

# How does residential mobility influence generalized trust?

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## Abstract

Residential mobility has received considerable research attention in recent years because of its influences on many aspects of our cognitive behaviors. However, little research has been conducted to explore how residential mobility affects generalized trust. The current study was conducted to fill this gap. From individual and societal level, Studies 1a, 1b and 1c employing survey questionnaires consistently documented a negative relationship between personal history of residential moves and generalized trust (trust in strangers), but there was no association between mobility and particularistic trust (trust in known others). Study 2 found that mobility priming significantly reduced perceived trustworthiness to strangers (Study 2a) and that less money was invested to strangers when participants were primed with mobility than when primed with stability in a trust game (Study 2b). Study 3 observed that individuals who planned to move dormitories in the near future, by comparison with those not planning to move, invested less money to strangers in a trust game. In addition, the current study also found that the association between mobility and generalized trust was mediated by perceived uncertainty evoked by mobility (in Study 2b & Study 3). Theoretical implications for the mechanisms underlying the mobility effect on generalized trust are discussed.

## Keywords

Generalized trust, particularistic trust, residential mobility, uncertainty

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## Introduction

With the development of economy and society in the past few decades and the internationalization of human society, the population's mobility has greatly increased, especially in developing countries in Asia and Africa (International Organization for Migration, 2015). Residential mobility has been one of the defining features in many societies, and presents enormous opportunities and challenges to individuals and society. Meanwhile, residential mobility also brings many important impacts on individuals' psychological processes and behaviors, in particular, interpersonal relationships (see Yuki & Schug, 2012, for a review). As advocated by Rozin et al. (2003), socioecological factors (e.g., residential mobility) cannot continue to be neglected if a main goal of psychological science is to understand and predict human behaviors in a rapidly changing world. Therefore, it is critical to investigate the psychological consequences of residential mobility. Here, we aim to explore its effects on interpersonal trust.

Residential mobility refers to the frequency with which people change their residence, and its typical features are changes in living space and reconstruction of new social networks (Oishi, 2010). At the individual (micro) level, it can be conceptualized as the number of residential moves an individual experienced during a certain period of time or plans to move in the future. At the societal (macro) level, residential mobility refers to the proportion of residents, in a given community, city, or country, who moved during a certain period of time (Oishi et al., 2012). Correspondingly, residential mobility is captured at different levels of analysis: at the micro level it is individuals reporting how often they have changed their residences—from different homes on the same street, to entirely different cities and countries—during a specified period of time (e.g., Oishi et al., 2007a), to the macro level reporting how frequently residents have moved within a town or country over a specified period of time (e.g., Oishi et al., 2007b).

It has been well-documented that residential moves profoundly affect how we think and behave. Adam (2004), for instance, found that residential moves negatively correlate with academic problem solving; frequently moving residence has a negative effect on subjective well-being (Oishi & Schimmack, 2010); a mobile lifestyle causes individuals to feel more loneliness and anticipate fewer friends in the future (Oishi et al., 2013). Although the effects of residential mobility on a variety of psychological behaviors have been explored, it is striking that (to our knowledge) little research has been conducted to explore its direct effect on interpersonal trust. Trust is defined in terms of the intention to accept vulnerability based on positive expectations or beliefs regarding the interaction with other people in general (Rotter, 1967; Rousseau et al., 1998). It consists of generalized and particularistic trust. Generalized trust (i.e., trust in unfamiliar others across a broad range of social contexts) concerns perceived trustworthiness of general strangers (Rotter, 1971), while particularistic trust refers to perceived trustworthiness of specific individuals or groups, such as, families and friends (Uslaner, 2002).

There is little research directly linking mobility with either generalized or particularistic trust. In the present study, we mainly focused on the impact of residential mobility on generalized trust, because generalized trust is an important heuristic that people use to navigate numerous daily interactions with unknown others and it is a crucial characteristic

of modern societies (Van Lange et al., 2017). Does residential mobility affect generalized trust? If so, how does it influence (promote or impair) generalized trust? To our knowledge, these two questions have not been investigated by far.

Although there is no direct exploration, some cross-cultural studies could provide some enlightenment. For instance, Yamagishi and Yamagishi (1994) found that people in the United States (with high relational/residential mobility) tend to have greater generalized trust than people in Japan (with low relational/residential mobility). They proposed that this finding might be explained by the difference of relational/residential mobility between the two countries. Supporting evidence came from Fukuyama (1995) and Yuki et al. (2007). Fukuyama observed that Americans exhibit greater trust toward strangers than East Asians. Yuki et al. found that strangers were perceived more trustworthy for Americans than for Japanese, and this cultural difference was entirely mediated by the difference in relational mobility between these two countries. It is important to note that although there are many similarities between residential and relational mobility, they are best to be considered as related but distinct (Gelfand et al., 2015). As mentioned above, residential mobility refers to the frequency with which people change their residence, whereas relational mobility refers to the degree to which different environments afford individuals with opportunities to form new relationships and end existing ones (Schug et al., 2010). In general, residentially mobile neighborhoods and cities present relationally mobile environments. However, there are some cases where high residential mobility does not necessarily produce high relational mobility. For instance, some people may live in a highly residentially mobile area yet have relatively stable social networks.

Moreover, the typical features of residential mobility are changes in living space and reconstruction of new social networks (Oishi, 2010). With each move, people may be faced with entering new educational and work systems, and rebuilding social networks. Therefore, generalized trust may be strengthened as a function of mobility in order to establish new social connections with others. In line with this claim, Oishi et al. (2013) found that participants in the mobility condition reported being more motivated to expand their social network, and this mobility effect was mediated by anticipated loneliness and sadness. Likewise, Li et al. (2019) found that residential mobility could reduce ingroup favoritism in prosocial behavior (increasing outgroup prosocial behavior). In addition, overlapped with the concept of residential mobility, Cao et al. (2014) examined the effect of breadth (number of countries traveled) and depth (amount of time spent traveling) of foreign travel experiences on generalized trust. They found that the breadth but not the depth of foreign travel experiences positively predicted trust behavior. In a nutshell, the above discussion supports the claim that residential moves tend to increase generalized trust.

It is, however, important to highlight that many other research findings implicate a negative relationship between residential mobility and generalized trust. First, previous studies have shown that the high level of mobility is associated with various negative outcomes such as disintegrating communities and breakdown of social ties (e.g., Kopf, 1977; Lun et al., 2012). More importantly, residential mobility may trigger the sense of uncertainty. Moving is exciting but also anxiety-provoking and stressful (Oishi, 2010), because it shifts our key proximal settings, including home, neighborhood, and

educational/work contexts. With each move, people may be faced with entering a new environment and rebuilding social networks with new strangers, which might induce more uncertain feelings. In real life, people might be forced to move because of personal hardships (e.g., evictions, environmental dangers) which are associated with uncertainty. Therefore, high rate of mobility confers greater feeling of uncertainty. Yu et al. (2020) revealed that residential mobility increased the participant's sense of uncertainty, which in turns enhancing temporal discounting.

Furthermore, previous studies have shown that perceived social risks or increased uncertainty of the environment (such as lack of norms and order in the context) could decrease individual trust (Chi & Zhang, 2016; Stolle, 1998). Although results regarding the relationship between uncertainty orientation and trust are mixed (e.g., Eckel & Wilson, 2004; Evans & Krueger, 2014; Snijders & Keren, 1999), Vives and FeldmanHall (2018) found that tolerance to ambiguous (but not risk) uncertainty positively predicts prosocial behavior including trust. Therefore, residential mobility might increase sense of uncertainty when moving to a new environment, and the uncertainty feeling might shape the ways in which they form trust toward strangers. Summarizing the above discussion, residential mobility has many negative effects on individuals' interpersonal relationships and increases uncertainty, which suggests a negative relationship between residential moves and generalized trust.

Overall, given the existence of conflicting evidence, it is difficult to make a clear prediction regarding the relationship between residential mobility and generalized trust, and no research has directly explored this important question. The aim of the current study was to fill this gap. Six studies were conducted to determine whether and how residential mobility affects generalized trust. First, we tested whether there was a relationship between residential mobility and generalized trust at the individual (Study 1a & Study 1b) and societal levels (Study 1c), with some potential confounding variables controlled, such as age, gender, as well as objective or subjective socioeconomic status (Bailey et al., 2015; Li & Fung, 2013). Next, in order to investigate the causal link between residential mobility and generalized trust, we utilized the mobility priming paradigm to explore whether mobility priming affects subsequent generalized trust in strangers, and tentatively examine the potential underlying mechanism (i.e., uncertainty evoked by mobility) of the effect (Study 2a & Study 2b). Lastly, a field study (Study 3) was conducted to examine whether an upcoming (and the upcoming time) residential mobility in real-life affects generalized trust.

## **Studies 1a & 1b & 1c: Relationship between residential moves and generalized trust**

### *Study 1a*

*Participants.* The required sample size was pre-estimated by using the R *pwr* package (Champely, 2018), which showed that at least 84 participants were required to detect a significant ( $\alpha = .05$ ; power = 0.80) correlation with a medium effect size ( $r = .30$ ) (Cohen, 1992). Correspondingly, 120 Chinese participants were recruited from Ningbo University in China. Thirteen of them were excluded from data analyses because they

did not respond to all questionnaire questions, leaving the final data from 107 participants, with a mean age of 20.99 ( $SD = 3.25$ ) and 65 female participants. The majority of participants in our studies are Chinese Han ethnicity (e.g., 96% and 95% in Studies 1a & 1b). Below, for the sake of conciseness, we do not repeatedly report participants' ethnicity information. Graduate and undergraduate students were recruited in Studies 1a and 1b using the online survey platform and they completed the questionnaires on the platform. The Ethics Committee at the Department of Psychology in Ningbo University provided ethical approval for all studies.

### Measurements

**Socioeconomic status survey.** Because socioeconomic status (SES) was proved to be associated with generalized trust (Hamamura, 2012; Piff et al., 2010) and residential mobility (Metzger et al., 2015), we hence measured SES as a control variable in the current study. SES survey items contain questions to measure both objective (Goodman et al., 2001) and subjective SES (Adler et al., 2000). The objective SES measurement contains 11 items, which are used to assess the objective economic and social conditions of a given individual's family, including their parents' education level, occupational status, and economic resources (Piff et al., 2010). The *Cronbach's  $\alpha$*  of the objective SES survey in this study was 0.73. The subjective SES was measured by asking participants to report their perceived ranking position of their home and themselves in the society (Adler et al., 2000; Kraus & Keltner, 2009). Higher scores indicate higher objective and subjective SES.

**Personal history of residential moves survey.** This part mainly used the following question to measure residential moves (see Table S1): *Do you have any moving experience? Please try to recall and fill in the table below according to your actual situation.* Participants indicated how many times they had moved (and their moving reasons<sup>1</sup>) to a new city or town during each of the following intervals: (1) from birth to preschool, (2) elementary school, (3) from middle to high school, and (4) university/college (Oishi et al., 2012). The overall mobility score was quantified by summing the moving numbers across the four stages.

**Generalized trust measurement.** Six items specifically designed to measure generalized trust were extracted from Rotter's (1967) Interpersonal Trust Scale (ITS, Chinese version). The full 25-item ITS has been widely used in previous studies to measure interpersonal trust in both strangers and known others (e.g., Xin & Xin, 2017). Because we were interested in generalized trust specifically, only the six items which captured attitude toward those targets were selected. In these six items, participants indicated how true each of the statements (e.g., *In dealing with strangers one is better off to be cautious until they have proved they are trustworthy.*) were in describing them on a scale ranging from 1 (*totally agree*) to 5 (*totally disagree*). We used the sum of the six items as an index of generalized trust (*Cronbach's  $\alpha$*  = 0.49). The higher the sum score the higher generalized trust.

**Results and discussion.** The average of total moves was 1.09 ( $SD = 1.29$ ), ranging from 0 to 6. The distribution of residential moves was positively skewed (skewness = 1.35;

**Table 1.** Estimated coefficients from the linear regression analysis in Study 1a.

Predictor	$\beta$	SE	T	p
Intercept	18.23	1.84	9.93	<.001
<b>Residential mobility</b>	<b>-0.59</b>	<b>0.25</b>	<b>-2.40</b>	<b>.018</b>
Gender	-0.50	0.65	-0.77	.443
Objective SES	0.01	0.12	0.10	.924
Subjective SES	0.17	0.31	0.54	.588

kurtosis = 4.60). According to Curran et al. (1996), skewness greater than 2 and kurtosis greater than 7 indicate a severe deviation from normal distribution. We fitted a general linear model to delineate the relationship between residential moves and generalized trust after controlling other possible confounding factors (gender, objective and subjective SES). The result showed that residential mobility negatively predicted generalized trust,  $B = -0.59$ , 95% CI [-1.08, -0.10],  $t = -2.40$ ,  $p = .018$  (see Table 1).

In Study 1a, we found that there was a negative relationship between residential moves and generalized trust. It remains unknown whether the observed negative relationship generalizes to particularistic trust. Therefore, Study 1b was primarily conducted to explore the relationship between residential moves and generalized trust as well as particularistic trust. Another important goal of Study 1b was to conceptually replicate the negative relationship between residential moves and generalized trust, with generalized trust measured by a new scale.

### Study 1b

**Participants.** The power analysis procedure was the same as that in Study 1a. Finally, 121 Chinese students (mean age = 19.85;  $SD = 2.21$ ; 91 female participants) participated in Study 1b.

#### Measurements

**Socioeconomic status survey.** We measured subjective SES by asking participants to report their perceived ranking position of their families and themselves in the society on the 10-point MacArthur Scale of Subjective Social Status (Adler et al., 2000), because previous research has shown that subjective SES predicts generalized trust (Delhey & Newton, 2003; Lount & Pettit, 2012). The objective SES was not measured in Study 1b.

**Personal history of residential moves survey.** Residential moves were measured using the same items as those used in Study 1a.

**Particularistic and generalized trust measurement.** Particularistic trust was measured by the items adapted from the World Values Survey (<http://www.worldvaluessurvey.org>). Specifically, participants indicated “how much do you trust your parents/friend/neighbor/doctor” on a 11-point scale (0 = not trust at all; 10 = trust very much). Different from Study 1a wherein generalized trust was measured by ITS, Study 1b employed the Generalized Trust Scale (GTS), developed by Yamagishi and Yamagishi, (1994), to

**Table 2.** Estimated coefficients from the linear regression analysis in Study1b.

Predictor	$\beta$	SE	T	p
Intercept	5.81	0.85	6.83	<.001
<b>Residential mobility</b>	<b>-0.13</b>	<b>0.04</b>	<b>-3.21</b>	<b>.002</b>
Gender	0.48	0.19	2.51	.013
Age	0.002	0.04	-0.06	.952
subjective SES	0.05	0.06	0.80	.423

measure generalized trust. In this scale, participants rated their agreement to each of six statements (e.g., *Most people are trustworthy*) on a 9-point scale ( $1 = \text{totally disagree}$ ;  $9 = \text{totally agree}$ ). We used the average of agreement ratings to the 6 items as an index of generalized trust (*Cronbach's*  $\alpha = 0.88$ ). The higher score the higher the level of generalized trust.

**Results and discussion.** The average of total moves was 1.56 ( $SD = 1.97$ ), ranging from 0 to 8. The distribution of residential moves was positively skewed (skewness = 1.71, kurtosis = 5.66), but did not severely violate normal distribution. A linear regression analysis was run to quantify the effect of residential mobility on generalized and particularistic trust after controlling possible confounding factors (gender, age, and subjective SES). The results showed that residential mobility negatively predicted generalized trust,  $B = -0.13$ , 95% CI  $[-0.22, -0.05]$ ,  $t = -3.21$ ,  $p = .002$  (see Table 2), but not particularistic trust,  $B = -0.06$ , 95% CI  $[-0.17, 0.05]$ ,  $t = -1.14$ ,  $p = .258$ .

In Studies 1a and 1b, at the individual level, we found that there was a negative relationship between residential moves and generalized trust (but not particularistic trust). It remains unknown whether this negative relationship exists at the societal level. Therefore, Study 1c was conducted to explore the potential relationship between residential mobility and generalized trust at the societal level.

### Study 1c

**Participants.** The participants in Study 1c came from the 2012 Chinese General Social Survey (CGSS) dataset, which is publicly available at <http://cnsda.ruc.edu.cn/>. The CGSS is aimed to systematically monitor the changing relationship between social structure and quality of life in China. The total sample size of this dataset is 11,765, after excluding missing data (6459 participants, 55%) due to those participants did not complete all of the target measures, the final sample consisted of 5,306 participants, including 2,697 males and 2,609 females. Their average age was 54.74 ( $SD = 31.57$ ). In order to measure residential mobility at the societal level, we used the data from the Sixth National Population Census of the People's Republic of China, which is publicly available at <http://www.stats.gov.cn/tjsj/pcsj/rkpc/6rp/indexch.htm>.

**Measurements.** From the 2012 CGSS, we extracted the data regarding individuals' generalized trust and some other control variables (age, gender, objective and subjective

**Table 3.** Estimated coefficients from the linear regression analysis in study 1c.

Predictor	$\beta$	SE	T	p
Intercept	3.09	0.07	45.31	<.001
<b>Residential mobility</b>	<b>-0.26</b>	<b>0.11</b>	<b>-2.49</b>	<b>.013</b>
Gender	-0.05	0.03	-1.76	.078
Age	0.002	<0.001	6.04	<.001
subjective SES	0.03	0.01	3.05	.002
objective SES	0.07	0.02	3.20	.001
GDP	<0.001	<0.001	0.87	.386

status). In CGSS, generalized trust was measured by the following item: *In general, do you agree that the majority of people in this society can be trusted?* 1 = totally disagree, 2 = partially disagree, 3 = uncertain, 4 = partially agree, and 5 = totally agree. Subjective status was measured by the following item: *What level do you think you are currently at?* 1~10, the larger the number, the higher of level. Objective status was measured by the following item: *What is your family's financial status in your home-place?* 1 = far below average, 2 = below average, 3 = average, 4 = above average, and 5 = far above average. In addition, particularistic trust was measured by using the items "how much do you trust those people: relative/friend/neighbor/colleague/doctor/ journalist/teacher" on a 4-point scale (1 = trust very much; 4 = not trust at all). We used the sum of agreement ratings to the 7 items as an index of particularistic trust (Cronbach's  $\alpha = 0.74$ ). The higher score of this index the lower the level of particularistic trust.

From the Sixth National Population Census of the People's Republic of China, we obtained the data regarding residential mobility of each province in China. The rates of inflow and outflow were calculated respectively, which are the amount of people living locally but household is not local, and leaving the household registration area for more than half a year and the amount of people whose household is local but now working abroad as the proportion of the total population in the region (total 29 regions). The above two indicators are used as indicators of residential mobility in the region. Then, the sum of the above two indicators was employed as the indicator of residential mobility in the region at the societal level. In addition, in order to control the impact of GDP, we obtained the 2012 GDP data for each region from the National Bureau of Statistics as a control variable.

**Results and discussion.** The average of residential mobility was 0.22 ( $SD = 0.13$ ), ranging from 0.10 to 0.56. The distribution of residential mobility was positively skewed (skewness = 1.41, kurtosis = 3.85), but did not severely violate normal distribution. A linear regression analysis was run to quantify the effect of residential mobility on generalized and particularistic trust after controlling possible confounding factors (gender, age, subjective and objective SES, as well as GDP). The results showed that residential mobility at the societal level negatively predicted generalized trust,  $B = -0.26$ , 95% CI [-0.47, -0.06],  $t = -2.49$ ,  $p = .013$  (see Table 3),<sup>2</sup> but not particularistic trust,  $B = 0.40$ , 95% CI [-0.08, 0.87],  $t = 1.63$ ,  $p = .103$ .



In summary, at both individual and societal level, Study 1 found a negative relationship between residential moves and generalized trust (but not particularistic trust), after controlling for some potential confounding variables. The results provided initial support for our hypothesis that individuals who have moved more frequently show a lower level of generalized trust. However, a major limitation of Study 1 was that all analyses were correlational, which cannot be employed draw a conclusion about the directional effect between residential move and generalized trust. Thus, Studies 2a and 2b were conducted, in which an intervention (mobility priming) was implemented to delineate the causal link between residential mobility and generalized trust. In addition, a potential mechanism (perceived uncertainty) was explored by mediation analysis.

## **Studies 2a & 2b: Influence of residential mobility on generalized trust**

### *Study 2a*

*Participants.* We aimed to have 35 participants per cell, which provided 0.80 power to detect a medium to large effect size (Cohen's  $d = 0.67$ ). This cell size is also much larger than Simmons et al.'s (2011) recommendation. Participants were 70 Chinese students (mean age = 19.70,  $SD = 2.27$ ; 20 female participants), who were randomly assigned to the treatment (moving) and control (stable) conditions. Graduate and undergraduate students were recruited via campus poster and social APP in Studies 2a & 2b. Participants provided written consent and received monetary compensation.

### *Methods*

*Mobility manipulation (priming) task.* We utilized the situational imagination task, adapted from Oishi et al. (2013, 2012), to prime residential move. Participants were randomly assigned to one of the two conditions: residential mobility vs. residential stability. In the mobile condition, participants were asked to imagine that they were offered a new job that they had always wanted, but it required living in a different city every other year. In the stable condition, participants were asked to imagine getting their dream job, but it required them to remain in the same city for 10 years. For detailed instructions in the mobile and stable condition, see the *SI Appendix, Section 1*.

After completing the mobility priming task, participants reported their perceived instability and uncertainty, which were measured by two questions (*How much (Q. 1) instability/ (Q. 2) uncertainty do you perceive in such work and living conditions? Please indicate your response by typing a number ranging from 1 to 100; the larger the number, the higher the sense of instability/uncertainty*).

*Face trustworthiness evaluation.* After completing the priming task and reporting perceived instability and uncertainty, participants initiated a face trustworthiness evaluation task, adapted from Castle et al. (2012). The principal stimuli in this task were 30 faces, for which the trust worthiness was pre-assessed in a pilot study. Specifically, 30 participants rated their perceived trustworthiness of each face. Based on their ratings, we divided the faces into three (high/medium/low) trustworthiness bins, with 10 faces in each bin.

In the face trustworthiness evaluation task, 30 stranger faces were presented one-by-one in a random order, and participants were instructed to report their perceived trustworthiness of each face. Their trust ratings were recorded on a rating scale ranging from 1 (*extremely untrustworthy*) to 7 (*extremely trustworthy*). In the subsequent analysis, we utilized trustworthiness ratings of the three types of faces as an indicator of generalized trust. The face evaluation task was performed via the Python *Psychopy* package (Peirce, 2009).

**Results and discussion.** In the mobility manipulation (priming) task, participants in the moving (treatment) condition perceived greater instability ( $M = 62.97$ ,  $SD = 13.36$ ) than those in the stability (control) condition ( $M = 35.49$ ,  $SD = 19.32$ ), difference = 27.48, 95% CI = [19.56, 35.41],  $t(68) = 6.92$ ,  $p < .001$ ,  $d = 1.65$ , indicating successful manipulation of mobile perception. In addition, participants in the moving condition reported greater uncertainty ( $M = 64.40$ ,  $SD = 10.95$ ) than those in the stability condition ( $M = 33.43$ ,  $SD = 16.52$ ), difference = 30.97, 95% CI = [24.28, 37.66],  $t(68) = 9.24$ ,  $p < .001$ ,  $d = 2.21$ , indicating that residential move priming increases uncertainty feeling.

With regard to face trustworthiness evaluation, we conducted a 2 (condition: mobile vs. stable)  $\times$  3 (face trustworthy type: high vs. medium vs. low) mixed-design analysis of variance analysis (ANOVA). We found main effects of condition ( $F(1, 68) = 30.17$ ,  $p < .001$ ,  $\eta^2 = 0.09$ ) and face trustworthy type ( $F(1, 68) = 73.16$ ,  $p < 0.001$ ,  $\eta^2 = 0.45$ ), but no significant interaction,  $F(2, 136) = 0.62$ ,  $p = 0.539$ ,  $\eta^2 = 0.01$ . The main effect analysis showed that participants in the moving condition rated the faces less trustworthy ( $M = 2.49$ ,  $SD = 0.32$ ) than those in the stable condition ( $M = 3.02$ ,  $SD = 0.46$ ), difference =  $-0.53$ , 95% CI = [ $-0.72$ ,  $-0.34$ ],  $t(68) = -5.51$ ,  $p < 0.001$ ,  $d = -1.31$ , indicating that residential mobility priming influenced trustworthiness evaluation across different types of stranger faces to a similar extent (see Figure S1).

Next, we tested the mediation effect of uncertainty perception. The mediation analysis was conducted using a bias-corrected bootstrapping method, with the number of bootstrap resampling set to 5,000, as recommended by Preacher and Hayes (2004). We examined the mediation effect of the mediator using the R *psych* package (Revelle, 2020). The result of the effect included 0 (indirect effect =  $-0.12$ , 95%CI [ $-0.35$ ,  $0.09$ ]), indicating that the mediating effect of uncertainty perception was not statistically significant.

## Study2b

Study 2a clearly showed that mobility priming promoted uncertainty feelings and reduced perceived trustworthiness of stranger faces, but the mediation effect was not fully supported. Study 2b was conducted to conceptually replicate these findings in a new trust task (the Trust Game), adapted from Berg et al. (1995). In addition, Study 2b further examined the mediating role of perceived uncertainty in the effect of residential mobility on generalized trust.

**Participants.** The power analysis procedure was the same as that in Study 2a. Participants were 70 college students (mean age = 20.54,  $SD = 1.89$ ; 40 female participants), who were randomly assigned to the mobility and control conditions.

### Methods

**Socioeconomic status survey.** Same as that in Study 1.

**Mobility manipulation task.** Same as that in Study 2a.

**Trust game.** Study 2b employed the trust game task to measure generalized trust. In this task, participants played a role of “investor” and were told to invest in some stranger players (trustees). The task consisted of five rounds. In each round, participants were provided with a certain amount of money, and decided how much money they would like to invest in another player (stranger). The invested money was trebled upon transferring to the other player. The trustees then decided whether to return the money to the participants. If the trustees chose to return, participants would get half of the transferred money. If the trustees chose not to return, participants would lose their investment (Berg et al., 1995). At the end of this game, participants received a certain amount of remuneration based on their investment. The investment task was performed via the E-Prime software (Version 2.0, Psychology Software Tools, Inc., Pittsburgh, PA).

At the beginning of the task, participants were informed that in each round the trustee was a different adult randomly selected from a large and representative subject pool ( $N = 100$ ). The instructions said that the experimenter sampled and interviewed those adults before this experiment and asked them to imagine taking part in a single round of trust game. Participants were told that those adults would chose send back half of the trebled investment or keep all the investment if being entrusted by a stranger. Participants were also told that the experimenter recorded all these adults’ choices and the computer would randomly select one of these choices as response to his/her investment in each round. In each round, a fixation picture presented for 1000 ms to mark interstimulus interval (ISI). Then, the randomly selected trustee which is anonymous and the total amount of investment money (10 or 15 RMB) were displayed on the screen. Afterward, a dialog box appeared on the screen (“Please enter the amount of money you would like to invest”), and participants entered the amount of money they would like to invest. The total amount of money returned by the “trustees” were shown to the participants at the very end of the task to avoid any potential effects of feedback on their investment intention.

**Results and discussion.** Consistent with that in Study 2a, participants in the mobile condition reported greater instability ( $M = 64.20$ ,  $SD = 10.33$ ) than those in the stability condition ( $M = 24.77$ ,  $SD = 10.46$ ), difference = 39.43, 95% CI = [34.47, 44.39],  $t(68) = 15.85$ ,  $p < .001$ ,  $d = 3.79$ . The same result pattern was also found in uncertainty perception, with greater uncertainty reported in the mobile condition ( $M = 69.88$ ,  $SD = 11.42$ ) than in the stability condition ( $M = 31.28$ ,  $SD = 13.88$ ), difference = 38.60, 95% CI = [32.54, 44.66],  $t(68) = 12.70$ ,  $p < .001$ ,  $d = 3.04$ .

Critically, in the trust game task, participants invested less money to trustees in the mobile condition ( $M = 26.65$ ,  $SD = 5.79$ , out of 60) than those in the stable condition ( $M$

= 33.40,  $SD = 5.06$ ), difference =  $-6.75$ , 95% CI =  $[-9.34, -4.15]$ ,  $t(68) = -5.19$ ,  $p < .001$ ,  $d = -1.24$  (see Figure S2). The difference in investments between groups was still significant after including SES as a covariate in an ANOVA,  $F(1, 68) = 26.29$ ,  $p < .001$ ,  $\eta^2 = 0.27$ . Overall, these results indicate that increasing mobility perception enhances uncertainty feeling and reduces trust investments to general strangers.

Next, we tested the mediation effect of uncertainty perception. The mediation analysis procedure was the same as that in Study 2a. The 95% of the mediation effect did not include 0 (indirect effect =  $-0.36$ , 95%CI  $[-0.64, -0.14]$ ), indicating that the mediating effect of uncertainty perception was significant.

### **Study 3: A field study on the influence of residential mobility on generalized trust**

Studies 2a and 2b demonstrated that residential mobility decreased generalized trust and increased uncertainty feeling. However, it is still uncertain whether these findings can generalize to a real-life situation. Study 3 (a field study) was conducted to evaluate the generalizability of the research findings to the real-life contexts. In addition, previous longitudinal studies showed that residential moves during middle childhood and early adolescence impede children's cognitive skills (Coley & Kull, 2016) and friendship quality (Vernberg et al., 2006), but these effects fade with time. This implies that the effects of residential mobility on psychology and behavior may vary at different stages. Therefore, Study 3 also tentatively explores whether the effects of residential moves on generalized trust are stronger as the time of the moves approaches by measuring participants' generalized trust at different timepoints (a week vs. a day before moving).

#### *Experiment design and participants*

Study 3 was a quasi-experiment, wherein participants were freshmen from four classes in Ningbo university. It involved a 2 (dormitory move: yes vs. no)  $\times$  2 (measurement administration time: a week vs. a day before moving) between-subjects design. The aim of setting the administration time condition was to examine whether the upcoming moving time would moderate the effect. Participants were assigned to the moving and stable conditions according to whether they would move their dormitory. Specifically, the freshmen studied at the same college in the first year. At the end of the academic year, they chose their preferred majors. Based on their selected majors, some participants were required to move their dormitory (moving to a new college) or not (staying at the original college).

The trust game task (similar to that in Study 2b) was administered at two stages. The first was implemented a week before dormitory moving, while the second was implemented 1 day before dormitory moving. Participants at the first stage (1 week before moving occurrence) were 70 college students, but three of them were excluded from data analyses for incomplete data, leaving the final data from 67 students (mean age = 19.40,  $SD = 1.33$ ; 48 females), with 34 in the moving condition and the other 33 in the stable condition. Participants at the second stage (1 day before moving occurrence) were 67

new college students (mean age = 19.06,  $SD = 1.30$ ; 50 females), with 34 in the moving condition and the other 33 in the stable condition.

## Methods

The experiment questionnaires were electronically sent to participants through a network platform.

**Demographic scale.** Participants' demographic information (gender, age, and other basic information) were collected first.

**Dormitory move survey.** This part was used to collect dormitory relocation information, which contained four items. The first question checked the mobile status (*Will you move dormitories in the near future?*). The second question measured feelings and opinions about dormitory moving (*How do you feel about moving dormitories?*). The third (*Do you think your recent life is stable?*) and fourth (*Do you think your recent life is uncertain?*) questions measured participants' subjective perceptions about their recent life status. Participants responded to these two questions on a scale ranging from 1 (*extremely stable/certain*) to 100 (*extremely instable/uncertain*). All participants answered the first, third, and fourth questions, but only the students who would move to a new college were required to answer the second question.

**Trust game.** This part was a questionnaire version of the one-shot trust game. The procedure of the task was similar to that in Study 2 except that the total investment amount was changed to 100 RMB.

## Results and discussion

Uncertainty ratings were entered into a 2 (dormitory move: yes vs. no)  $\times$  2 (measurement administration time: a week vs. a day before dormitory moving) between-subjects ANOVA. The main effect of dormitory move was significant,  $F(1, 130) = 70.08, p < .001, \eta^2 = 0.35$ . Participants who would recently move dormitories experienced greater uncertainty ( $M = 57.20, SD = 19.69$ ) than those who would not move ( $M = 31.18, SD = 15.94$ ), difference = 26.02, 95% CI = [19.89, 32.16],  $t(132) = 8.39, p < .001, d = 1.45$ . There was no main effect of measurement administration time,  $F(1, 130) = 0.02, p = .893, \eta^2 = 0.0001$ , and no significant interaction between the two factors,  $F(1, 130) = 1.32, p = .252, \eta^2 = 0.01$ .

The invested money in the trust game was also entered into a 2 (dormitory move: yes vs. no)  $\times$  2 (measurement administration time: a week vs. a day before moving) between-subjects ANOVA. The main effect of dormitory move was significant,  $F(1, 130) = 22.18, p < .001, \eta^2 = 0.15$ . Participants who would recently move dormitories invested less money ( $M = 35.67, SD = 16.75$ ) to strangers than those who would not move ( $M = 49.71, SD = 17.78$ ), difference = -14.04, 95% CI = [-19.94, -8.13],  $t(132) = -4.70, p < .001, d = 0.81$ . The main effect of measurement administration time was non-significant,  $F(1, 130) = 1.36, p = .245, \eta^2 = 0.01$ , and the interaction between the

two factors was also non-significant,  $F(1, 130) = 1.01, p = .317, \eta^2 = 0.01$  (see Figure S3). Next, we tested the mediation effect of uncertainty perception. The mediation analysis procedure was the same as in Study 2a. The result of the effect did not include 0 (indirect effect =  $-0.25, 95\%CI [-0.37, -0.13]$ ), indicating that the mediating effect of uncertainty perception was significant.

In order to quantify the overall effect size of the impact of residential mobility on generalized trust, we conducted a within-study meta-analysis. The results showed that residential mobility exerted significant influences on generalized trust,  $Z = 5.08, p < 0.001$ , and the overall effect size was  $0.84, 95\% CI = [0.47, 1.51]$  (see Figure S4). According to Cohen's (1992) standard, the effect of residential mobility on generalized trust was large (*SI Appendix, Section 2.2*).

## General discussion

The purpose of the current study was to examine whether and how residential mobility affects generalized trust. Six studies were conducted to explore these two questions. In Studies 1a, 1b, and 1c, we found a negative relationship between residential mobility and generalized trust at the individual and societal levels. In Studies 2a and 2b, we found that participants who were randomly assigned to the mobility condition perceived stranger faces as being less trustworthy and invested less money to them in the trust game than participants in the stability condition. Finally, in Study 3, a field experiment suggested that, by comparison with students who would not move dormitory (staying at the same college), those who would move dormitory (moving to a new college) invested less money to strangers in the trust game.

Taken together, combining correlational and behavioral experimental methods, we documented a negative relationship between personal history of residential moves and generalized trust, and observed that residential mobility priming or upcoming residential mobility significantly reduced generalized trust in strangers. In addition, the association between residential mobility and generalized trust was mediated by the uncertainty evoked by mobility (in Studies 2b & Study 3). It is noteworthy that participants in the current study came from a relatively low residential/relational mobility country (similar to Japan). Our results that personal history of residential moves is negatively related to generalized trust were inconsistent with those from previous cross-cultural studies, which found that people in a high relational/residential mobility country (e.g., US) tend to have higher generalized trust than those in a low relational/residential mobility country (e.g., Japan) (Yuki et al., 2007). Researchers proposed that in a high relational/residential society, people can easily settle problematic relationships and build new relationships with strangers. Thus, maintaining a default tendency to trust strangers is particularly adaptive in such societies. In contrast, in less relational/residential cultures, individuals do not encounter strangers as frequently as they do in highly mobile cultures, and hence they may tend to avoid transactions with unrelated and potentially untrustworthy outsiders (Yamagishi et al., 1998).

Although the main findings derived from the current study were inconsistent with those from cross-cultural studies, they were consistent with those from many residential mobility studies. For instance, Oishi et al. (2007a) found that residential mobility is

associated with increased centrality of the personal self and decreased centrality of the collective self. Namely, the more residential moves a given individual experiences, the more central the personal self becomes and the less central the collective self becomes to the self-concept. These findings imply that residential mobility decreases interdependence or cooperation with others. In addition, residential mobility could increase our uncertainty when moving to a new environment. A recent study showed that residential mobility could enhance temporal discounting by increasing sense of uncertainty (Yu et al., 2020). Our mediation effect results also indicated that residential mobility decreased generalized trust via the feeling of uncertainty induced by mobility. Therefore, residential mobility might undermine our trust toward strangers though increasing perceived uncertainty.

An alternative explanation for the fact that residential mobility reduces generalized trust is the lack of reputational constraints in a fast-mobile society. The tendencies to monitor, spread, and manage each other's reputation help explain the abundance of human cooperation with unrelated strangers (Ge et al., 2019; Wu et al., 2016). However, when we move from one place to another, it will cause the interruption of the original social network, the separation of the original interpersonal relationship, and the alienation of the original emotional connection. These interruptions make the reputation mechanism established in the acquaintance society no longer work. In a fast-moving society, people can move freely and interact with different strangers. This interaction is often one-shot, anonymous, and loose. Under this circumstance, the role of the reputation which is an important mechanism for forming trust or prosocial behavior will be greatly reduced. This was consistent with the results that reputational considerations will be more salient in small communities, which are also more stable as residents have lived there for a much longer time, and thus have a greater opportunity to get to know each other (Ge et al., 2019). However, this potential mechanism needs to be tested by future research.

It is important to acknowledge several limitations of the current research. First, in Studies 1a and 1b, although participants were asked to list their moving reasons at each stage, we could not quantify their roles in the effect of residential mobility on generalized trust, because moving causes at each stage were different. Second, our results were derived from Chinese people, thus the generalizability of the research findings to other populations needs further investigation. Individuals' generalized trust are inevitably shaped by institutions, economic systems, and local cultures. It is plausible that the effect of moving is different in a tight society with weak trust in the legal system, as opposed to that in a country where moving is common, normative, and where people generally trust the rule of law (Gächter & Schulz, 2016; Thomson et al., 2018). Future studies should examine the results in other countries and populations. In addition, it is noteworthy that Study 1c is different from other studies, which explored the relationship between residential mobility and generalized trust at the societal level. However, residential mobility could have different impacts at the individual level and the societal level. The interpretation of this result requires caution. Lastly, in the current study, the effects of residential mobility were specific to generalized trust (trust in strangers) but not particularistic trust (trust in known others). These results suggested that residential mobility (at least in low-mobility countries) might have stronger consequences on

establishing new relationships than it does for existing ones. Understanding the distinctive influences of mobility on one type of trust but not the other can be a focus of future research.


The current research brings some important implications for future research on residential mobility and trust as well as the development of housing policies. On the one hand, the majority of previous studies on trust have been conducted to investigate the determinants of generalized trust in terms of individual factors (e.g. age, genetic influences, personality traits, social class). This work highlights the association between residential mobility and generalized trust, deepening our understanding of the formation/development mechanisms of trust from a socio-ecological perspective. This suggests that future research should consider the profound impacts of socio-ecological factors (e.g., residential mobility, population density, and political systems) on human social psychology (Georgas et al., 2004). On the other hand, as residential mobility continues to increase worldwide, especially in developing countries, countless people move to a new area, place, or region to pursue better education, job, and quality of life. Although it brings many advantages, our results showed that residential mobility might undermine our trust in strangers through increasing perceived uncertainty. This reminds us that in large-scale societies with high residential mobility, government should adopt some appropriate measures (e.g., providing a solid and sound housing purchase and rental policy) to help people cope with perceived uncertainty, accordingly alleviating the negative impact of residential mobility on generalized trust. In future, in order to provide a more scientific reference for policy-making, an interdisciplinary investigation is required to detect various factors (e.g., personality, characteristics of mobility) contributing to the effect and its underlying mechanisms.

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## **Open research statement**

As part of IARR's encouragement of open research practices, the authors have provided the following information: This research was not pre-registered.

The data used in the research are available. The data can be obtained at: <https://osf.io/2nyq5/>. The materials used in the research are available. The materials can be obtained by emailing: [yuanbopsy@gmail.com](mailto:yuanbopsy@gmail.com).

## **Supplemental material**

Supplemental material for this article is available online.



## Notes

1. The aim we asked participants to list their moving reasons at each stage was to stimulate them to more deeply retrieve their moving history and more accurately report moving times. Since moving causes at each stage are different, it is difficult to quantify their roles in the effects of residential mobility on generalized trust.
2. We also estimated the effects of residential mobility on generalized trust using mixed-effects linear regression. See detailed information in *SI Appendix, section 2.1*.

## References

- Adam, E. K. (2004). Beyond quality: Parental and residential stability and children's adjustment. *Current Directions in Psychological Science*, *13*(5), 210–213.
- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy, White women. *Health Psychology*, *19*(6), 586–592. <https://doi.org/10.1037/0278-6133.19.6.586>
- Bailey, P. E., Slessor, G., Rieger, M., Rendell, P. G., Moustafa, A. A., & Ruffman, T. (2015). Trust and trustworthiness in young and older adults. *Psychology and Aging*, *30*(4), 977–986. <https://doi.org/10.1037/a0039736>
- Berg, J., Dickhaut, J., & McCabe, K. (1995). Trust, reciprocity, and social history. *Games and Economic Behavior*, *10*(1), 122–142. <https://doi.org/10.1006/game.1995.1027>
- Cao, J., Galinsky, A. D., & Maddux, W. W. (2014). Does travel broaden the mind? Breadth of foreign experiences increases generalized trust. *Social Psychological and Personality Science*, *5*(5), 517–525. <https://doi.org/10.1177/1948550613514456>
- Castle, E., Eisenberger, N. I., Seeman, T. E., Moons, W. G., Boggero, I. A., Grinblatt, M. S., & Taylor, S. E. (2012). Neural and behavioral bases of age differences in perceptions of trust. *Proceedings of the National Academy of Sciences*, *109*(51), 20848–20852. <https://doi.org/10.1073/pnas.1218518109>
- Champely, S. (2018). *PWR: Basic functions for power analysis*. <https://CRAN.R-project.org/package=pwr>
- Chi, L., & Zhang, C. (2016). Order cues effect on trust. *Studies of Psychology and Behavior*, *14*(4), 517–522.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*(1), 155–159. <https://doi.org/10.1037/0033-2909.112.1.155>
- Coley, R. L., & Kull, M. (2016). Cumulative, timing-specific, and interactive models of residential mobility and children's cognitive and psychosocial skills. *Child Development*, *87*(4), 1204–1220. <https://doi.org/10.1111/cdev.12535>
- Curran, P. J., West, S. G., & Finch, J. F. (1996). The Robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, *1*(1), 16–29. <https://doi.org/10.1037/1082-989X.1.1.16>
- Delhey, J., & Newton, K. (2003). Who trusts? The origins of social trust in seven societies. *European Societies*, *5*(2), 93–137. <https://doi.org/10.1080/1461669032000072256>
- Eckel, C. C., & Wilson, R. K. (2004). Is trust a risky decision? *Journal of Economic Behavior & Organization*, *55*(4), 447–465. <https://doi.org/10.1016/j.jebo.2003.11.003>

- Evans, A. M., & Krueger, J. I. (2014). Outcomes and expectations in dilemmas of trust. *Judgment and Decision Making*, 9(2), 90–103.
- Fukuyama, F. (1995). *Trust: The social virtues and the creation of prosperity*. Free Press Paperbacks.
- Gächter, S., & Schulz, J. F. (2016). Intrinsic honesty and the prevalence of rule violations across societies. *Nature*, 531(7595), 496–499. <https://doi.org/10.1038/nature17160>
- Ge, E., Chen, Y., Wu, J., & Mace, R. (2019). Large-scale cooperation driven by reputation, not fear of divine punishment. *Royal Society Open Science*, 6(8), 190991. <https://doi.org/10.1098/rsos.190991>
- Gelfand, M. J., Chiu, C., & Hong, Y. (2015). *Handbook of advances in culture and psychology* (Vol. 5). Oxford University Press.
- Georgas, J., van de Vijver, F. J. R., & Berry, J. W. (2004). The ecocultural framework, ecosocial indices, and psychological variables in cross-cultural research. *Journal of Cross-Cultural Psychology*, 35(1), 74–96. <https://doi.org/10.1177/0022022103260459>
- Goodman, E., Adler, N. E., Kawachi, I., Frazier, A. L., Huang, B., & Colditz, G. A. (2001). Adolescents' perceptions of social status: Development and evaluation of a new indicator. *Pediatrics*, 108(2), e31–e31. <https://doi.org/10.1542/peds.108.2.e31>
- Hamamura, T. (2012). Social class predicts generalized trust but only in wealthy societies. *Journal of Cross-Cultural Psychology*, 43(3), 498–509. <https://doi.org/10.1177/0022022111399649>
- International Organization for Migration. (2015). *World migration report 2015. Migrants and cities: New partnerships to manage mobility*. International Organization for Migration Geneva.
- Kopf, E. (1977). Untarnishing the dream: Mobility, opportunity, and order in modern America. *Journal of Social History*, 11(2), 206–227. <https://doi.org/10.1353/jsh/11.2.206>
- Kraus, M. W., & Keltner, D. (2009). Signs of socioeconomic status: A thin-slicing approach. *Psychological Science*, 20(1), 99–106. <https://doi.org/10.1111/j.1467-9280.2008.02251.x>
- Li, T., & Fung, H. H. (2013). Age differences in trust: An investigation across 38 countries. *The Journals of Gerontology: Series B*, 68(3), 347–355. <https://doi.org/10.1093/geronb/gbs072>
- Li, W.-Q., Li, L. M. W., & Li, M. (2019). Residential mobility reduces ingroup favouritism in prosocial behaviour. *Asian Journal of Social Psychology*, 22(1), 3–17. <https://doi.org/10.1111/ajsp.12338>
- Lount, R. B., & Pettit, N. C. (2012). The social context of trust: The role of status. *Organizational Behavior and Human Decision Processes*, 117(1), 15–23. <https://doi.org/10.1016/j.obhdp.2011.07.005>
- Lun, J., Oishi, S., & Tenney, E. R. (2012). Residential mobility moderates preferences for egalitarian versus loyal helpers. *Journal of Experimental Social Psychology*, 48(1), 291–297. <https://doi.org/10.1016/j.jesp.2011.09.002>
- Metzger, M. W., Fowler, P. J., Anderson, C. L., & Lindsay, C. A. (2015). Residential mobility during adolescence: Do even “upward” moves predict dropout risk? *Social Science Research*, 53, 218–230. <https://doi.org/10.1016/j.ssresearch.2015.05.004>
- Oishi, S. (2010). The Psychology of Residential Mobility: Implications for the Self, Social Relationships, and Well-Being. *Perspectives on Psychological Science*, 5(1), 5–21. <https://doi.org/10.1177/1745691609356781>
- Oishi, S., Kesebir, S., Miao, F. F., Tallhelm, T., Endo, Y., Uchida, Y., Shibana, Y., & Norasakunkit, V. (2013). Residential mobility increases motivation to expand social network: But

- why? *Journal of Experimental Social Psychology*, 49(2), 217–223. <https://doi.org/10.1016/j.jesp.2012.10.008>
- Oishi, S., Lun, J., & Sherman, G. D. (2007a). Residential mobility, self-concept, and positive affect in social interactions. *Journal of Personality and Social Psychology*, 93(1), 131–141. <https://doi.org/10.1037/0022-3514.93.1.131>
- Oishi, S., Miao, F. F., Koo, M., Kisling, J., & Ratliff, K. A. (2012). Residential mobility breeds familiarity-seeking. *Journal of Personality and Social Psychology*, 102(1), 149–162. <https://doi.org/10.1037/a0024949>
- Oishi, S., Rothman, A. J., Snyder, M., Su, J., Zehm, K., Hertel, A. W., Gonzales, M. H., & Sherman, G. D. (2007b). The socioecological model of procommunity action: The benefits of residential stability. *Journal of Personality and Social Psychology*, 93(5), 831–844. <https://doi.org/10.1037/0022-3514.93.5.831>
- Oishi, S., & Schimmack, U. (2010). Residential mobility, well-being, and mortality. *Journal of Personality and Social Psychology*, 98(6), 980–994. <https://doi.org/10.1037/a0019389>
- Peirce, J. W. (2009). Generating stimuli for neuroscience using psychoPy. *Frontiers in Neuroinformatics*, 2. <https://doi.org/10.3389/neuro.11.010.2008>
- Piff, P. K., Kraus, M. W., Côté, S., Cheng, B. H., & Keltner, D. (2010). Having less, giving more: The influence of social class on prosocial behavior. *Journal of Personality and Social Psychology*, 99(5), 771–784. <https://doi.org/10.1037/a0020092>
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods*, 36(4), 717–731. <https://doi.org/10.3758/BF03206553>
- Revelle, W. (2020). *PSYCH: Procedures for psychological, psychometric, and personality research* (1.9.12.31) [Computer software]. <https://CRAN.R-project.org/package=psych>
- Rotter, J. B. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality*, 35(4), 651–665. <https://doi.org/10.1111/j.1467-6494.1967.tb01454.x>
- Rotter, J. B. (1971). Generalized expectancies for interpersonal trust. *American Psychologist*, 26(5), 443–452. <https://doi.org/10.1037/h0031464>
- Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of Management Review*, 23(3), 393–404. <https://doi.org/10.5465/amr.1998.926617>
- Rozin, P., Kabnick, K., Pete, E., Fischler, C., & Shields, C. (2003). The ecology of eating: Smaller portion sizes in France than in the United States help explain the French paradox. *Psychological Science*, 14(5), 450–454.
- Schug, J., Yuki, M., & Maddux, W. (2010). Relational mobility explains between- and within-culture differences in self-disclosure to close friends. *Psychological Science*, 21(10), 1471–1478. <https://doi.org/10.1177/0956797610382786>
- Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2011). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science*, 22(11), 1359–1366. <https://doi.org/10.1177/0956797611417632>
- Snijders, C., & Keren, G. (1999). Determinants of trust. In D.V. Budescu, I. Erev, & R. Zwick (Eds.), *Games and human behavior: Essays in honor of Amnon Rapoport* (pp. 355–385). Lawrence Erlbaum Associates Publishers.
- Stolle, D. (1998). Bowling together, bowling alone: The development of generalized trust in voluntary associations. *Political Psychology*, 497–525. <https://doi.org/10.2307/3792175>

- Thomson, R., Yuki, M., Talhelm, T., Schug, J., Kito, M., Ayanian, A. H., Becker, J. C., Becker, M., Chiu, C., & Choi, H.-S. (2018). Relational mobility predicts social behaviors in 39 countries and is tied to historical farming and threat. *Proceedings of the National Academy of Sciences*, *115*(29), 7521–7526. <https://doi.org/10.1073/pnas.1713191115>
- Uslaner, E. M. (2002). *The moral foundations of trust*. Cambridge University Press.
- Van Lange, P. A. M., Rockenbach, B., & Yamagishi, T. (2017). *Trust in social dilemmas*. Oxford University Press.
- Vernberg, E. M., Greenhoot, A. F., & Biggs, B. K. (2006). Intercommunity relocation and adolescent friendships: Who struggles and why? *Journal of Consulting and Clinical Psychology*, *74*(3), 511–523. <https://doi.org/10.1037/0022-006X.74.3.511>
- Vives, M.-L., & FeldmanHall, O. (2018). Tolerance to ambiguous uncertainty predicts prosocial behavior. *Nature Communications*, *9*(1), 2156. <https://doi.org/10.1038/s41467-018-04631-9>
- Wu, J., Balliet, D., & Van Lange, P. A. M. (2016). Reputation, gossip, and human cooperation. *Social and Personality Psychology Compass*, *10*(6), 350–364. <https://doi.org/10.1111/spc3.12255>
- Xin, Z., & Xin, S. (2017). Marketization process predicts trust decline in China. *Journal of Economic Psychology*, *62*, 120–129. <https://doi.org/10.1016/j.joep.2017.07.001>
- Yamagishi, T., Cook, K. S., & Watabe, M. (1998). Uncertainty, trust, and commitment formation in the United States and Japan. *American Journal of Sociology*, *104*(1), 165–194. <https://doi.org/10.1086/210005>
- Yamagishi, T., & Yamagishi, M. (1994). Trust and commitment in the United States and Japan. *Motivation and Emotion*, *18*(2), 129–166. <https://doi.org/10.1007/BF02249397>
- Yu, M., Wu, X., Huang, L., & Luo, S. (2020). Residential mobility mindset enhances temporal discounting in the loss framework. *Physiology & Behavior*, *225*, 113107. <https://doi.org/10.1016/j.physbeh.2020.113107>
- Yuki, M., & Schug, J. (2012). Relational mobility: A socioecological approach to personal relationships. In O. Gillath, G. Adams, & A. Kunkel (Eds.), *Relationship science: Integrating evolutionary, neuroscience, and sociocultural approaches* (pp. 137–151). American Psychological Association. <http://content.apa.org/books/13489-007>
- Yuki, M., Schug, J., Horikawa, H., Takemura, K., Sato, K., Yokota, K., & Kamaya, K. (2007). Development of a scale to measure perceptions of relational mobility in society. *Working Paper*, Hokkaido University.