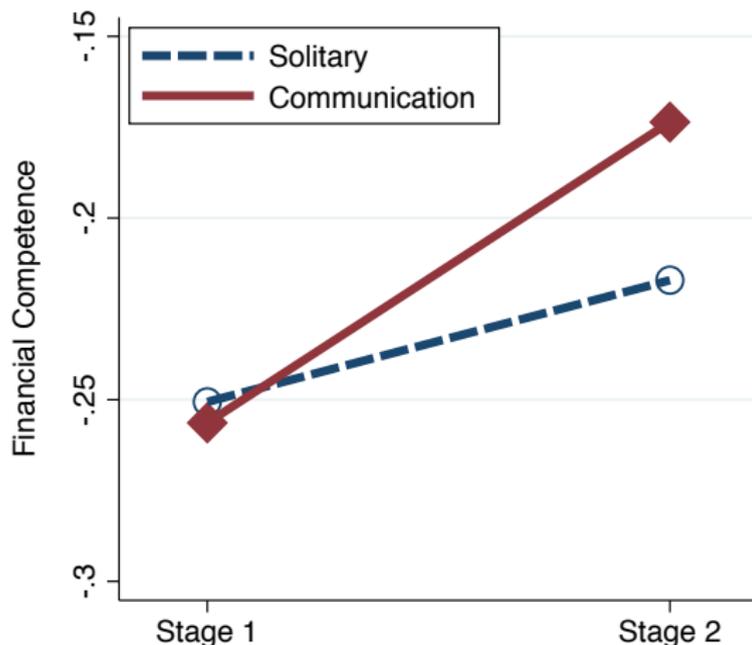
- ▶ Financial competence $-|v^{complex} - v^{simple}|$
- ▶ Normalized as if each future value was £1

Does communication help or hurt decision making quality?



Averaged across discussed and novel tasks. Slopes: Solitary: 0.016 (s.e. 0.018). Communication: 0.088*** (s.e. 0.017). Diff-in-diff: 0.072*** (s.e. 0.027). OLS, s.e. clustered by subject.

Does communication help or hurt decision making quality?



Averaged across discussed and novel tasks. Slopes: Solitary: 0.016 (s.e. 0.018). Communication: 0.088*** (s.e. 0.017). Diff-in-diff: 0.072*** (s.e. 0.027). OLS, s.e. clustered by subject.

Research Questions

Does face-to-face communication with a randomly chosen peer improve **decision making quality** in settings where best choice depends on preferences?

Communication improves decision making!

Mechanisms:

- ▶ Do subjects merely mimic others' choices? Do they acquire skills they can apply to new problems?
- ▶ Between whom is communication most / least beneficial?

Spillovers:

- ▶ Can we use communication to leverage financial education?

Research Questions

Does face-to-face communication with a randomly chosen peer improve **decision making quality** in settings where best choice depends on preferences?

Communication improves decision making!

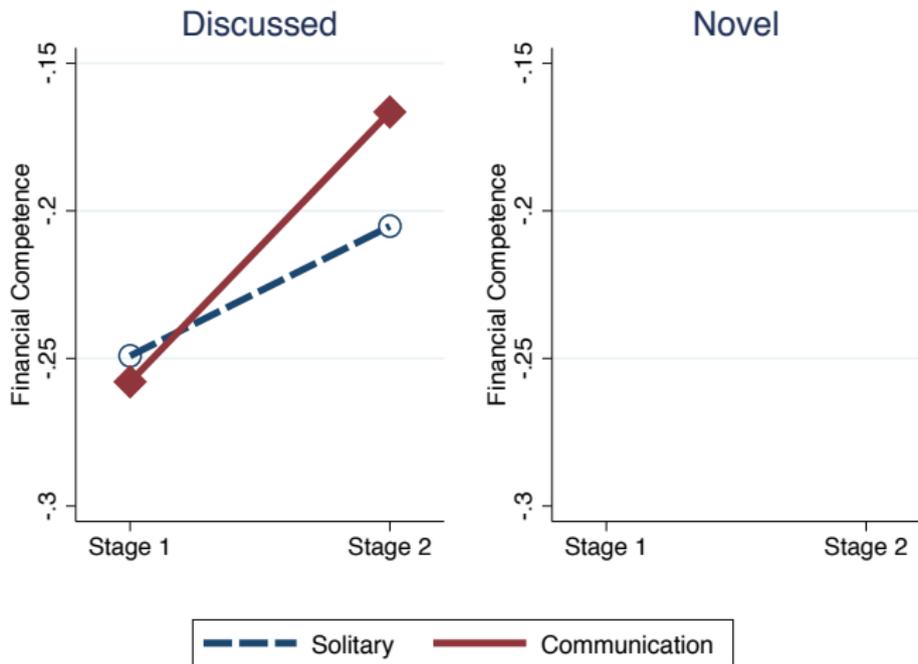
Mechanisms:

- ▶ Do subjects merely mimic others' choices? Do they acquire skills they can apply to new problems?
- ▶ Between whom is communication most / least beneficial?

Spillovers:

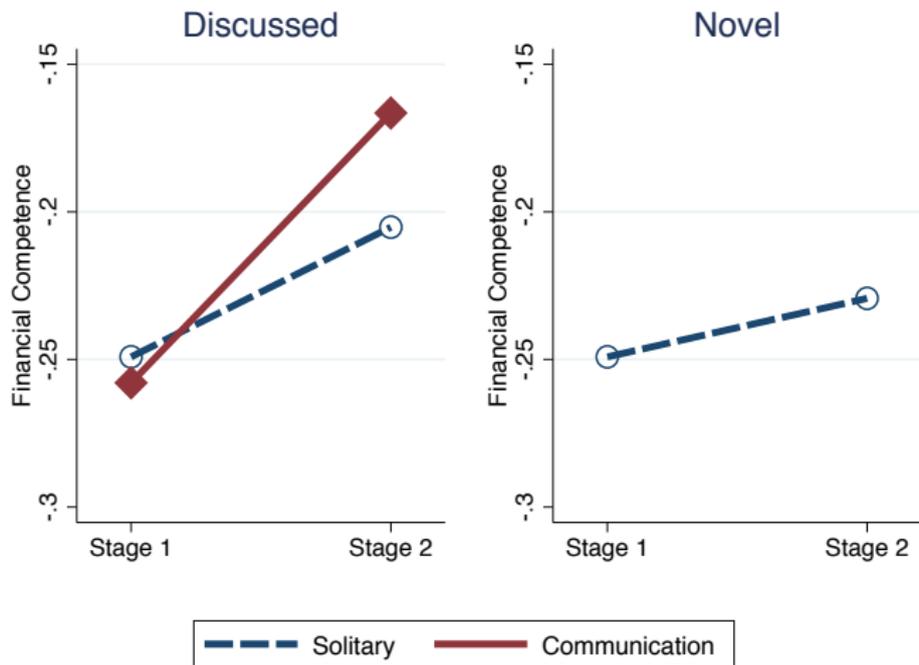
- ▶ Can we use communication to leverage financial education?

Conceptual learning or choice mimicry?



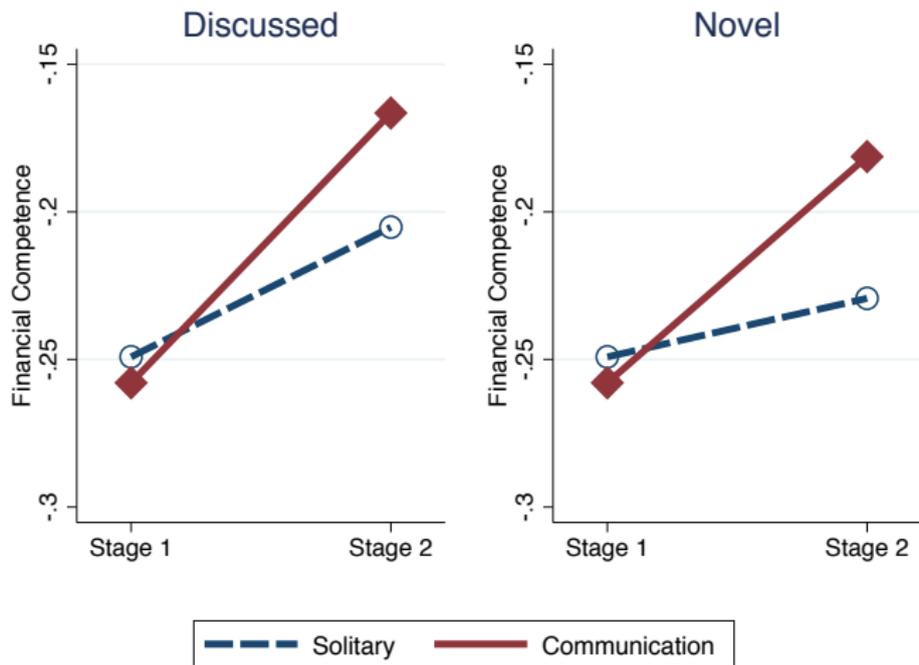
Slopes: solitary-discussed: 0.022 (s.e. 0.022), solitary-novel: 0.009 (s.e. 0.022), communication-discussed: 0.096*** (s.e. 0.019), communication-novel 0.081*** (s.e. 0.018). *Diff-in-diff:* discussed: 0.073** (s.e. 0.030), novel 0.071** (s.e. 0.029). OLS, s.e. clustered by subject.

Conceptual learning or choice mimicry?



Slopes: solitary-discussed: 0.022 (s.e. 0.022), solitary-novel: 0.009 (s.e. 0.022), communication-discussed: 0.096*** (s.e. 0.019), communication-novel 0.081*** (s.e. 0.018). *Diff-in-diff:* discussed: 0.073** (s.e. 0.030), novel 0.071** (s.e. 0.029). OLS, s.e. clustered by subject.

Conceptual learning or choice mimicry?



Slopes: solitary-discussed: 0.022 (s.e. 0.022), solitary-novel: 0.009 (s.e. 0.022), communication-discussed: 0.096*** (s.e. 0.019), communication-novel 0.081*** (s.e. 0.018). *Diff-in-diff:* discussed: 0.073** (s.e. 0.030), novel 0.071** (s.e. 0.029). OLS, s.e. clustered by subject.

Research Questions

Does face-to-face communication with a randomly chosen peer improve **decision making quality** in settings where best choice depends on preferences?

Communication improves decision making!

Mechanisms:

- ▶ Do subjects merely mimic others' choices? Do they acquire skills they can apply to new problems? **No evidence on choice mimicry**
- ▶ Between whom is communication most / least beneficial?

Spillovers:

- ▶ Can we use communication to leverage financial education?

Research Questions

Does face-to-face communication with a randomly chosen peer improve **decision making quality** in settings where best choice depends on preferences?

Communication improves decision making!

Mechanisms:

- ▶ Do subjects merely mimic others' choices? Do they acquire skills they can apply to new problems? **No evidence on choice mimicry**
- ▶ **Between whom is communication most / least beneficial?**

Spillovers:

- ▶ Can we use communication to leverage financial education?

Who benefits most from communication?

Hypothesis 1

Information flows from those who have it to those who do not
(e.g. Jackson & Bruegman, 2009)

- ▶ Improve more the better the partner

Who benefits most from communication?

Hypothesis 1

Information flows from those who have it to those who do not (e.g. Jackson & Bruegman, 2009)

- ▶ Improve more the better the partner

Hypothesis 2

Skill transmission more effective between people of similar skills who can address concerns at appropriate level and pace (e.g. Booij, et al., 2016, Feld & Zolitz, 2016, and Haliassos et al., 2017)

- ▶ Improve more if partner more similar

Who benefits most from communication?

Hypothesis 1

Information flows from those who have it to those who do not (e.g. Jackson & Bruegman, 2009)

- ▶ Improve more the better the partner

Hypothesis 2

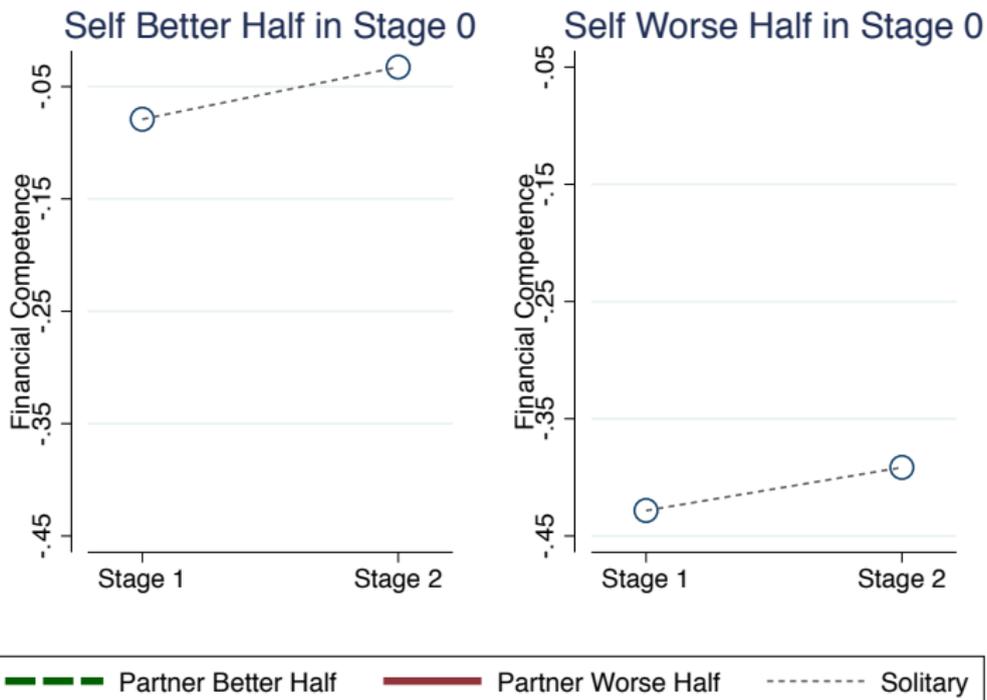
Skill transmission more effective between people of similar skills who can address concerns at appropriate level and pace (e.g. Booij, et al., 2016, Feld & Zolitz, 2016, and Haliassos et al., 2017)

- ▶ Improve more if partner more similar

4 kinds of pairs

Classify using stage 0 decisions (to avoid regression to the mean)

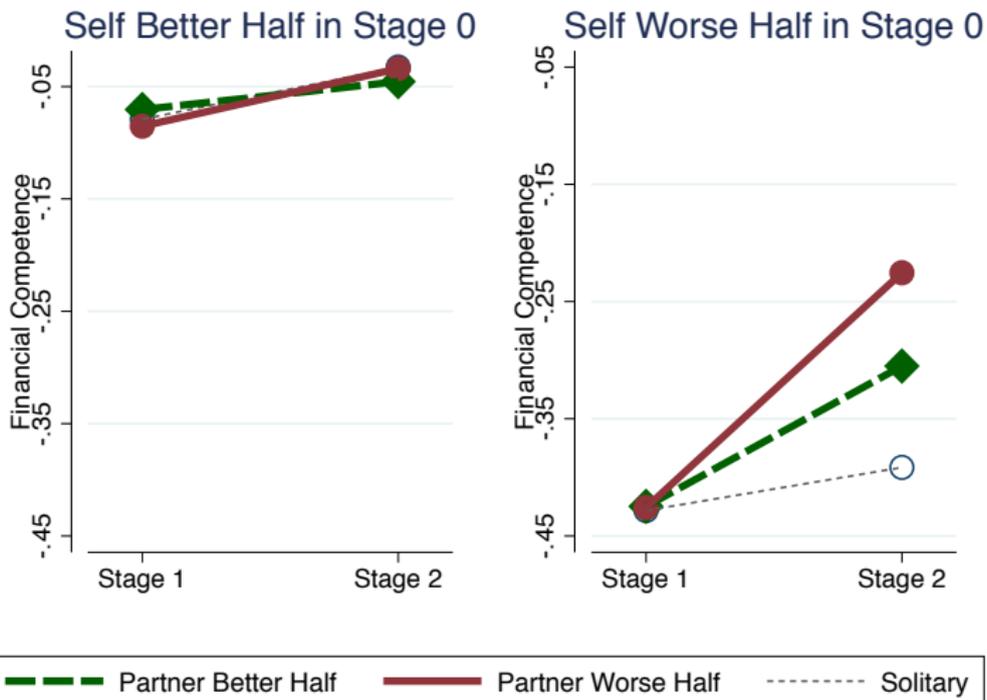
- ▶ Self in better / worse half
- ▶ Partner in better / worse half



Difference in slope Communication to Solitary: Self worse, partner worse: 16.4%*** (s.e. 2.2), Self worse, partner better: 8.29%*** (s.e. 2.13), Self better, partner worse: 0.48% (s.e. 2.47), Self better, partner better: -2.15% (s.e. 2.5). *Difference in better vs. worse partner:* Self worse: -8.06%*** (s.e. 2.18), Self better: -2.6% (s.e. 2.12). OLS, s.e. clustered by subject.



Difference in slope Communication to Solitary: Self worse, partner worse: 16.4%*** (s.e. 2.2), Self worse, partner better: 8.29%*** (s.e. 2.13), Self better, partner worse: 0.48% (s.e. 2.47), Self better, partner better: -2.15% (s.e. 2.5). *Difference in better vs. worse partner:* Self worse: -8.06%*** (s.e. 2.18), Self better: -2.6% (s.e. 2.12). OLS, s.e. clustered by subject.



Difference in slope Communication to Solitary: Self worse, partner worse: 16.4%*** (s.e. 2.2), Self worse, partner better: 8.29%*** (s.e. 2.13), Self better, partner worse: 0.48% (s.e. 2.47), Self better, partner better: -2.15% (s.e. 2.5). *Difference in better vs. worse partner:* Self worse: -8.06%*** (s.e. 2.18), Self better: -2.6% (s.e. 2.12). OLS, s.e. clustered by subject.

What do people discuss?

	Highlight similarity
Similar (TT/BB)	82% (8.7%)
Different (TB/BT)	44% (8.3%)
p-value	0.001

Variables

- ▶ Highlight similarities e.g. “I’m bad at this too, let’s see whether we can help each other out”

What do people discuss?

	Highlight similarity	Minutes discussed
Similar (TT/BB)	82% (8.7%)	10.15 (0.78)
Different (TB/BT)	44% (8.3%)	8.26 (0.80)
p-value	0.001	0.091

Variables

- ▶ Highlight similarities e.g. “I’m bad at this too, let’s see whether we can help each other out”

What do people discuss?

	Highlight similarity	Minutes discussed	# problems (of 6)	# small talk topics (of 3)
Similar (TT/BB)	82% (8.7%)	10.15 (0.78)	3.51 (0.31)	0.35 (0.13)
Different (TB/BT)	44% (8.3%)	8.26 (0.80)	3.57 (0.29)	0.62 (0.12)
p-value	0.001	0.091	0.873	0.088

Variables

- ▶ Highlight similarities e.g. “I’m bad at this too, let’s see whether we can help each other out”
- ▶ Small talk topics: Country of origin, college major, years of study

Research Questions

Does face-to-face communication with a randomly chosen peer improve **decision making quality** in settings where best choice depends on preferences?

Communication improves decision making!

Mechanisms:

- ▶ Do subjects merely mimic others' choices? Do they acquire skills they can apply to new problems? **No evidence on choice mimicry**
- ▶ Between whom is communication most / least beneficial? **Most beneficial between people with similar skill levels, as transmission requires "common language"**

Spillovers:

- ▶ Can we use communication to leverage financial education?

Research Questions

Does face-to-face communication with a randomly chosen peer improve **decision making quality** in settings where best choice depends on preferences?

Communication improves decision making!

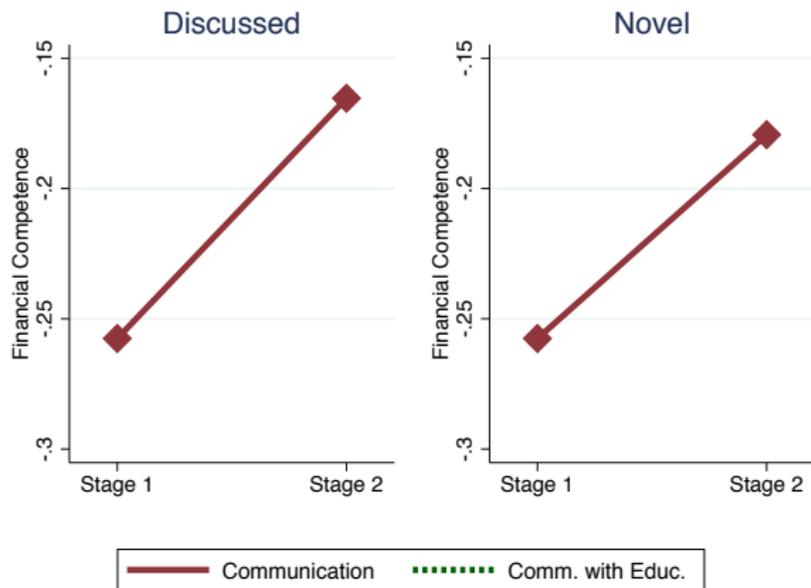
Mechanisms:

- ▶ Do subjects merely mimic others' choices? Do they acquire skills they can apply to new problems? **No evidence on choice mimicry**
- ▶ Between whom is communication most / least beneficial? **Most beneficial between people with similar skill levels, as transmission requires "common language"**

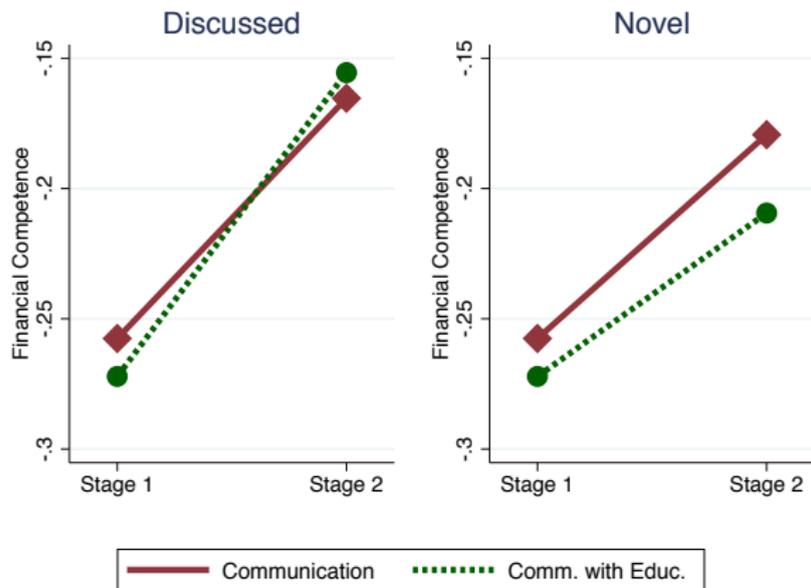
Spillovers:

- ▶ **Can we use communication to leverage financial education?**

Indirect Effect of Education?

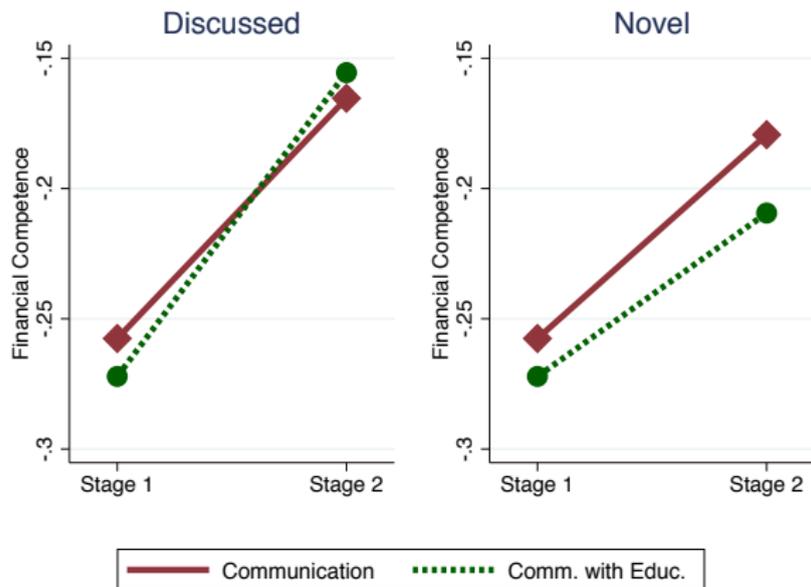


Indirect Effect of Education?



Slopes: Diff-in-diff communication with educated / not educated: 0.042, $p = 0.016$.

Indirect Effect of Education?



Slopes: Diff-in-diff communication with educated / not educated: 0.042, $p = 0.016$.

Discussion in % of pairs	<i>Communication</i>	<i>Com. with Educ.</i>
Rule of 72	2%	73.2%
Compound interest formula	63%	42%

Research Questions

Does face-to-face communication with a randomly chosen peer improve **decision making quality** in settings where best choice depends on preferences?

Communication improves decision making!

Mechanisms:

- ▶ Do subjects merely mimic others' choices? Do they acquire skills they can apply to new problems? **No evidence on choice mimicry**
- ▶ Between whom is communication most / least beneficial? **Most beneficial between people with similar skill levels, as transmission requires "common language"**

Spillovers:

- ▶ Can we use communication to leverage financial education? **Not really since education indirectly helps through choice mimicry, but not through conceptual learning.**

Conclusion

Policy implications

Financial decision making may be improved by encouraging communication even in environments involving preference heterogeneity

- ▶ Will be most effective if (e.g. in financial education interventions) people of similar skill level are paired
- ▶ By contrast, educating part of population and relying on diffusion may be ineffective

Conclusion

Policy implications

Financial decision making may be improved by encouraging communication even in environments involving preference heterogeneity

- ▶ Will be most effective if (e.g. in financial education interventions) people of similar skill level are paired
- ▶ By contrast, educating part of population and relying on diffusion may be ineffective

Further questions

- ▶ Role of confidence?
 - ▶ Our experiment: Ability and confidence highly correlated
 - ▶ Maybe less so in other contexts (e.g. Linnainmaa et al., 2016)
- ▶ Would effects be similar in less / more educated subject pools?

Conclusion

Policy implications

Financial decision making may be improved by encouraging communication even in environments involving preference heterogeneity

- ▶ Will be most effective if (e.g. in financial education interventions) people of similar skill level are paired
- ▶ By contrast, educating part of population and relying on diffusion may be ineffective

Further questions

- ▶ Role of confidence?
 - ▶ Our experiment: Ability and confidence highly correlated
 - ▶ Maybe less so in other contexts (e.g. Linnainmaa et al., 2016)
- ▶ Would effects be similar in less / more educated subject pools?

THANK YOU!