

**From foe to friend and back again: The temporal dynamics of
intra-party bias in the 2016 U.S. Presidential Election**

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SUPPLEMENTARY INFORMATION

1. Supporting analyses

1.1 Possible confounds: comprehension failure, and Wave 1 vs Wave 2 differences

In this section we address potential concerns about (i) our exclusion of participants who failed comprehension questions, and (ii) the non-panel nature of our dataset (i.e. the fact that the same people were not surveyed repeatedly). We address (i) by showing that our results are robust to including non-comprehenders. To address (ii), we first evaluate whether the sample's choices and demographics varied between Wave 1 and Wave 2 (Table S1). We see that Wave 2 has a larger female-to-male ratio, is richer, less experienced, more conservative and more likely to have voted for Hillary Clinton over Bernie Sanders during the primaries ($ps < 0.01$, even after controlling for multiple comparisons with Bonferroni-corrections). Given the presence of these differences, we show that our results are robust to including the collected demographics as covariates.

	Excluding non-comprehenders			Including comprehenders		
	Wave 1	Wave 2	p	Wave 1	Wave 2	p
Age	34.84	35.20	0.30	34.91	35.17	0.39
Female	0.49	0.54	<0.01	0.51	0.56	<0.01
Graduated	0.53	0.56	0.07	0.51	0.54	0.03
Earned over \$35,000	0.50	0.54	<0.01	0.50	0.53	0.02
Trust in others	4.54	4.58	0.27	4.56	4.56	0.93
Log(Experience)	2.77	2.46	<0.01	2.63	2.35	<0.01
Fiscal conservatism	3.21	3.41	<0.01	3.28	3.45	<0.01
Social conservatism	2.68	2.82	<0.01	2.80	2.91	<0.01
Democrat	0.66	0.64	0.07	0.65	0.63	0.07
Voted HC Primary	0.26	0.35	<0.01	0.28	0.38	<0.01
Republican	0.34	0.36	0.07	0.35	0.37	0.07
Voted DT Primary	0.46	0.43	0.26	0.49	0.46	0.11
Share given in the DG	0.27	0.30	<0.01	0.32	0.35	<0.01
Democrat	0.28	0.31	<0.01	0.32	0.35	<0.01
Voted HC Primary	0.28	0.29	0.63	0.34	0.35	0.73
Voted BS Primary	0.28	0.32	<0.01	0.31	0.35	<0.01
Republican	0.25	0.29	<0.01	0.31	0.33	0.08
Voted DT Primary	0.22	0.26	0.08	0.28	0.32	0.04
Voted <i>Oth</i> Primary	0.27	0.31	0.04	0.34	0.34	0.79

Table S1. Mean comparisons between wave 1 and wave 2 by comprehension types: age, female-to-male ratio, percentage of participants who completed a Bachelor's degree or more, percentage of participants earning more than \$35,000, trust in others, logarithmic value of experience answering surveys online, fiscal and social conservatism, percentage of participants who identified with the Democrat party, percentage of participants who voted for Hillary Clinton during the primaries, percentage of participants who identified with the Republican party, percentage of participants who voted for Donald Trump during the primaries, share given in the Dictator game by Party and Primary candidate preferences, (two tailed) t-tests.

Results in Table S2 reveal that the inclusion of non-comprehenders and demographic controls does not affect (i) the overall positive interaction between *Outgroup* and *Week*, nor (ii) the fact that this interaction is significant among Democrats but not among Republicans in Wave 1. However, including non-comprehending participants does affect the significance of the *Democrat x Week x Outgroup* three-way interaction.

	Democrats and Republicans		Democrats and Republicans		Republicans only		Democrats only		Democrats and Republicans	
	<i>Exc. NC</i>	<i>Inc. NC</i>	<i>Exc. NC</i>	<i>Inc. NC</i>	<i>Exc. NC</i>	<i>Inc. NC</i>	<i>Exc. NC</i>	<i>Inc. NC</i>	<i>Exc. NC</i>	<i>Inc. NC</i>
Outgroup (O)	-0.049*** (0.011)	-0.036*** (0.010)	-0.099*** (0.025)	-0.084** (0.025)	-0.045 (0.045)	-0.067 (0.046)	-0.124*** (0.031)	-0.094** (0.030)	-0.046 (0.046)	-0.062 (0.045)
Week (W)			0.004* (0.002)	0.005* (0.002)	0.008* (0.004)	0.004 (0.004)	0.002 (0.003)	0.005 (0.003)	0.008* (0.004)	0.005 (0.004)
O x W			0.007* (0.003)	0.006* (0.003)	-0.002 (0.005)	0.003 (0.005)	0.011** (0.004)	0.008* (0.004)	-0.002 (0.005)	0.003 (0.005)
Democrat (D)									0.059 (0.041)	0.029 (0.040)
O x D									-0.078 (0.055)	-0.032 (0.055)
D x W									-0.006 (0.004)	0.000 (0.004)
O x D x W									0.013* (0.006)	0.005 (0.006)
Constant	0.266*** (0.038)	0.299*** (0.036)	0.228*** (0.041)	0.259*** (0.040)	0.210** (0.067)	0.340*** (0.066)	0.271*** (0.045)	0.265*** (0.043)	0.201*** (0.049)	0.260*** (0.047)
Controls	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>
N	2142	2883	2142	2883	718	1001	1424	1882	2142	2883
R ²	0.110	0.102	0.123	0.111	0.143	0.117	0.121	0.116	0.125	0.112

Table S2 (OLS) Regression results for DG giving in wave 1, excluding or including non-comprehenders (NC). *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Controls include: age, female-to-male ratio, percentage of participants who completed a Bachelor's degree or more, percentage of participants earning more than \$35,000, trust in others, logarithmic value of experience answering surveys online, fiscal and social conservatism, percentage of participants who identified with the Democrat party (first four models), percentage of participants who voted for Donald Trump during the primaries (fifth and sixth models), and percentage of participants who voted for Hillary Clinton during the primaries (seventh and eighth models).

With regards to Wave 2, Table S3 shows that the inclusion of participants who failed the comprehension questions and demographic controls does not change our results either. We find an (i) overall negative main effect of being paired with a supporter of the other primary candidate, $\beta=-.084$, $t(2447)=-4.43$, $p<.001$; (ii) a null interaction between in-group-bias and day, $\beta=-.029$, $t(2444)=0.21$, $p=.834$; and (iii) a null interaction between in-group-bias, day, and party, $\beta=-.156$, $t(2440)=-.59$, $p=.558$.

	Democrats and Republicans		Democrats and Republicans		Republicans only		Democrats only		Democrats and Republicans	
	<i>Exc. NC</i>	<i>Inc. NC</i>	<i>Exc. NC</i>	<i>Inc. NC</i>	<i>Exc. NC</i>	<i>Inc. NC</i>	<i>Exc. NC</i>	<i>Inc. NC</i>	<i>Exc. NC</i>	<i>Inc. NC</i>
Outgroup (O)	-0.058*** (0.011)	-0.047*** (0.011)	-0.050 (0.082)	-0.031 (0.076)	-0.179 (0.139)	-0.079 (0.131)	0.001 (0.101)	-0.005 (0.094)	-0.194 (0.137)	-0.082 (0.127)
Week (W)			0.004 (0.003)	0.006 (0.003)	0.001 (0.005)	0.004 (0.005)	0.005 (0.004)	0.007 (0.004)	0.000 (0.005)	0.004 (0.005)
O x W			0.000 (0.005)	-0.001 (0.004)	0.007 (0.008)	0.002 (0.007)	-0.003 (0.006)	-0.003 (0.005)	0.007 (0.008)	0.002 (0.007)
Democrat (D)									-0.077 (0.122)	-0.008 (0.114)
O x D									0.222 (0.171)	0.081 (0.159)
D x W									0.006 (0.007)	0.003 (0.006)
O x D x W									-0.012 (0.009)	-0.005 (0.009)
Constant	0.279*** (0.040)	0.261*** (0.036)	0.207** (0.070)	0.161* (0.065)	0.250* (0.117)	0.171 (0.110)	0.240** (0.083)	0.204** (0.077)	0.281** (0.106)	0.194* (0.098)
Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
N	1734	2458	1734	2458	627	912	1107	1546	1734	2458
R ²	0.143	0.119	0.144	0.122	0.186	0.141	0.134	0.113	0.145	0.122

Table S3 (OLS) Regression results for DG giving in wave 2, excluding or including non-comprehenders (NC). *** $p<0.001$; ** $p<0.01$; * $p<0.05$. Controls include: age, female-to-male ratio, percentage of participants who completed a Bachelor's degree or more, percentage of participants earning more than \$35,000, trust in others, logarithmic value of experience answering surveys online, fiscal and social conservatism, percentage of participants who identified with the Democrat party (first four models), percentage of participants who voted for Donald Trump during the primaries (fifth and sixth models), and percentage of participants who voted for Hillary Clinton during the primaries (seventh and eighth models).

Thus, our results remain qualitatively similar when including participants who failed the comprehension checks and including demographic controls. Figure S1 replicates Figure 1 from the main text when including non-comprehenders.

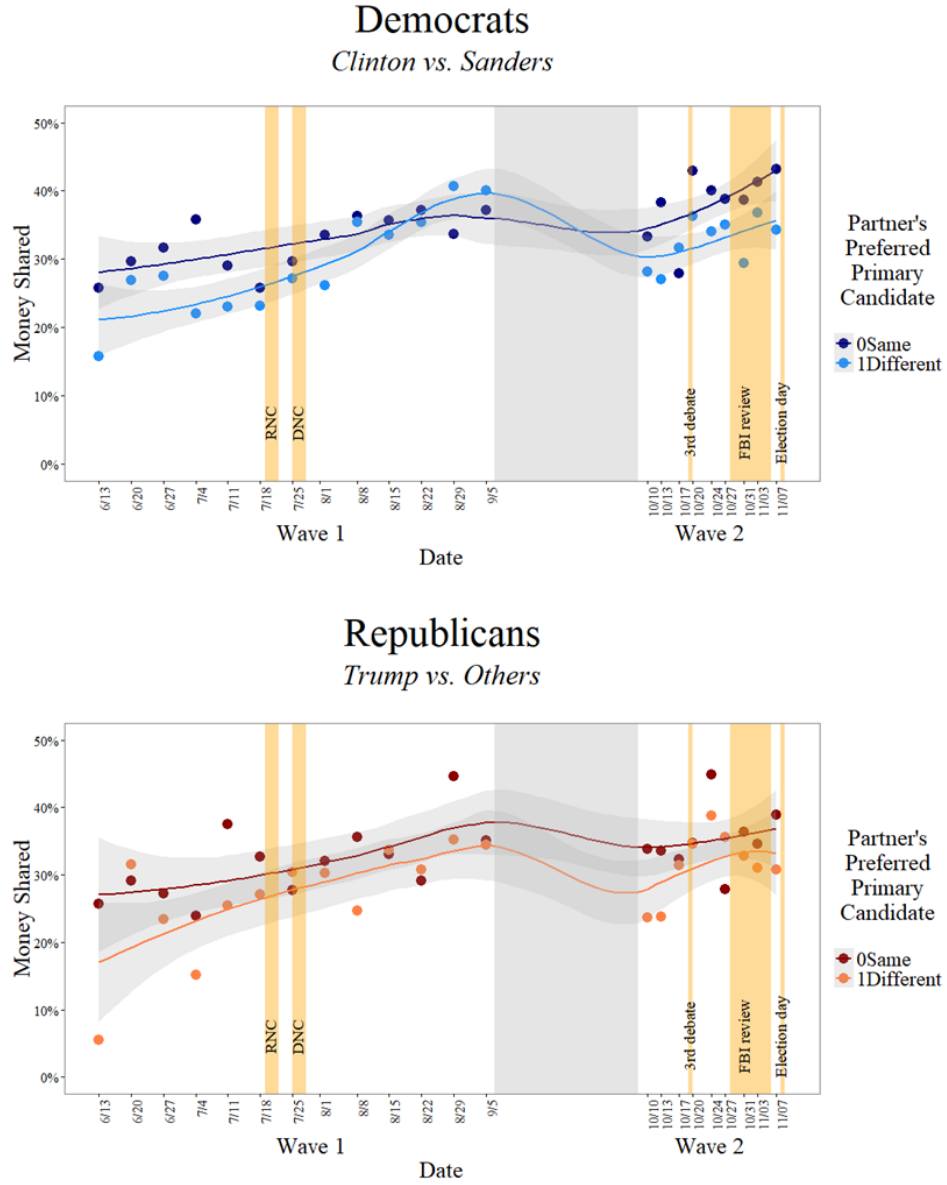


Figure S1. Fraction transferred in the Dictator Game in each week of the first wave of the study, with Locally Estimated (LOESS) 95% Confidence Intervals. RNC: Republican National Convention; DNC: Democratic National Convention. Including non-comprehenders.

1.2 Predicted main effect and interaction

First we note that for Dictator game (DG) giving, being an *outgroup* recipient reduces the amount sent in both waves, while the number of weeks into our study increases it in wave 1. There is also a positive interaction between both variables in wave 1 (Table S4).

Dictator game giving (excl. non-comprehenders)								
	<i>Wave 1</i>				<i>Wave 2</i>			
	Coef (se)	Beta	Coef (se)	Beta	Coef (se)	Beta	Coef (se)	Beta
Outgroup (O)	-0.043*** (0.011)	-0.083	-0.107*** (0.026)	-0.208	-0.055*** (0.012)	-0.108	-0.111 (0.086)	-0.218
Week (W)			0.007** (0.002)	0.094			0.006 (0.003)	0.060
O x W			0.008** (0.003)	0.149			0.003 (0.005)	
Constant	0.290*** (0.008)		0.237*** (0.019)		0.330*** (0.009)		0.222*** (0.061)	0.112
N	2183		2183		1775		1775	
R ²	0.007		0.033		0.011		0.016	

Table S4 (OLS) Regression results for DG giving, excl. non-comprehenders. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

1.3 Difference in dynamics between Democrats and Republicans

We also find a positive interaction between outgroup members, week into our study, and preference for the Democratic Party in wave 1 but not in wave 2, such that democrats see their outgroup bias reduced over time, unlike republicans (Table S5).

	<i>Wave 1</i>						<i>Wave 2</i>	
	<i>Democrats and Republicans</i>		<i>Republicans only</i>		<i>Democrats only</i>		<i>Democrats and Republicans</i>	
	Coef (se)	Beta	Coef (se)	Beta	Coef (se)	Beta	Coef (se)	Beta
Outgroup (O)	-0.044 (0.047)	-0.086	-0.044 (0.047)	-0.087	-0.135*** (0.032)	-0.261	-0.272 (0.145)	-0.534
Week (W)	0.013** (0.004)	0.177	0.013** (0.004)	0.175	0.004 (0.003)	0.059	0.001 (0.006)	0.011
O x W	-0.002 (0.005)	-0.028	-0.002 (0.005)	-0.029	0.013** (0.004)	0.232	0.012 (0.008)	0.438
Democrat (D)	0.090* (0.040)	0.166					-0.119 (0.128)	-0.224
O x D	-0.090 (0.057)	-0.166					0.254 (0.181)	0.466
D x W	-0.009 (0.005)	-0.155					0.008 (0.007)	0.278
O x D x W	0.015* (0.007)	0.237					-0.015 (0.010)	-0.481
Constant	0.173*** (0.034)		0.173*** (0.033)		0.264*** (0.022)		0.295** (0.104)	
N	2183		732		1451		1775	
R ²	0.040		0.041		0.035		0.017	

Table S5 (OLS) Regression results for DG giving, excl. non-comprehenders. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

1.4 The effect of the Democratic National Convention in Dictator game giving, among Democrats

We find that among Democrats a dummy for observations occurring a week after the Democratic National Convention has equivalent (or even slightly better) predictive power (R^2) than a continuous variable for weeks.

Dictator game giving among Democrats (excl. non-comprehenders)				
	Coef (se)	Beta	Coef (se)	Beta
Outgroup (O)	-0.135*** (0.032)	-0.261	-0.078*** (0.018)	-0.151
Week (W)	0.004 (0.003)	0.059		
August 8 or later (A)			0.032 (0.019)	0.062
O x W	0.013** (0.004)	0.232		
O x A			0.092** (0.027)	0.151
Constant	0.264*** (0.022)		0.281*** (0.013)	
N	1451		1451	
R ²	0.035		0.035	

Table S6 (OLS) Regression results for DG giving among Democrats, excl. non-comprehenders. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

We also note that among Democrats, out-group bias is seen before August 8th but not afterwards.

Dictator game giving among Democrats (excl. non-comprehenders)				
	<i>Before August 8th</i>		<i>After August 8th</i>	
	Coef (se)	Beta	Coef (se)	Beta
Outgroup (O)	-0.078*** (0.018)	-0.154	0.014 (0.020)	0.026
Constant	0.281*** (0.013)		0.314*** (0.014)	
N	780		671	
R ²	0.024		0.001	

Table S7 (OLS) Regression results for DG giving among Democrats, excl. non-comprehenders. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

1.5 The effect of the National Conventions in Dictator game giving, among Republicans

We find that, among Republicans, there is an out-group bias before and after the Democratic and Republican National Conventions, but not during them.

Dictator game giving among Republicans (excl. non-comprehenders)								
	<i>All weeks sampled</i>		<i>Before July 18th</i>		<i>After July 28th</i>		<i>During Conventions</i>	
	Coef (se)	Beta	Coef (se)	Beta	Coef (se)	Beta	Coef (se)	Beta
Outgroup (O)	-0.078*** (0.020)	-0.154	-0.084* (0.036)	-0.178	-0.071** (0.024)	-0.137	0.031 (0.046)	0.063
Conventions (C)	-0.072* (0.035)	-0.104						
O x C	0.109* (0.050)	0.117						
Constant	0.290*** (0.014)		0.232*** (0.026)		0.311*** (0.017)		0.219*** (0.032)	
N	732		172		441		119	
R ²	0.021		0.032		0.019		0.004	

Table S8 (OLS) Regression results for DG giving, excluding or including non-comprehenders (NC). *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

2. Experimental materials

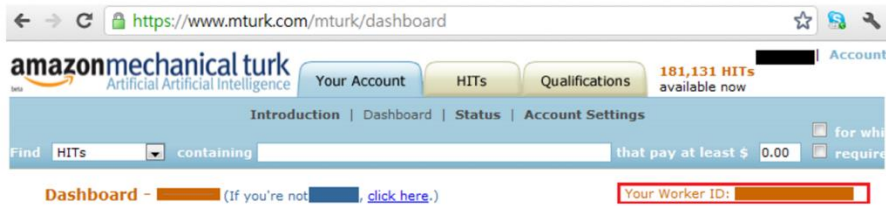
Screen 1

qualtrics.com*

Welcome!

Please enter your Amazon Mechanical Turk WorkerID. (Please see below for where you can find your WorkerID.) Your WorkerID starts with the letter A and has 12-14 letters or numbers. It is NOT your email address. If we do not have your correct WorkerID we will not be able to pay you. Thank you!

Note that your WorkerID can be found on your dashboard page:



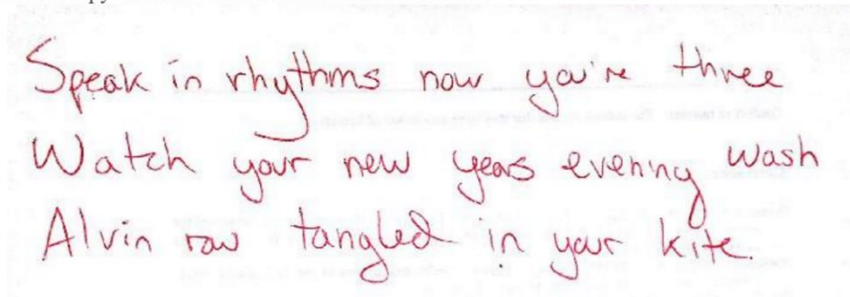
The screenshot shows a web browser window with the URL <https://www.mturk.com/mturk/dashboard>. The page header includes the Amazon Mechanical Turk logo and navigation tabs for 'Your Account', 'HITS', and 'Qualifications'. A search bar is visible with 'HITS' selected. At the bottom of the dashboard, a red box highlights the 'Your Worker ID:' field, which contains a redacted value. A link to 'click here' is also visible.

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Screen 2

qualtrics.com*

Please copy this handwritten text into the box below:



The handwritten text is written in red ink on a white background with horizontal lines. It reads: "Speak in rhythms now you're three", "Watch your new years evening wash", and "Alvin row tangled in your kite." Below the text is a large empty text box for copying the content.

>>

Screen 3

Do you prefer the Democratic or the Republican party?

- I prefer the Republican party
- I prefer the Democratic party

>>

Screen 4

If Republican:

If Democrat:

Which candidate did you prefer in the primary election?



Donald Trump



Other

>>

Which candidate did you prefer in the primary election?



Hillary Clinton



Bernie Sanders

>>

Screen 5

How strongly do you support this candidate?

- 1 - Very weakly
- 2
- 3
- 4
- 5
- 6
- 7 - Very strongly

>>

Screen 6



You have been randomly assigned to interact with another MTurk worker. You cannot participate in this study more than once.

The only thing you know about this person is that they affiliate with the party. They have said that in the 2016 primary election, they supported

Participant's party here

Their candidate's name here

THEIR CANDIDATE



Their name here

YOUR CANDIDATE



Their name here

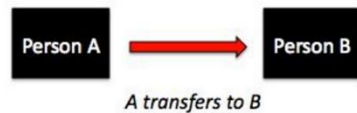
You start with 40 cents and the other person starts with 0.

This interaction has one single decision:

You choose how many of the 40 cents to transfer to the other person.


Your bonus will be whatever you keep. The other person's bonus will be whatever you transfer to them.

The graphic below shows a summary of the interaction:




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Screen 10

 qualtrics.com

In the text box below, please describe why you made the decision that you did in this study.

Screen 11 (collected only after week 8)

 qualtrics.com

Who do you plan to vote for in the 2016 presidential election?

- Hillary Clinton
- Donald Trump
- Jill Stein
- Gary Johnson
- Someone else
- Don't plan to vote

Screen 12



Gender:

- Male
- Female

Age:

Highest level of education completed:

- Less than a high school degree
- High School Diploma
- Vocational Training
- Attended College
- Bachelor's Degree
- Graduate Degree
- Unknown

Please choose the category that describes the total amount of income you earned in 2015. Consider all forms of income, including salaries, tips, interest and dividend payments, scholarship support, student loans, parental support, social security, alimony, and child support, and others.

- Under \$5,000
- \$5,000-\$10,000
- \$10,001-\$15,000
- \$15,001-\$25,000
- \$25,001-\$35,000
- \$35,001-\$50,000
- \$50,001-\$65,000
- \$65,001-\$80,000
- \$80,001-\$100,000
- Over \$100,000

To what extent do you feel you can trust other people that you interact with in your daily life?

1 - Very little 2 3 4 5 6 7 - Very much

I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.

1 - Very untrue 2 3 4 5 - Very true

I trust my initial feelings about people.

1 - Very untrue 2 3 4 5 - Very true

How strongly do you believe in the existence of a God or Gods?

1 - Very little 2 3 4 5 6 7 - Very much

What is your country of residence?

- United States
- India
- Other

Politically, how conservative are you in terms of social issues

1 - Very liberal 2 3 4 5 6 - Very conservative

Politically, how conservative are you in terms of fiscal issues

1 - Very liberal 2 3 4 5 6 - Very conservative

About how many surveys/studies have you participated in on MTurk before?

To what extent have you previously participated in other studies like to this one (i.e. that involve the dividing up of money)?

1 - Nothing like this scenario 2 3 - Something like this scenario 4 5 - Exactly this scenario

Unlike some other requesters on Mechanical Turk, we never use deception in our studies. Your actions really will affect the bonus of the other individual. For our own records, to what extent did you believe that the other person was real when making your decision?

1 - Very skeptical that other was real 2 3 4 5 6 7 - Very confident that other was real

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