令和３年度　博士論文

HOW DOES SOCIAL ECOLOGY SHAPE PEOPLE'S TENDENCY TO CONCEAL PROSOCIAL BEHAVIORS? THE ROLE OF RELATIONAL MOBILITY

社会生態はどのように向社会的行動の秘匿傾向を形成するのか？関係流動性の役割に関する検討

by

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ABSTRACT

In this research, I investigated how characteristics of a social environment influence individuals' active concealment of prosocial behaviors. I hypothesized that lower relational mobility would be associated with a stronger expectation of negative reputation and a weaker expectation of positive reputation following publicized prosocial behaviors, which, in turn, would be related to a higher tendency to conceal prosocial behaviors among individuals. I conducted five studies to test the hypothesis, and the findings supported my hypothesis in general. Studies 1 and 2 were within-country studies. In Study 1, 269 Chinese participants read a hypothetical disaster donation scenario and indicated whether they would choose to conceal their donations. The results showed that lower perceived relational mobility was associated with a less positive (more negative) expected reputation following publicized prosocial behaviors, which, in turn, predicted a higher tendency to conceal prosocial behaviors. In Study 2, I extended Study 1 by differentiating positive versus negative expected reputation. In this study, 281 Chinese participants read a hypothetical ingroup donation scenario and indicated the likelihood of concealing the donation. I found that negative expected reputation, but not positive expected reputation, significantly mediated the association between relational mobility and individuals' tendency to conceal prosocial behaviors. Study 3 was a cross-cultural study. In this study, I recruited 237 Japanese participants and 241 American participants to complete similar measures as in Study 2, except that I added the measure of concealing donation in real life to test the ecological validity of the findings. Regarding concealing donation in the hypothetical scenario, the results showed that the lower relational mobility in Japan compared to the United States was associated with the expectation of a less positive and more negative reputation following publicized donation, which, in turn, predicted a higher likelihood of concealing donation. Regarding concealing donation in real life, the results revealed that Japanese participants

were more likely than American participants to donate anonymously and less likely to tell others about their donations in real life. Moreover, the cultural difference of whether telling others about one's donation in real life was explained by lower relational mobility in Japan. Study 4 and Study 5 were experiments in which I tested the causal relation between relational mobility and individuals' tendency to conceal prosocial behaviors. In Study 4, I manipulated people's perceptions of relational mobility using a popular manipulation paradigm, which emphasized the instability (stability) of interpersonal relationships in high (low) relational mobility conditions. 243 American participants finished the manipulation task and completed a similar measure of concealing prosocial behaviors as in Study 1. However, the results did not support the hypothesis. In Study 5, I used new manipulation materials for people's perceptions of relational mobility, which emphasized high (low) relational choice in high (low) relational mobility conditions. 192 American participants completed the manipulation task and then finished the measure of concealing prosocial behaviors in a hypothetical donation scenario. I found that the manipulation of low (vs. high) relational mobility induced a more negative expected reputation following publicized prosocial behaviors, which, in turn, increased individuals' likelihood of concealing prosocial behaviors. The findings of this research highlight that social ecology plays an important role in shaping individuals' active concealment of prosociality. Moreover, the findings suggest that anonymous prosocial acts may not always be driven by altruistic motivations but may also arise from egocentric motivations to avoid bad reputations.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

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CHAPTER 1: INTRODUCTION

1.1 Observability and Prosocial Behaviors

1.1.1 Previous Theories on Human Prosocial Behaviors

The puzzle of human prosocial behaviors towards non-kin others—acts that benefit non-kin others at one's own expense—has been investigated extensively by researchers from different fields, including sociology (e.g., Simpson & Willer, 2015), biology (e.g., Sober & Wilson, 1999), psychology (e.g., Batson 2011), and economics (e.g., Gintis et al., 2003). There are several influential theories on human prosocial behaviors, including the reciprocal altruism theory (Trivers, 1971), the indirect reciprocity theory (Nowak & Sigmund, 1998), the altruistic punishment theory (Fehr & Gächter, 2002), and the costly signaling theory (Gintis et al., 2001; Spence, 1973).

1.1.1.1 Reciprocal Altruism Theory

The reciprocal altruism theory is first established by Trivers (1971). This theory maintains that there is a natural selection of reciprocal altruism, which is also called "tit-for-tat altruism." As the saying goes, "I'll scratch your back if you scratch mine." Based on this theory, the altruistic behavior is adaptive for the helper's survival because the recipient of help will reciprocate the help in the future. For example, on a rainy day, person A shared their umbrella with their colleague B who had left their umbrella at home. On another rainy day later, colleague B noticed that person A had forgotten to bring their umbrella. Then, colleague B reciprocated the earlier help from person A and shared their umbrella with person A.

1.1.1.2 Indirect Reciprocity Theory

The indirect reciprocity theory is proposed by Nowak and Sigmund (1998). This theory can be captured by the principle, "I won't scratch your back if you won't scratch their backs." According to indirect reciprocity theory, natural selection favors cooperation with those who have helped others. A prosocial act will build a positive reputation for the helper, and the helper would be reciprocated by others who have known about the helper's good deed. Indirect reciprocity theory is known as a reputation-based account of human prosocial behaviors, which "involves reputation and status, and results in everyone in the group continually being assessed and reassessed" (Alexander, 1987).

1.1.1.3 Altruistic Punishment Theory

The altruistic punishment theory is established by Fehr and Gächter (2002). This theory aims at explaining the prosocial behaviors with strangers when the reputation benefit is small or absent. This theory maintains that a person's selfish acts predispose other people to feel negative emotions, which lead to altruistic punishment towards the selfish person, though the punishment itself will be costly for the punishers. Thus, according to this theory, people conduct prosocial acts towards strangers because if they do not, others will exert altruistic punishment towards them.

1.1.1.4 Costly Signaling Theory

The costly signaling theory is first elaborated by Spence (1973). This theory is particularly applied to explaining public displays of prosocial behaviors. For example, Jack Dorsey, the founder and CEO of Twitter, one of the wealthiest men in the United States, has pledged one billion dollars to help to conquer the COVID-19 pandemic (Isaac, 2020). Costly signaling theory maintains that altruism is like a peacock's tail, which is a costly display of

status, abilities, resources, and character (Miller, 2000). In particular, through public display of prosocial behaviors, the helper signals that they have high enough resources and status to put up with the costs of the prosocial acts, and/or that they have a good character as they are willing to confer benefits towards others (Barclay, 2010). As a consequence of the good qualities and status they have signaled, the helper receives benefits in different contexts of cooperation and competition, such as the competitive mating market.

1.1.2 Benefits for Helpers and Punishment for Freeriders

What is common in the aforementioned theoretical accounts is that they all maintain that prosocial individuals will receive interpersonal and social benefits (e.g., reciprocated help, a good reputation, high status), while selfish individuals will receive punishment, from others. These theories resonate with a popular fairy tale named The Golden Goose. In this story, a young man generously shared his food with an old man, and as a reward, he magically got a golden goose and finally married the princess of the country; in contrast, his eldest brother and second eldest brother lost their arm and leg, respectively, as a punishment for their reluctance to share food with the old man.

Consistently, empirical evidence shows that helpers are more likely than freeriders to be chosen as cooperation partners (Raihani & Power, 2021; Van Apeldoorn & Schram, 2016), friendship partners (Xin Zhang et al., 2018), romantic partners (Barclay, 2010), and leaders (E. A. Smith & Bliege Bird, 2000). Furthermore, helpers are perceived to have more desirable traits and characteristics, such as trustworthiness and likableness, than freeriders (Bhogal et al., 2019; Fehrler & Przepiorka, 2013; Xin Zhang et al., 2018). As written by Trivers (1971), “Selection will favor liking those who are themselves altruistic”.

A necessary condition for the helpers to receive interpersonal and social benefits, or for the selfish individuals to receive punishment, from others is that the individuals’ identities

are disclosed—the prosocial behaviors are publicized/observable. In other words, previous theoretical accounts on human prosocial behaviors are commonly based on the observability of prosocial behaviors.

1.1.3 Observability and Prosocial Behaviors

Consistent with the aforementioned theories, there is abundant evidence that people display more prosociality when they are observed by others or when their prosocial behaviors are publicly recognized (Alpizar et al., 2008; Andreoni & Petrie, 2004; Bekkers & Schuyt, 2008; Fujii et al., 2015; Kraft-Todd et al., 2015; Shaw et al., 2014; J. R. Smith & McSweeney, 2007; Yoeli et al., 2013; but see Denis et al., 2020, for some contradicting evidence). For example, some research found that the participants whose names were publicized, compared with those whose names were anonymous, contributed more in the public goods games (Andreoni & Petrie, 2004). In another study that examined factors that affected charitable donation during a telethon, it was found that audiences were most likely to donate when the donors' names were publicized (Silverman et al., 1984). Furthermore, a lot of studies, including empirical studies and field studies, have demonstrated that even subtle cues of observation (e.g., eye images) can lead to more prosocial behaviors among people, which is called the "eye-images effect" (Ernest-Jones et al., 2011; Oda & Ichihashi, 2016; Powell et al., 2012).[1]

Likewise, many researchers have argued that seeking public recognition is an important motive that drives people's prosocial behaviors (e.g., Denis et al., 2020; Penner et al., 2005). Furthermore, in a randomized controlled field experiment, Mason (2016) found

[1] It should be noted, however, that many studies did not detect the "eye-images effect" (see Fujii et al., 2015; Northover et al., 2017, for a review; Sparks & Barclay, 2013).

that the participants who were given a promise to be publicly recognized for their participation were more likely to sign up to a program to support a nonprofit organization.

1.2 Concealing Prosocial Behaviors

1.2.1 Moral Prescription for Prosocial Behaviors

In stark contrast to the above theories and research, which augment the importance of publicity/observability for motivating people's prosocial behaviors, anonymous prosocial behaviors are ubiquitous in human societies. To facilitate a better understanding of this phenomenon, I would like to first introduce a widely shared moral prescription that encourages anonymous prosocial behaviors.

In Bible (Matthew 6:1-4, ESV), it writes "Beware of practicing your righteousness before other people in order to be seen by them, for then you will have no reward from your Father who is in heaven. Thus, when you give to the needy, sound no trumpet before you, as the hypocrites do in the synagogues and in the streets, that they may be praised by others. Truly, I say to you, they have received their reward. But when you give to the needy, do not let your left hand know what your right hand is doing, so that your giving may be in secret. And your Father who sees in secret will reward you." (Biblical Stewardship, 2017)

Likewise, in Tao Te Ching, the classical text for Taoism in China, the sage Laozi wrote, "One who is good at going does not leave traces" (善行無轍迹) (Moeller, 2007). This well-known sentence reflects the view of true charity in traditional Chinese philosophy: those with true virtuosity and morality will not leave any marks/traces that make them recognized (D'Ambrosio et al., 2018).

Similarly, in Islam religion (another major religion in the world), it is a rule that voluntary prosocial behaviors (Sadaqah) must not be motivated by a wish of receiving recognition from others and instead should be conducted sincerely only to please Allah (i.e., the Arabic word for God) (Lambarraa & Riener, 2015). This rule is explicitly expressed in Qur'an (i.e., the central religious text of Islam), "O you who believe! Do not render vain your

charity by reminders of your generosity or by injury, like him who spends his wealth to be seen of men and he does not believe in Allah nor in the last day." In Lambarraa and Riener's (2015) research, two field experiments consistently found that the participants from Morocco, where over 99% of people adhere to Islam, were more likely to donate, and actually donated a higher amount, in the anonymous identity condition than the publicized identity condition. This finding contradicts the previous findings regarding the effect of observability (vs. anonymity) on promoting prosocial behaviors.

1.2.2 The Phenomenon of Anonymous Prosocial Behaviors

In line with the moral prescription of prosocial behaviors, in some cases in real-life, it is a descriptive norm to help anonymously. For example, most people visiting churches or temples put coins or cash into the untransparent offertory boxes without anyone knowing how much they donate. As another example, there are often tiny charity boxes at the convenience stores or supermarkets in Japan, which collect money for helping the victims of disasters or diseases. The customers who intend to help just put coins in the charity box without getting any recognition or even anyone's attention. Furthermore, nowadays, when people donate their organ or oocyte for helping others in need, it is often the rule that their identities remain anonymous to the recipients and the general public (Jordan et al., 2004; Reichman et al., 2010). On these occasions, it is a default choice for people to help anonymously.

1.2.2.1 Concealing Prosocial Behaviors

Interestingly, when they have a choice to seek recognition, humans still often refrain from publicizing their prosocial behaviors and even deliberately conceal them. There is much media coverage on the "mysterious donors" who make a large donation using a pseudonym

or even without disclosing any information. For example, during the COVID-19 pandemic, a Japanese man visited the city hall of Obu City in Aichi Prefecture and handed 1 million yen (in cash) to the receptionist. The person also left a letter to the mayor of the city, which stated, “Please use it where you need it right now for the future of children who are having a hard time in the COVID-19 pandemic. [コロナで大変な思いをしている子どもの未来のために今スグ必要としているところに使ってください。]” Then, the generous donor left without leaving his name (Obu City, 2020).

Furthermore, it is easy to find anonymous donors on the donor-list or benefactors-page that charitable organizations post online. For instance, on the Million Dollar List website, there are 1,220 gifts from 2000 to 2020, ranging from 1 million to 275 million dollars, whose donors have chosen to conceal their donations and appear as anonymous donors (Indiana University Lilly Family School of Philanthropy, 2020). Furthermore, some research analyzed the gifts made on the crowdfunding platform GoFundMe, which included a total of about $44 million from around 558,000 individual donations, and found that 21% of the donations were given by anonymous donors (Sisco & Weber, 2019).

1.2.2.2 Definition of Concealing Prosocial Behaviors

In this research, I define concealing prosocial behaviors as the helper’s act of deliberatively anonymizing the prosocial behaviors so that their identity is unknown/unrecognized to others.

To clarify the concept of concealing prosocial behaviors, we need to consider the people that could potentially know about the prosocial behaviors. Depending on the circumstances, a helper may 1) directly provide their resource (e.g., time, money, goods) to the recipient of help, or 2) indirectly provide the resource via an agency (e.g., a charitable organization). In the first case (direct helping), the helper’s prosocial behaviors may be observed and thus known by the recipient, some acquaintances, and/or some strangers.

Furthermore, the helper's prosocial behaviors could be known by others via word of mouth (oral communication), from the helper to the recipient, and/or from the helper and the recipient to other people. Therefore, the helper would be concealing prosocial behaviors if their act would lead to the consequence that the recipient of help, the potential observers, and/or the general others don't know about the prosocial behaviors. For example, John hears that his friend Tom is dealing with some financial difficulties and plans to donate some money to Tom. If John intends to conceal his giving behavior, a) he may just put the money into Tom's mailbox and then leave; b) he may choose a "right" time when nobody would be watching him when he gives money to Tom, such as when he and Tom are alone in a room; c) he may never mention his donation in front of other people; d) he may particularly ask Tom not to tell others (given that Tom knows about John's donation). Each of these acts from a) to d) represent different methods of concealing prosocial behaviors in the case of direct helping.

In the case of indirect helping via an agency, the agency staff would be the first target to potentially know about the helper's identity. Furthermore, the helper's prosocial behaviors could be known by the recipient through the disclosure from the agency. Moreover, the general others may know about the helper's prosocial acts when they directly observe it or when the helper themselves, the agency, or the recipient of help shares the helper's prosocial behaviors. Therefore, concealing prosocial behaviors would be indicated by the helper's acts that make the agency, the recipient of help, and/or the general others not to know about their prosocial behaviors. For example, John plans to donate to a fund for helping with those affected by the COVID-19 pandemic. If John intends to conceal his donation, a) he may donate money to the fund without leaving his name; b) he may try to prevent others from recognizing him when he donates the money, such as by wearing a mask; c) he may choose to remain as an anonymous donor and ask the fund not to disclose his identity to the recipient of

donation or the general public, d) he may never mention his donation in front of other people. Each of these acts from a) to d) represent different ways of concealing prosocial behaviors in the case of indirect helping via an agency.

In the modern era with increasing mobility and globalization, human beings are more and more likely to help strangers via some agency, such as a charitable organization or a crowdfunding website (Ein-Gar & Levontin, 2013). Considering the significance of helping via an agency in modern times, the current research mainly focuses on examining individuals' acts of concealing prosocial behaviors in indirect helping through an agency. Furthermore, consistent with the research that shows the effect of public recognition on promoting prosocial behaviors, the agencies of helping nowadays often offer chances for helpers to receive public recognition (Mason, 2016). In the current research, I particularly focus on an individual's act of concealing prosociality through declining public recognition of the agency and requesting to be an anonymous donor, so that the recipient of help and the general public would not know about their prosocial behaviors.

To help readers understand the concept of concealing prosocial behaviors, two points need to be noted. First, in the current research, concealing prosocial behaviors refers to the concealment of prosocial behaviors when disclosing one's identity is a default choice offered by the agency of helping, but not when anonymizing one's identity is a default choice. For instance, donating money via the offertory box in the temple is not concealing prosocial behaviors, because anonymizing one's donation is a default choice offered by the temple in this case. Second, concealing prosocial behaviors is different from anonymous prosocial behaviors. Concealing prosocial behaviors is about *whether* a helper anonymizes or publicizes their prosocial behaviors. In contrast, anonymous prosocial behaviors are about *how much* an individual helps when their helping behavior would be anonymous (Carlo & Randall, 2002).

1.2.3 Previous Research on Concealing Prosocial Behaviors

Despite its theoretical significance and its prevalence in the real world, studies on concealing prosocial behaviors have been scarce in the literature on human prosociality (Imada, 2020). A few exceptions include studies that examined antecedents or consequences of concealing prosocial behaviors. Below I will review the findings of these studies.

1.2.3.1 Antecedents of Concealing Prosocial Behaviors

Why do individuals sometimes deliberately try to hide their identities when there is a chance to achieve interpersonal and social benefits such as good reputation and social status? Some research investigated how characteristics of a donation, such as the donation amount and timing, were associated with whether donors publicized or concealed their donations (Mokos & Scheuring, 2019; Peacey & Sanders, 2013; Raihani, 2014). Specifically, Peacey and Sanders (2013) examined a dataset of more than 70,000 donations to the fundraisers who participated in the 2010 London Marathon. They found that particularly large or small donations were more likely to be made anonymously than moderately sized ones. Furthermore, the early donors, especially the first donor, in a fundraising page were more likely to donate anonymously than the later/subsequent donors. In line with Peacey and Sanders's research, Raihani (2014) analyzed donations on an online fundraising website in the UK (www.bmycharity.com) and found that those who made extremely high or low donations were more likely to donate anonymously, while those who donated at the average level preferred publicizing their names. Raihani explained the findings from a norm-deviation perspective, maintaining that the donors who gave at especially top or low levels violated the norm of giving, and thus they opted in anonymity to prevent from being ostracized or punished by the group members.

Some research has identified the role of norm in shaping individuals' decisions in whether to conceal their prosocial behaviors. Specifically, Burtch et al. (2016) examined contributions at a global online crowdfunding platform and found that a contributor' decision in whether to make their name or contribution amount anonymous was affected by the norm of decisions among previous contributors shown on the web page. In other words, if most of the former contributors publicized their names, the individual will be more likely to disclose their names and vice versa.

1.2.3.2 Consequences of Concealing Prosocial Behaviors

Some studies investigated how concealing prosocial behaviors would influence the level of prosociality among future helpers. These studies showed mixed findings on this topic. Specifically, Burtch et al. (2016) found that when contributors of a specific campaign at crowdfunding site chose to conceal their name and contribution amount, subsequent visitors of the campaign would contribute a lower amount. In contrast, however, Peacey and Sanders (2013) found that the following donor would donate around 4% more when a former donor donated anonymously (compared to when a former donor publicized their donation).

A recent study investigated how concealing prosocial behaviors would influence the recipient's behavior (Y. Chen & Gao, 2021). This research found that when the donor's name was concealed from (rather than disclosed to) the recipient of donation, the recipient would be less likely to spend the donation appropriately in a way that fitted the aim of the donation. For example, in Study 2 of this research, the university students sample imagined receiving a scholarship donation; the participants in the donor-concealed condition spent a lower proportion of the money on study-related items than those in the donor-disclosed condition. The authors argued that the concealment of the donor's identity would make the donor's

identity less salient in the recipient's mind, which would result in a decreased sense of obligation.

1.2.3.3 Limitation of Previous Research

Although the aforementioned studies are informative, to date, almost nothing is known about whether and how concealing prosocial behaviors would be shaped by social ecology. Social ecology is defined as an individual's social or natural habitats, including interpersonal, economic, political, and physical environments (Oishi, 2014). Abundant evidence has accumulated to demonstrate that social ecology has a dramatic influence on human behaviors in various domains (Oishi, 2014; Yuki & Schug, 2020). The aim of this study is to fill this gap in the literature. I test what socio-ecological factors may influence the degree to which individuals actively conceal their prosocial behaviors.

1.3 A Social-Ecological Approach on Concealing Prosocial Behaviors

Before theorizing how social ecology may influence individuals' tendency to conceal prosocial behaviors, I will first review the previous research that has investigated how social ecology shapes individuals' prosocial behaviors. The socio-ecological approach in psychology studies how social ecology shapes the thinking, feelings, and behaviors of the individuals who live in a specific environment (Oishi, 2014). Lots of studies have adopted the socio-ecological approach to examine human prosocial behaviors. These studies have consistently shown that a variety of socio-ecological factors have significant influences on human prosociality (Bennett & Einolf, 2017; Buchan et al., 2009; Glanville et al., 2016; Koster, 2007; W. Q. Li et al., 2019; Ruiter & De Graaf, 2006; Van De Vliert et al., 2004; Wiepking et al., 2021). For instance, it was found that people in societies with a higher level of urbanization and globalization were more generous to geographically distant others (Buchan et al., 2009; Devlin & Rowlands, 2019). Moreover, people in societies with lower residential mobility were more willing to conduct prosocial acts that benefited their communities (Oishi et al., 2007).

In line with previous studies that suggest an important role of social ecology on human prosocial behaviors, in this research, I propose that social ecology will affect people's tendency to conceal prosocial behaviors. Supporting this notion, there is some evidence suggesting that people's tendency to conceal prosocial behaviors is largely embedded in the societal and cultural context. For example, in 2007, Forbes Magazine announced that they had decided to cancel releasing China Philanthropy List, which had been done for three years. According to the marketing director of Forbes China, the decision was made because "China's philanthropy is not as mature as abroad, and many rich people donate in a secret way; many entrepreneurs keep a low profile and are unwilling to disclose their contributions in the philanthropy field, which increased our difficulty for collecting data." (F. Chen, 2007).

Likewise, several empirical studies consistently found that East Asians preferred those who were modest about their prosocial acts (i.e., denying the fact that they conducted the prosocial acts), while North Americans preferred those who admitted their prosocial acts (Fu et al., 2011; Fu et al., 2001; Lee et al., 2001). These findings suggest that there are societal or cultural differences in people's tendency to conceal prosocial behaviors.

What socio-ecological factors would underlie societal/cultural differences in concealing prosocial behaviors? Further, what socio-ecological factors would shape individuals' tendency to actively anonymize their prosocial behaviors? In this research, I propose that relational mobility, how much freedom people in a society have in relational choice, will shape the tendency to conceal prosociality among the individuals in the society.

1.3.1 Relational Mobility

Relational mobility is a socio-ecological factor about the degree of freedom and opportunity a given society affords individuals to select and dispose of interpersonal relationships based on personal preference (Thomson et al., 2018; Yuki & Schug, 2020). In high relational mobility societies, individuals tend to have much freedom to voluntarily choose new relationship partners and leave undesirable ones, but the relationships are less guaranteed. In other words, the interpersonal relationships in high relational mobility societies tend to be flexible and unstable. For instance, the United States has been found to be a typical high relational mobility society in previous research (e.g., Schug et al., 2009). According to what Alexis de Tocqueville, a French scholar, observed during his travel in most of the U.S. territories, Americans tend to talk to strangers freely and make new friends easily (Tocqueville, 1835/2003).

In contrast, in low relational mobility societies, individuals have little freedom to choose or leave their relationship partners, with the relationships largely contingent upon

circumstances. In other words, the interpersonal relationships in low relational mobility societies tend to be fixed and stable. For example, Japan has been found to be a typical low relational mobility society (Schug et al., 2009). The well-known lifetime employment practice is applied in Japanese companies, which leads to a low turnout rate and relatively fixed relationship structure among employees (Yamagishi et al., 1998). Even if the employees do not like their current companies, it would be hardly possible that they could find another ideal job, so they have to stay in the current companies (Yamagishi et al., 1998).

Recent research has demonstrated that the differences in relational mobility are useful to explain a host of variations in human psychological tendencies and behaviors across societies, including interpersonal relationship strategies (L. M. W. Li et al., 2015; Schug et al., 2010; Yamada et al., 2017), self-concept (Falk et al., 2009), well-being (Sato & Yuki, 2014; Yuki et al., 2013), consumer behavior (Komiya et al., 2019), and thinking styles (San Martin et al., 2019).

1.3.2 Relational Mobility and Reputation Management Strategies

1.3.2.1 High Relational Mobility: Striving for a Positive Reputation

I propose that different levels of relational mobility in societies will promote diverse reputation management strategies (striving for a positive reputation vs. avoiding a negative reputation), which, in turn, will affect the degree to which individuals actively conceal their prosocial behaviors. On the one hand, gaining a positive reputation is a more crucial task for survival and prosperity than avoiding a negative reputation in high relational mobility societies or a *biological market* (Barclay, 2011, 2016; Noë & Hammerstein, 1994). The greater degree of freedom in relational connections leads to a harsher competition for gaining and retaining desirable relationships. Previous research suggests that high relational mobility encourages promotion-focused interpersonal strategies, such as greater risk-taking in

relationships (L. M. W. Li et al., 2016), higher self-disclosure (Schug et al., 2010), and higher self-enhancement (Falk et al., 2009). Building upon these findings, high relational mobility is likely to breed promotion-focused strategy in reputation management—striving for a positive reputation. It has been found that if one has a good reputation, for instance, for being generous or being willing to confer one's benefits to others, it becomes easier for them to attract or keep desirable partners (Barclay, 2016). Therefore, in high relational mobility societies, the incentive to gain a positive reputation is greater than in low relational mobility societies.

1.3.2.2 Low Relational Mobility: Avoiding a Negative Reputation

On the other hand, avoiding a negative reputation is a more critical task than striving for a positive reputation in low relational mobility societies. In such societies where individuals have limited choice of alternative relationships, it is important to maintain the harmony of the current relationships and avoid social exclusion from one's current relationship partners or the groups which one belongs to (Lou & Li, 2017; Yamagishi et al., 2008). Supporting this notion, previous research suggests that low relational mobility encourages prevention-focused interpersonal strategies, such as greater rejection sensitivity (Lou & Li, 2017; Sato et al., 2014) and cautious intimacy (L. M. W. Li et al., 2015). Based on these findings, low relational mobility is likely to breed a prevention-focused strategy in reputation management—avoiding a negative reputation. There is evidence that those with a negative reputation are more likely to be socially sanctioned or excluded (Bone et al., 2014; Whitson et al., 2015). With limited choice in alternative relationship partners, people in low relational mobility environments would have a stronger incentive to avoid a negative reputation than those in high relational mobility environments.

1.3.3 Reputation Benefits Associated with Publicized Prosocial Behaviors

Why would high versus low relational mobility, which promotes different reputation management strategies, significantly influence people's tendency to conceal their prosocial behaviors? To understand the logic, it is important to note that the publicity of prosocial behaviors could give rise to both positive and negative reputations.

The publicity of prosocial behaviors sends an important signal to the observers that the helper has conducted a prosocial act. The competitive altruism theory argues that public display of prosocial behaviors signals that a specific helper is the kind of person who is inclined to confer benefits to others (Barclay, 2010). In line with this argument, as introduced earlier, lots of evidence shows that helpers are rewarded with a positive reputation. For example, it is found that helpers, on the basis that their identities are disclosed, are perceived to be more trustworthy and more likable than the selfish/indifferent persons (Bhogal et al., 2019; Fehrler & Przepiorka, 2013; Xin Zhang et al., 2018).

1.3.4 Reputation Costs Associated with Publicized Prosocial Behaviors

However, publicizing one's prosocial behaviors can also bring about a negative reputation from others. It has been found that a prosocial act could be self-threatening and is likely to induce negative affect among the recipient of help (Fisher et al., 1982). Furthermore, extremely generous players in dictator games are disliked by the observers (Kawamura & Kusumi, 2020). In a recent review, it is pointed out that "Prosocial actors are often met with suspicion and sometimes castigated as disingenuous braggarts, empty virtue-signalers, or holier-than-thou hypocrites" (Berman & Silver, 2022).

There are some mechanisms underlying the reputation costs associated with publicized prosocial behaviors. First, helpers could be targets of antisocial punishment (Herrmann et al., 2008) or do-gooder derogation (Minson & Monin, 2012). Second, the publicity of prosocial behaviors potentially sends a signal that the helper is bragging and that

the helper's prosocial act is driven by an extrinsic motive for recognition. Below I will review relevant research regarding these mechanisms.

1.3.4.1 Antisocial Punishment

Antisocial punishment refers to sanctioning of the people who display prosociality (Herrmann et al., 2008). In addition to the punishment towards the freeriders (altruistic punishment), humans also exert punishment towards the helpers. Many studies using the public goods game paradigm consistently found that players punished high contributors via deducting their monetary reward (Herrmann et al., 2008; Irwin & Horne, 2013; Sylwester et al., 2013). Likewise, across four studies, Parks and Stone's (2010) research found that when players in public goods games were given the right to exclude members from the group, the generous members (i.e., who gave a lot to the group but took just a little) were unpopular and were excluded as often as the free-riders (i.e., who gave a little but took a lot). It has been argued that the generous contributors/donors induce envy and spiteful behaviors among others, which gives rise to antisocial punishment (Kuběna et al., 2014; Vollan & Pröpper, 2009). Consistent with this notion, Parks and Stone (2010) found evidence that the generous members of a group were unpopular because they established a high behavior standard for other members and made others look bad in comparison.

1.3.4.2 Do-gooder Derogation

Do-gooder derogation refers to the tendency to put down or dislike morally laudable people (Raihani & Power, 2021). For example, vegetarians, the morally motivated minority, are often teased, hated, and even harassed by meat-eaters, the less morally motivated majority (Minson & Monin, 2012). Likewise, in a well-known study conducted by Monin et al. (2008), people who completed a racist task and identified the lone African American as a

burglar among the lineup of suspects subsequently disliked an individual who refused to do the task and said the task was “offensive”. It was found that children as young as 8 years old showed do-gooder derogation (Tasimi et al., 2015). Evidence has accumulated to suggest that, similar to antisocial punishment, do-gooder derogation is underlain by social comparison. That is, the morally laudable people, such as the generous members in a group, will threaten the self-image and reputation of the less moral others, such as the selfish persons (Minson & Monin, 2012; Monin et al., 2008; Tasimi et al., 2015).

1.3.4.3 Publicity & Questionable Motive

Moreover, the publicity of prosocial behaviors risks signaling that the helper is bragging or that the helper seeks recognition for their prosocial act, which then would discount the helper’s perceived generosity and altruistic motive (Berman & Silver, 2022). Some research has found that when prosocial behaviors are known by others through public recognition or personal dissemination, the helpers are perceived to be bragging and self-promotional rather than genuinely altruistic (Berman et al., 2015; Scopelliti et al., 2015). Consistently, the people who publicly express their morally laudable opinions or publicly conduct moral acts are accused of being “virtue signaling” (Berman & Silver, 2022). According to the discounting principle in causal attribution, a prosocial act will be less likely to be attributed to the helper’s internal motive (i.e., altruistic motive to help others) when a potential external motive is present, such as when the prosocial act is publicized, or when the helper receives some reward out of the prosocial act (Kelley, 1973). Therefore, publicizing one’s prosocial behaviors will potentially make one’s helping motive questionable and cause damage to one’s reputation.

1.3.5 Relational Mobility and Concealing Prosocial Behaviors

Given that publicizing prosocial behaviors induces both reputation benefits and costs, people in high versus low relational mobility societies, who are varying in reputation management strategies, may show differing tendencies to conceal prosocial behaviors. The people in high relational mobility societies, who tend to strive for a positive reputation, may be more sensitive to the possibility that they will gain positive judgment from the observers if their prosocial behaviors are publicized. In other words, these people may expect more positive reputation and less negative reputation associated with publicized prosocial behaviors. In turn, the greater positive expected reputation and less negative expected reputation may make the people in high relational mobility societies less likely to conceal prosocial behaviors, compared to the people in low relational mobility societies.

The people in low relational mobility societies, who tend to avoid negative reputation, however, may be more sensitive to the possibility that they will receive negative judgment from the observers if their prosocial behaviors are publicized. In other words, these people may expect more negative reputation and less positive reputation associated with publicized prosocial behaviors. In turn, the greater negative expected reputation and less positive expected reputation associated with publicized prosocial behaviors may make the people in low relational mobility societies more likely to conceal prosocial behaviors, compared to the people in high relational mobility societies.

1.4 Overview of the Research

1.4.1 Hypothesis

Based on the theorizing above, this research hypothesizes that, lower, as contrasted with higher, relational mobility in the social environment would breed the expectation of more negative and less positive reputation accompanying publicized prosocial behaviors, which, in turn, would lead to a stronger tendency for individuals to conceal their prosocial behaviors.

1.4.2 Overview of the Studies

I tested the hypothesis in five studies. In Study 1, I recruited a Chinese sample and tested whether expectation of reputation mediated the association between relational mobility and the decision in whether to conceal prosocial behaviors in hypothetical donation contexts. In Study 2, using a Chinese sample, I differentiated expectation of positive and negative reputation and tested whether both expectations of positive and negative reputation mediated the association between relational mobility and people's tendency to conceal prosocial behaviors. In Study 3, I examined whether relational mobility would mediate the cultural difference in the degree of concealing prosocial behaviors in both hypothetical and real-life situations between the US and Japan. These countries have been repeatedly found as either high or low (respectively) in relational mobility (e.g., Schug et al., 2010; Thomson et al., 2018). I also tested the mediating roles of positive and negative reputational concerns: whether, in the hypothetical situation, weaker expectation for positive reputation and greater expectation for negative reputation would mediate the association between lower relational mobility and higher tendency to conceal prosocial behaviors. In Study 4, I attempted to test the causal effect of relational mobility on concealing prosocial behaviors using a popular

manipulation paradigm for people's perceptions of relational mobility. However, the findings did not support my hypothesis. In Study 5, I modified the manipulation paradigm used in Study 4 and re-examined the causal role of relational mobility in shaping people's tendency to conceal prosocial behaviors. I also tested whether expectations for positive and negative reputations might mediate the effect.

CHAPTER 2: STUDY 1

2.1 Introduction

In Study 1, I aimed at initially testing the hypothesis that lower relational mobility would be associated with a higher tendency to conceal prosocial behaviors. Though previous research on relational mobility has typically used a cross-cultural (i.e., between-countries) comparison approach, it is well-recognized that relational mobility also varies within a country (Komiya et al., 2019; Schug et al., 2010). Furthermore, using a single-country sample to test the hypothesis precludes the possibility that the effect of relational mobility would be confounded by some other variables that differ between cultures (Komiya et al., 2019). In line with this, some research on relational mobility used sample within a single country to test whether people's varied relational mobility would predict different patterns of psychological processes and behaviors (L. M. W. Li et al., 2015; L. M. W. Li et al., 2016; San Martin et al., 2019; Schug et al., 2010; Yuki et al., 2013). Following this line of research, I used a single-country sample in Study 1. I collected data in China and examined whether perceptions of lower relational mobility in one's immediate society would be associated with a higher tendency to conceal prosocial behaviors and whether this association would be mediated by expected reputation associated with publicized prosocial behaviors.

In particular, I used a hypothetical disaster donation scenario to measure whether people would choose to conceal their donations in the context and their expected reputation following the publicity of the donations. I chose to use a hypothetical scenario because it allowed me to measure expected reputation following publicized prosocial behaviors, which is the proposed underlying mechanism of the association between relational mobility and concealing prosocial behaviors. Another reason was that I intended to manipulate the identity of observers for exploratory purposes. I will provide more details about this in the following section. Furthermore, previous research on prosocial behaviors has extensively used hypothetical scenarios (e.g., W. Q. Li et al., 2019), suggesting that hypothetical scenario is

one of reliable ways to examine human prosociality. Moreover, I measured people's perceptions of relational mobility in their immediate society using a well-recognized scale created by Yuki et al. (2007). Previous research on relational mobility has consistently shown that this scale has high reliability and validity (Thomson et al., 2018).

My predictions were as follows: lower relational mobility would be associated with less positive (more negative) expected reputation following publicized prosocial behaviors, which, in turn, would be associated with a higher tendency to conceal prosocial behaviors among individuals.

2.2 Method

2.2.1 Participants

I recruited participants using the sampling service of Wenjuanxing, a professional sampling company in China. Finally, I recruited 314 Chinese participants to participate in an online survey. In the survey, I inserted an attention-check item, "Please choose the option '2 Disagree' to this question. This will make us sure that you are reading the questions carefully." Thirty-nine participants were excluded from the subsequent analyses because they failed the attention-check item. Moreover, I excluded eight responses with a repeated IP address as they might be duplicate responses provided by a single participant. The final sample included 269 participants (120 women (45%), age range: 16-70, mean age = 33.86, *SD* = 9.19). The participants received 3.3 RMB for remuneration. All participants provided consent about participating in the survey. Appendix A provides the demographic characteristics of the samples across all studies in this research.

2.2.2 Procedure and Measures

2.2.2.1 Disaster Donation Scenario

Participants first read a donation scenario in which they intended to donate for helping the victims of a natural disaster that occurred in the country. In the donation scenario, I also explored whether the association between relational mobility and people's tendency to conceal prosocial behaviors would be contingent on whether the observers were ingroup members or strangers.

Participants were randomly assigned to either the ingroup members condition or the strangers condition. In the ingroup members condition, participants read a scenario in which they worked in a company, and they donated money to the victims of a natural disaster via a

new charity established by a group of colleagues within the company. In this company donation context, the observers were ingroup members for the donor (i.e., coworkers in the company). In the strangers condition, participants read a scenario in which they donated money to the natural disaster victims via the website of a new charity, which received donations from people in various places. In this Internet donation context, the observers were mostly strangers to the donor. Because I did not find a significant interaction effect between the identity of observers condition (ingroup members vs. strangers) and relational mobility, I reported the results with combining the two conditions (see Appendix B for more details on the donation situations materials and Appendix C for the related results).

2.2.2.2 Control Variable–Donation Amount

As previous research has found that donation amount influences people's decision in whether to conceal prosocial behaviors (Peacey & Sanders, 2013), I measured donation amount in this study and used it as a controlling variable. Specifically, participants were asked how much they intended to donate, "If you were in this kind of situation, how much would you typically donate?" Participants indicated their answers according to the local currency.

2.2.2.3 Decision about Whether to Conceal Prosocial Behaviors

Next, participants were told that the charity intended to publicize donors' names and donation amount unless specifically asked not to, and participants were offered an option to make their donations anonymous.

Specifically, in the ingroup members condition (for the identity of the observers), participants read, "When you tell your colleagues that you want to donate some money to the charity, they gave you a donation form to write down your name and pledge donation

amount. The form says that they will publicize donors' names and donation amount on the bulletin board of the company unless specifically requested not to. Under the empty line for name, you find that there is a checkbox option 'Please do not disclose my name and make it anonymous.'" In the strangers condition (for the identity of the observers), participants read, "You click the donation form and you are asked to fill in your name and pledge donation amount. The form says that they will publicize donors' names and donation amount on the website unless specifically requested not to. Underneath the name field, you find that there is a checkbox option 'Please do not disclose my name to the public and make it anonymous.'"

Participants indicated whether or not they would choose to conceal their donations by checking the blank box provided (1 = "I will not check the box, and do not make my donation anonymous", 2 = "I will check the box, and make my donation anonymous"). Later, the authors transformed the responses and created a binary variable for concealing prosocial behaviors (1= conceal prosocial behaviors, 0 = publicize prosocial behaviors).

2.2.2.4 Expected Reputation Associated with Publicized Prosocial Behaviors

Then I measured expected reputation from the observers associated with publicized prosocial behaviors. Participants were asked how favorably or unfavorably they expected the observers (for the ingroup members condition of the identity of the observers: colleagues in the company; for the strangers condition of the identity of the observers: some strangers on the Internet) would judge them if their donations were publicized. Participants indicated their answers using a 7-point Likert scale (1 = *very negatively*; 7 = *very positively*). A higher score of this item suggested more positive expected reputation (less negative expected reputation) associated with publicized donations.

2.2.2.5 Relational Mobility

Then, participants finished the 12-item Relational Mobility Scale (Yuki et al., 2007), which measures the perceived relational mobility in an individual's immediate social environment. Participants provided their answers on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Sample items include "They (the people around you) have many chances to get to know other people." and "They are able to choose, according to their own preferences, the people whom they interact with in their daily life." The relational mobility scale had high reliability (Cronbach's alpha = .81) in this study. A higher score on this scale indicated higher relational mobility.

Finally, participants provided their demographic information, including age, gender, and SES.

2.3 Results

First, I analyzed the descriptive statistics and the reliability score of the main variables (see Table 2-1 for the results). Then, I conducted a zero-order correlation analysis for the main variables (see Table 2-2 for the results). The results were similar when I conducted partial correlation analysis with donation amount controlled. Importantly, the correlation analysis revealed that lower relational mobility was significantly related to a higher likelihood of concealing prosocial behaviors, $r = -.11$, $p = .085$, though the correlation was marginally significant.

Table 2-1. Descriptive statistics and reliability of the main variables in Study 1.

Variable		*M*	*SD*	%	Reliability (α)
Relational mobility		4.17	0.63	/	.81
Expected reputation		4.94	1.16	/	/
Concealing donation	Yes	/	/	74.30	/
	No	/	/	25.70	/

Table 2-2. Zero-order correlations between the main variables in Study 1.

	Relational mobility	Expected reputation
Relational mobility	-	-
Expected reputation	.41***	-
Concealing donation	-.11†	-.24***

Note. *** $p < .001$, † $p < .1$.

I next used the PROCESS macro (model 4, Hayes, 2017) in SPSS to test whether expected reputation mediated the association between relational mobility and participants' decision about whether to conceal prosocial behaviors or not. Five thousand bootstrap samples were used to create 95% bias-corrected confidence intervals. In the analysis, the dependent variable was a binary variable (1 = conceal prosocial behaviors, 0 = publicize prosocial behaviors). Furthermore, the donation amount was entered as a covariate. Figure 2-1 shows the results of the mediation analysis. Consistent with my hypothesis, the results showed that the indirect effect of expected reputation was significant, indirect effect = -0.38, *SE* = 0.13, 95% Confidence Interval (CI) = [-0.66, -0.15]. Specifically, higher relational mobility was associated with more positive (less negative) expected reputation associated with publicized prosocial behaviors, $b = 0.74$, $SE = 0.10$, $p < .001$, 95% CI = [0.54, 0.94], which, in turn, was associated a lower tendency to conceal prosocial behaviors, $b = -0.51$, $SE = 0.14$, $p < .001$, 95% CI = [-0.79, -0.23]. The results remained similar when the identity of the observers condition was controlled.

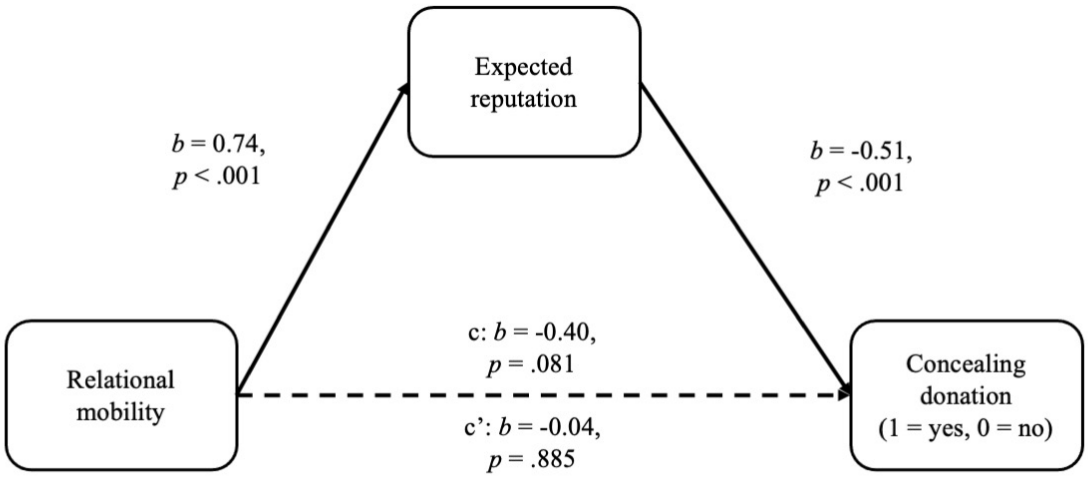

Figure 2-1. The mediating role of expected reputation in the association between relational mobility and tendency to conceal prosocial behaviors in Study 1. Unstandardized coefficients are reported. The donation amount was controlled in the analysis. Solid lines indicate significant associations, while dashed lines indicate non-significant associations.

Interestingly, further analysis revealed that relational mobility and expected reputation associated with publicized prosocial behaviors had a serial mediating effect in shaping the association between city size of the birthplace and people's tendency to conceal prosocial behaviors (see Figure 2-2). Specifically, those who grew up in small cities had lower relational mobility than those who grew up in big cities or medium cities, which, in turn, predicted a less positive (more negative) expected reputation following publicized prosocial behaviors, which then was associated with a higher tendency to conceal prosocial behaviors (see Appendix C for more detailed results).

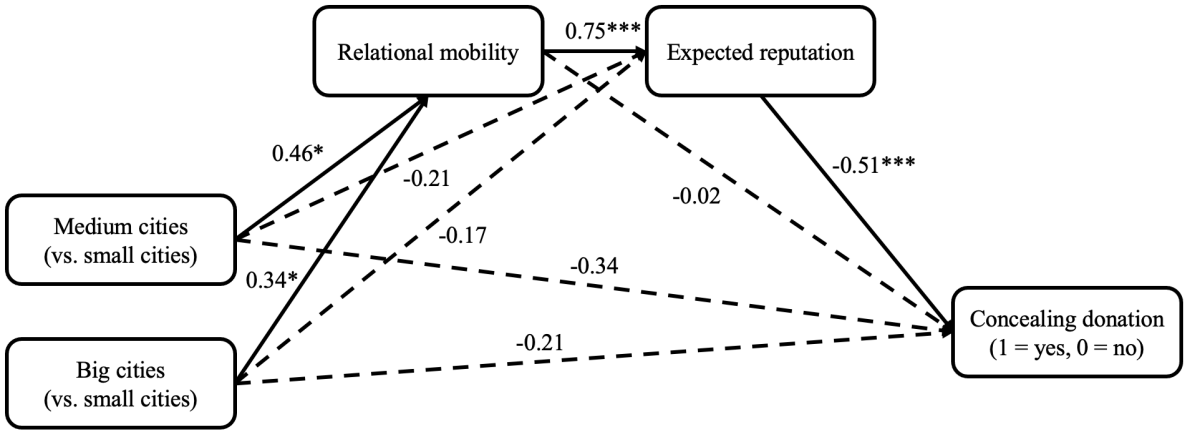

Figure 2-2. The serial mediating effect of relational mobility and expected reputation in the association between city size of the birthplace and concealing prosocial behaviors in Study 1. Unstandardized coefficients are reported. The donation amount was controlled in the analysis. Solid lines indicate significant associations, while dashed lines indicate non-significant associations. *$p < .05$, ***$p < .001$.

2.4 Discussion

The results of Study 1 provided initial support for my hypothesis that lower relational mobility would be related to less positive expected reputation (more negative expected reputation), which, in turn, would be associated with a higher tendency to conceal prosocial behaviors. In further support of my hypothesis, the results showed that a smaller city size (compared to a medium or large city size) bred lower relational mobility, which then was associated with less positive expected reputation (more negative expected reputation) following publicized prosocial behaviors and consequently a higher tendency to conceal prosocial behaviors.

CHAPTER 3: STUDY 2

3.1 Introduction

Study 2 extends Study 1 by differentiating positive expected reputation and negative expected reputation. One limitation of Study 1 was that I used a bipolar item to measure expected reputation, thus it was unclear whether the association between lower relational mobility and the higher tendency to conceal prosocial behaviors was underlain by the decrease in positive expected reputation or the increase in negative expected reputation. Some research suggests that positive reputation concern and negative reputation concern are independent of each other (Kawamura & Kusumi, 2018). To establish a better understanding of the underlying mechanism of the association between relational mobility and people's tendency to conceal prosocial behaviors, I measured positive expected reputation and negative expected reputation separately in Study 2.

Furthermore, Study 2 tested the hypothesis of this research using a different donation context compared to Study 1. In Study 1, I used a disaster donation context, where the recipients of donations, the disaster victims, were strangers to the participants. It's well-established in the field of prosocial behaviors that people's prosocial behavior tendency could be very different contingent upon the group membership of the recipient (e.g., Balliet et al., 2014; W. Q. Li et al., 2019). To provide further support for the hypothesis of this research, I tested whether the findings of Study 1 could be generalized to an ingroup helping context.

My predictions were as follows: lower relational mobility would predict less positive expected reputation and more negative expected reputation for publicized prosocial behaviors, which, in turn, would predict a higher tendency to conceal prosocial behaviors.

3.2 Method

3.2.1 Participants

I conducted Study 2 during the worldwide COVID-19 pandemic in 2020. Consistent with Study 1, the participants were recruited via Wenjuanxing's sampling service. Finally, I recruited 331 Chinese participants to participate in the online survey. In the survey, I inserted an attention-check item, "We want to test your attention, so please click on the answer '2. Disagree.'" Forty participants who failed the attention-check item were excluded from the analysis. One participant was excluded from the analysis because they reported that Chinese was not their native language. Moreover, three respondents were excluded as their duration of the survey was extremely short (no more than 2 minutes, while the median duration among all participants was about 9 minutes), indicating that they may be careless in responding. Furthermore, 10 responses with a repeated IP address were excluded as they may be duplicate responses.

The final sample included 281 participants from China (129 women (46%), age range: 18-61, mean age = 32.60, *SD* = 8.49). The participants received 3.9 RMB as participation payment. All participants provided their consent before participating in the survey.

3.2.2 Procedure and Measures

3.2.2.1 Ingroup Donation Scenario

Participants first read a donation scenario in which they donated money for helping an ingroup member. Specifically, participants imagined that they were an employee in a company, and they donated to a fund in the company for helping a coworker who was diagnosed with a rare disease. Later, they received an email from the fund, notifying them that the fund planned to publicize the donors' names and donation amount on the bulletin

board in the office. In the email, an example poster was shown, where participants could find out their donation amount and how it compared to other donors.

In the donation scenario, I also explored whether the association between relational mobility and the tendency to conceal prosocial behaviors would be contingent on the amount of donation that an individual has made. I randomly assigned participants to one of two conditions of donation amount (superior donation vs. normative donation). In the superior donation condition, the participant's name appeared in the highest tier of donation amount, indicating that they were one of the most generous donors in the company. In contrast, in the normative donation condition, the participant's name appeared in the lowest tier of donation amount together with a large group of other donors, indicating that they donated at the normative level. Because I did not find a significant interaction effect between relational mobility and donation amount (superior donation vs. normative donation), I reported the results with combining the two conditions of donation amount (see Appendix B for more details on the donation situations materials and Appendix C for the related results).

In the email, the fund informed the participants that, if they did not want to make their donation public, they could reply to the email to request to be an anonymous donor.

3.2.2.2 Likelihood of Concealing Prosocial Behaviors

Next, I measured the likelihood of concealing donation. Participants were asked to indicate how likely it would be for them to reply to the email to request to be an anonymous donor. They indicated their answers using a 6-point Likert scale (1 = *definitely not*; 6 = *definitely*).

3.2.2.3 Positive and Negative Expected Reputation

Then, I used four items to measure participants' expected reputation from the observers (i.e., coworkers in the company) associated with publicized prosocial behaviors, with two items measuring positive expected reputation and two items measuring negative expected reputation. I asked participants how they thought their coworkers (other than the fund organizers) would judge them if they did not reply to the email and their donation was publicized within the company. The positive expected reputation items included: "My colleagues will judge me positively" and "My colleagues will like me" (Cronbach's alpha = .86). The negative expected reputation items included "My colleagues will judge me negatively" and "My colleagues will dislike me" (Cronbach's alpha = .88). Participants indicated their degree of agreement of the items on a 7-point Likert scale (1 = *strongly disagree*; 7 = *strongly agree*). In this study, positive expected reputation had a moderately negative relation with negative expected reputation, $r = -.41$, $p < .001$.

3.2.2.4 Relational Mobility

Next, I measured relational mobility. Considering existing evidence that suggests that relational mobility before the COVID-19 pandemic may be a better predictor than the current relational mobility during the pandemic for people's psychological processes and behaviors, I measured perceived relational mobility before COVID-19 using the Relational Mobility Before COVID-19 Scale (Yuki et al., 2021). Sample items included a) "Before COVID-19, they (the people around you) had many chances to get to know other people." and b) "Before COVID-19, they were able to choose, according to their own preferences, the people whom they interacted with in their daily life." Participants indicated their responses on a 6-point Likert scale (1 = *strongly disagree*; 6 = *strongly agree*). The scale had high reliability in this

study (Cronbach's alpha = .79). A higher score on this scale indicated higher relational mobility.

Finally, participants provided their demographics.

3.3 Results

I first tested the descriptive statistics and the reliability of the main variables (see Table 3-1 for the results). Next, I conducted a zero-order correlation analysis for the main variables (see Table 3-2 for the results). Unexpectedly, the results revealed that relational mobility was not significantly related to people's likelihood of concealing donation, $r = -.02$, $p = .808$.

Table 3-1. Descriptive statistics and reliability of the main variables in Study 2.

Variable	*M*	*SD*	Reliability (α)
Relational mobility	4.24	0.62	.79
Positive expected reputation	4.65	1.27	.86
Negative expected reputation	2.91	1.46	.88
Likelihood of concealing donation	3.77	1.48	/

Table 3-2. Zero-order correlations between the main variables in Study 2.

	Relational mobility	Positive expected reputation	Negative expected reputation
Relational mobility	-	-	-
Positive expected reputation	.16**	-	-
Negative expected reputation	-.30***	-.41***	-
Likelihood of concealing donation	-.02	-.13*	.21***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

I next used the PROCESS macro (model 4, Hayes, 2017) in SPSS to test whether relational mobility had an indirect effect on participants' tendency to conceal prosocial behaviors via positive and/or negative expected reputation. Five thousand bootstrap samples were used to create 95% bias-corrected confidence intervals. In the analysis, I entered positive expected reputation and negative expected reputation simultaneously as mediators. Figure 3-1 shows the results of the mediation analysis. The results revealed that negative

expected reputation had a significant indirect effect on the association between relational mobility and the tendency to conceal prosocial behaviors, indirect effect = -0.14, *SE* = 0.06, 95% CI = [-0.26, -0.04]. Specifically, higher relational mobility was associated with less negative expected reputation, *b* = -0.67, *SE* = 0.13, *p* < .001, 95% CI = [-0.93, -0.41], which, in turn, was associated with a lower likelihood of concealing prosocial behaviors, *b* = 0.20, *SE* = 0.07, *p* = .003, 95% CI = [0.07, 0.34]. However, the indirect effect of positive expected reputation was not significant, indirect effect = -0.02, *SE* = 0.03, 95% CI = [-0.09, 0.03]. The results remained similar when the donation amount (superior donation condition vs. normative donation condition) was controlled.

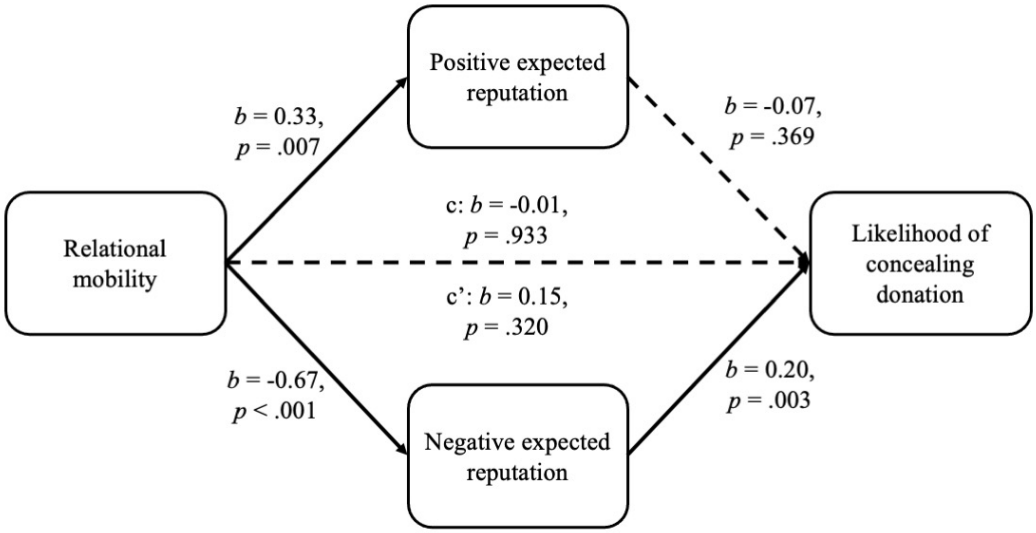

Figure 3-1. Results of the mediation model tested in Study 2. Unstandardized coefficients are reported. Solid lines indicate significant associations, while dashed lines indicate non-significant associations.

Interestingly, further analysis revealed that relational mobility and negative expected reputation (but not positive expected reputation) had a serial mediating effect in shaping the association between the city size of the place where the participant had lived the longest and the likelihood of concealing prosocial behaviors (see Figure 3-2). Specifically, bigger city

size of the previous living place was associated with higher relational mobility, which, in turn, predicted less negative expected reputation associated with publicized prosocial behaviors, which then was associated with a lower tendency to conceal prosocial behaviors (see Appendix C for more detailed results).

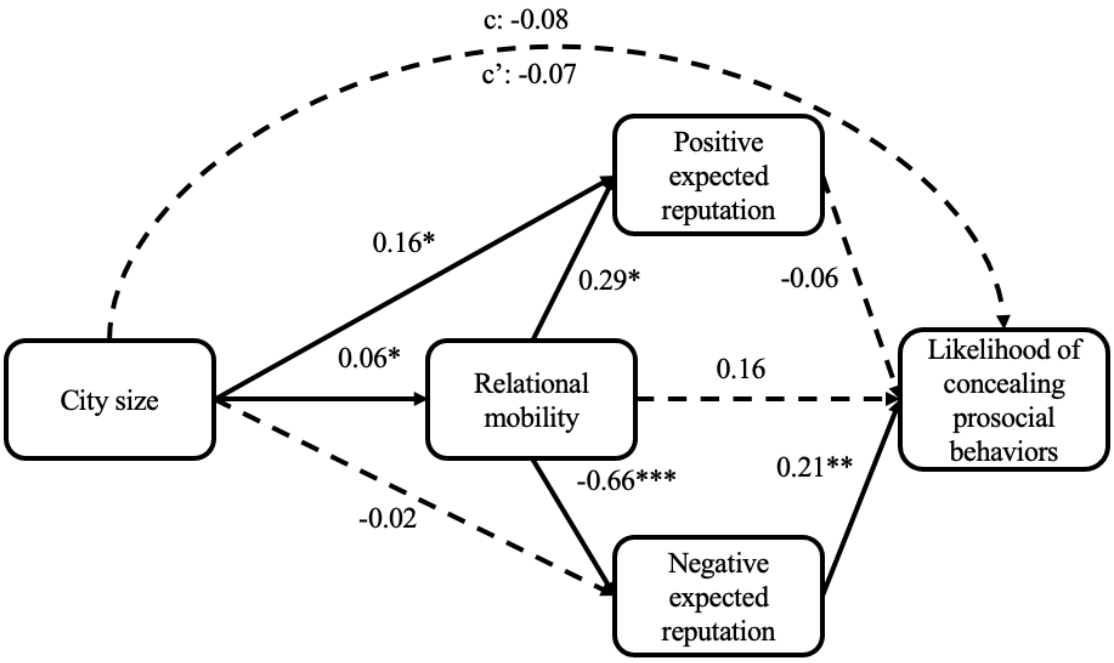

Figure 3-2. The serial mediating effect of relational mobility and expected reputation in the association between city size of the place where people have lived the longest and the tendency to conceal prosocial behaviors in Study 2. Unstandardized coefficients are reported. Solid lines indicate significant associations, while dashed lines indicate non-significant associations. *$p < .05$, **$p < .01$, ***$p < .001$.

3.4 Discussion

Using an ingroup-helping donation context in Study 2, I found that relational mobility had a significant indirect effect on people's likelihood of concealing prosocial behaviors via negative expected reputation for publicized prosocial behaviors. This finding is consistent with the one in Study 1, which showed that relational mobility had a significant indirect effect on people's tendency to conceal prosocial behaviors via expected reputation for publicized prosocial behaviors. Together, the results of Studies 1 and 2 suggest that the association between lower relational mobility and a higher tendency among individuals to conceal prosocial behaviors is robust regardless of the group membership of the recipient.

Furthermore, the findings of Study 2 revealed that negative expected reputation rather than positive expected reputation underlay the association between relational mobility and the tendency to conceal prosocial behaviors. Consistently, my exploratory analysis showed that the serial mediating effect of relational mobility and negative expected reputation (rather than that of relational mobility and positive expected reputation) explained the association between smaller city size and a higher tendency to conceal prosocial behaviors among individuals. These findings provided support for former research which showed that positive reputation concern and negative reputation concern were independent of each other (Kawamura & Kusumi, 2018). Moreover, the results helped us gain a more nuanced understanding of the underlying mechanism of the association between relational mobility and individuals' tendency to conceal prosocial behaviors.

CHAPTER 4: STUDY 3

4.1 Introduction

Study 3 extends Study 2 in two ways. First, I tested the hypothesis using a cross-cultural comparison approach. Extant research in the field of relational mobility has demonstrated that cross-societal differences in relational mobility can explain cross-cultural (i.e., between-countries) differences in people's psychology and behavior in many domains (see Yuki & Schug, 2020, for an overview), such as interpersonal strategies (Schug et al., 2009) and thinking style (San Martin et al., 2019). Following this line of research, I examined whether relational mobility would explain the cross-cultural difference between two countries, Japan and the United States, in people's tendency to conceal prosocial behaviors. Based on the hypothesis of this research, I predicted that Americans, who are found to reside in a social environment that is higher in relational mobility than Japanese (e.g., Schug et al., 2009), would be less likely to conceal prosocial behaviors, and the cross-cultural difference would be mediated by higher relational mobility among Americans.

Second, I measured real-life donation experiences to test the ecological validity of the association between relational mobility and the tendency to conceal prosocial behaviors. Specifically, I asked participants to recall their most recent donation, then I examined whether the donation was anonymous and whether the participant told others about their donations. Active anonymization of prosocial behaviors could be indicated by the fact that the donation was anonymous, and that the donation experience was kept from others.

Moreover, I tested the replicability of the mediating role of negative expected reputation for publicized prosocial behaviors in the association between relational mobility and individuals' tendency to conceal prosocial behaviors. Using a hypothetical ingroup helping scenario in Study 2, I found that negative expected reputation but not positive expected reputation mediated the association between relational mobility and the tendency to conceal prosocial behaviors. In Study 3, I used the same hypothetical scenario as in Study 2

to examine whether relational mobility and negative expected reputation, but not relational mobility and positive expected reputation, would serially mediate the cross-cultural difference between Japanese and Americans in the tendency to conceal prosocial behaviors.

4.2 Method

4.2.1 Participants

Study 3 was also conducted during the worldwide COVID-19 pandemic in 2020. I collected data using the crowdsourcing sites in Japan and the United States. Specifically, I recruited Japanese participants via Lancers, and American participants via Amazon Mechanical Turk (MTurk). Finally, I recruited 302 responses in Japan and 250 responses in the United States. In the survey, I inserted an attention-check item, "We want to test your attention, so please click on the answer '2. Disagree.'" Participants who failed the attention-check item were excluded from analyses (Japan: 11; the United States: 4). Some participants were excluded because they were not targeting nationalities, not current residents in the targeting countries, or the survey language was not in their native language (Japan: 6; the United States: 5). Furthermore, 52 responses in the Japanese sample were not included in the analyses because the participants did not request payment in Lancers. Furthermore, 8 responses in Japan with a repeated IP address were excluded as they may be duplicate responses.

The final sample included 237 participants from Japan (126 women (53%), age range: 18-72, mean age = 36.49, *SD* = 10.08) and 241 participants from the United States (116 women (48%), age range: 18-88, mean age = 40.32, *SD* = 13.23). Participants from Japan received 150 JPY, and participants from the United States received 1.5 USD. All participants provided their consent before participating in the survey.

4.2.2 Design and Procedure

I had three dependent variables in Study 3. The first one was the likelihood of concealing prosocial behaviors in the hypothetical helping scenario. The second and third

ones were about the real-life donation experience, specifically whether the participants had donated anonymously and whether the participants had told others about their donations.

4.2.2.1 Hypothetical Ingroup Donation Scenario

First, participants read the hypothetical donation scenario, which was the same as the one used in Study 2. Furthermore, in this study, I also explored whether the societal difference in concealing donations would be contingent on the prosocial individual's donation amount (superior donation vs. normative donation). The manipulation materials for the two conditions of donation amount were the same as the ones used in Study 2. Nevertheless, consistent with Study 2, I did not find a significant moderating effect of the donation amount, thus I reported the results with combining the two conditions (see Appendix B for more details on the donation situations materials and Appendix C for the related results).

4.2.2.2 Likelihood of Concealing Prosocial Behaviors

Next, I measured the likelihood of concealing the donation. This measure was identical to the one used in Study 2. Participants provided their answers to the question using a 6-point Likert scale (1 = *definitely not*; 6 = *definitely*).

4.2.2.3 Positive and Negative Expected Reputation

Then, I measured participants' positive expected reputation and negative expected reputation from the observers (i.e., coworkers in the company) associated with publicized prosocial behaviors. The measures were identical to the ones used in Study 2. Participants provided their answers on a 7-point Likert scale (1 = *strongly disagree*; 7 = *strongly agree*). In this study, both positive expected reputation (Cronbach's alpha = .88) and negative

expected reputation (Cronbach's alpha = .89) had high reliability. Moreover, positive expected reputation was negatively related to negative expected reputation, $r = -.40$, $p < .001$.

4.2.2.4 Relational Mobility

Next, I measured relational mobility. Consistent with Study 2, I used the Relational Mobility Before COVID-19 Scale (Yuki et al., 2021). Participants provided their answers on a 6-point Likert scale (1 = *strongly disagree*; 6 = *strongly agree*). The scale had high reliability across the two countries (Japan: Cronbach's alpha = .80; the United States: Cronbach's alpha = .84). A higher score on this scale indicated higher relational mobility.

4.2.2.5 Real-Life Donation Experiences

After the measure of relational mobility, I measured participants' real-life donation experiences. Participants were asked to recall the last time they donated money or material goods to individuals or charitable or nonprofit organizations. Then they answered three questions about the recalled donation experience. The first question was regarding donation amount, in which participants indicated the amount of money or the value of the material goods they donated. Participants indicated their answers according to the local currency. Later, I transformed the donation amount to US dollars based on the instant exchange rates. The donation amount was used as a control variable in the regression on the two dependent variables regarding real-life donation behaviors. In the second question, participants answered whether the donation had been anonymous or not. They were provided three options: 1) "Yes, the donation was anonymous."; 2) "No, the donation was not anonymous (I disclosed my identity)."; and 3) "I do not remember." I reported the results with excluding participants that chose the third option, but it should be noted that the results remained similar without excluding the participants (see Appendix C for the detailed results with including the

participants that chose the third option). In the third question, participants were asked whether they had told anyone else that they had made the donation. Participants indicated their answers by choosing either “Yes” or “No”.

Finally, participants provided their demographics.

4.3 Results

4.3.1 Descriptive Statistics

First, I analyzed the descriptive statistics of the primary variables separately for the two country samples (i.e., Japan and the United States). Table 4-1 shows the results.

Table 4-1. Descriptive statistics of the primary variables for the two countries.

Variable			*M*	*SD*	%	Reliability (α)
Relational mobility		JA	3.82	0.64	/	.80
		US	4.45	0.67	/	.84
Hypothetical scenario						
Positive expected reputation		JA	3.47	1.18	/	.77
		US	4.85	1.23	/	.91
Negative expected reputation		JA	3.11	1.25	/	.87
		US	2.67	1.36	/	.91
Likelihood of concealing donation		JA	4.24	1.39	/	/
		US	4.28	1.59	/	/
Real-life donation experience						
Whether the donation was anonymous	Yes	JA	/	/	80.5	/
		US	/	/	59.5	/
	No	JA	/	/	19.5	/
		US	/	/	40.5	/
Whether told others about the donation	Yes	JA	/	/	13.1	/
		US	/	/	18.8	/
	No	JA	/	/	86.9	/
		US	/	/	81.3	/

Note. JA indicates Japan, and US indicates the United States.

In the following, I used statistical tests to rigorously analyze 1) societal difference in relational mobility, 2) societal difference in concealing donation in the hypothetical scenario, and the serial mediating roles of relational mobility and positive as well as negative expected reputation for publicized donation, and 3) societal differences in the two indicators of concealing donation in real life (i.e., whether donated anonymously, whether told others about the donation), and the mediating role of relational mobility.

4.3.2 Societal Difference in Relational Mobility

I ran an independent t-test to examine whether there was a societal difference in relational mobility. The results showed that, consistent with former findings, Japanese (M = 3.82, SD = .64) had lower relational mobility than Americans (M = 4.45, SD = .67), $t(475)$ = -10.48, p < .001, 95% CI for mean difference = [-0.75, -0.51].

4.3.3 Societal Difference in Concealing Prosocial Behaviors in the Hypothetical Scenario

Next, I analyzed whether there was a societal difference in concealing prosocial behaviors in the hypothetical scenario. Unexpectedly, there was no significant difference between the Japanese participants (M = 4.24, SD = 1.39) and the American participants (M = 4.28, SD = 1.59) in the likelihood of concealing donation in the hypothetical context, $t(476)$ = -0.34, p = .738, 95% CI for mean difference = [-0.32, 0.22] (see Figure 4-1).

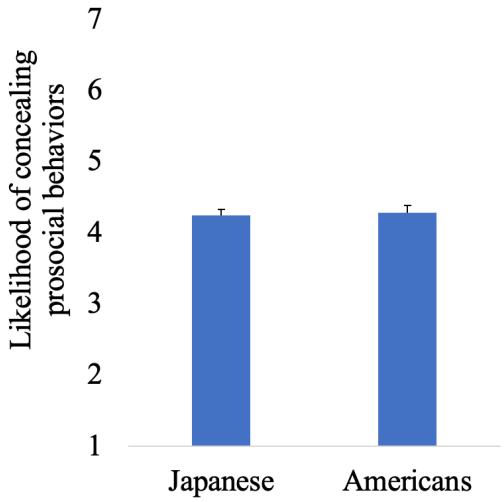

Figure 4-1. The difference between Japanese and Americans in the likelihood of concealing prosocial behaviors in the hypothetical scenario in Study 3.

4.3.3.1 Serial Indirect Effects of Relational Mobility and Positive as well as Negative Expected Reputation

Despite the non-significant societal difference in the likelihood of concealing prosocial behaviors in the hypothetical scenario, I next analyzed whether the serial indirect

effects of relational mobility and positive as well as negative expected reputation were significant. I used the PROCESS macro (model 81, Hayes, 2017) in SPSS to run the mediation analysis. Five thousand bootstrap samples were used to create 95% bias-corrected confidence intervals. In the analysis, I entered positive expected reputation and negative expected reputation simultaneously as mediators.

Consistent with Study 2, the results showed that the serial indirect effect of relational mobility and negative expected reputation was significant in indirectly shaping people's likelihood of concealing donation in the hypothetical scenario, indirect effect = -0.03, *SE* = 0.01, 95% CI = [-0.06, -0.001] (see Figure 4-2). Specifically, Americans had higher relational mobility than Japanese, $b = 0.63$, $SE = 0.06$, $p < .001$, 95% CI = [0.51, 0.74], which, in turn, was related to less negative expected reputation associated with publicized prosocial behaviors, $b = -0.20$, $SE = 0.09$, $p = .028$, 95% CI = [-0.38, -0.02], which, in turn, predicted a lower likelihood of concealing prosocial behaviors, $b = 0.20$, $SE = 0.05$, $p < .001$, 95% CI = [0.09, 0.31].

Inconsistent with Study 2, however, the results showed that the serial indirect effect of relational mobility and positive expected reputation was also significant, indirect effect = -0.02, *SE* = 0.02, 95% CI = [-0.06, -0.001] (see Figure 4-2). Specifically, Americans had higher relational mobility than Japanese, $b = 0.63$, $SE = 0.06$, $p < .001$, 95% CI = [0.51, 0.74], which, in turn, was related to more positive expected reputation associated with publicized prosocial behaviors, $b = 0.19$, $SE = 0.08$, $p = .024$, 95% CI = [0.03, 0.36], which was associated with a lower likelihood of concealing prosocial behaviors, $b = -0.21$, $SE = 0.06$, $p < .001$, 95% CI = [-0.32, -0.09]. The above results remained similar when the prosocial individual's donation amount (superior donation vs. normative donation) was controlled.

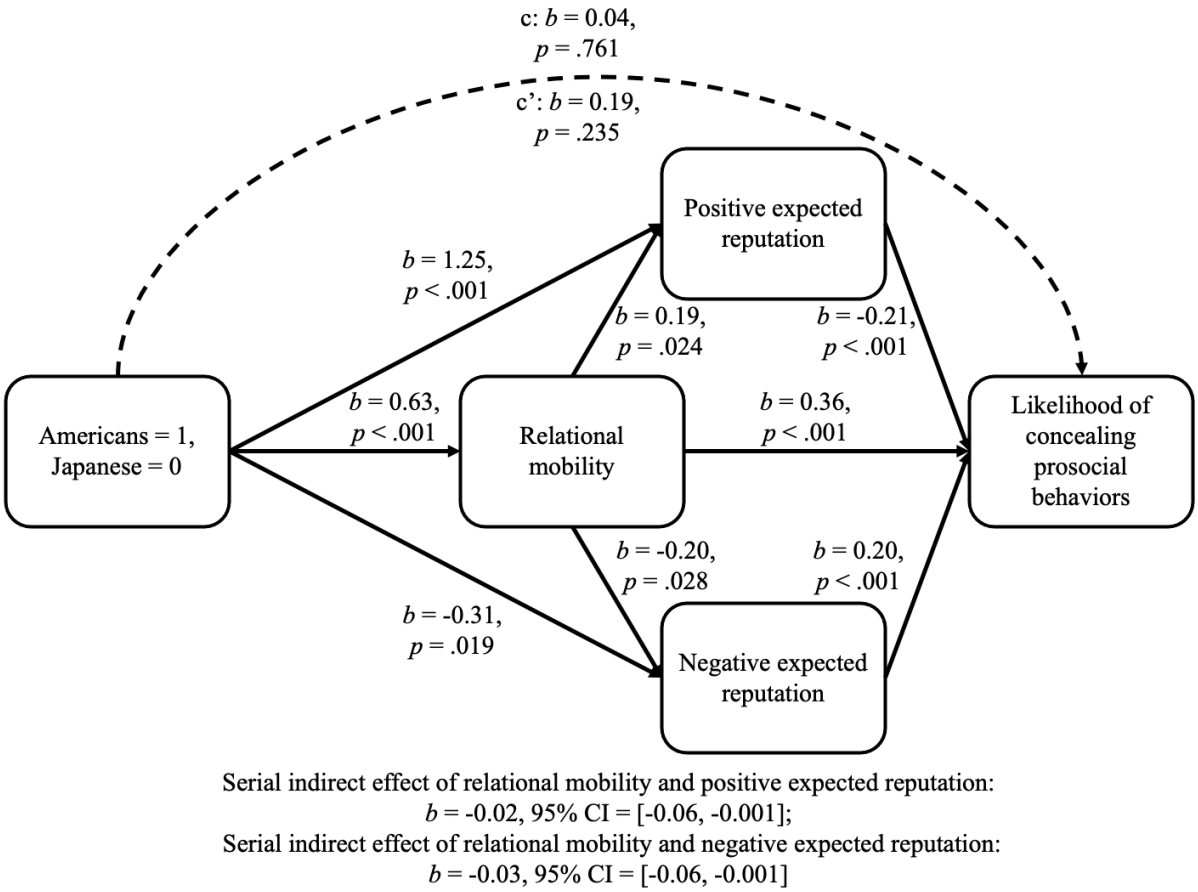

Figure 4-2. The serial mediating roles of relational mobility and positive expected reputation as well as negative expected reputation in explaining the difference between Americans and Japanese in the likelihood of concealing prosocial behaviors in the hypothetical scenario in Study 3. Unstandardized coefficients are reported. Solid lines indicate significant associations, while dashed lines indicate non-significant associations.

4.3.4 Societal Differences in Concealing Prosocial Behaviors in Real Life

Next, I analyzed whether there were societal differences in concealing prosocial behaviors in real life, which was indicated by a) whether the participant had donated anonymously and b) whether the participant had told others about the donation. Consistent with my prediction, the results showed that, compared to the American participants (59.5%), a larger percentage of the Japanese participants (80.5%) indicated that they had donated anonymously, χ^2 (1, N = 422) = 21.79, p < .001 (see Figure 4-3A). Likewise, compared to the American participants (18.8%), the Japanese participants (13.1%) were less likely to tell others about their donations, χ^2 (1, N = 477) = 2.86, p = .091 (see Figure 4-3B).

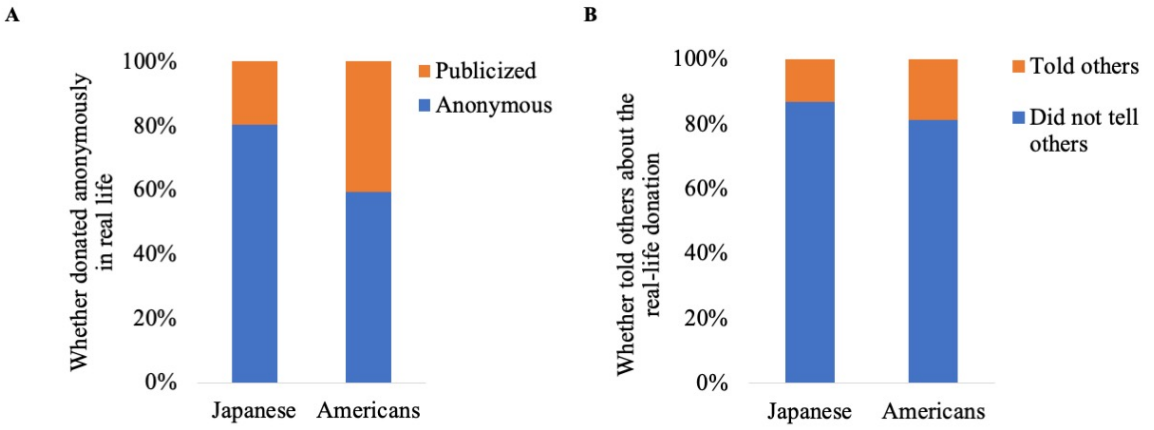

Figure 4-3. The differences between Japanese and Americans in A) whether people donated anonymously in real life and B) whether people told others about the real-life donation in Study 3.

4.3.4.1 Mediating Effect of Relational Mobility

I then used the PROCESS macro (model 4, Hayes, 2017) in SPSS to analyze whether the societal differences in concealing prosocial behaviors in real life would be explained by the difference in relational mobility. Inconsistent with my prediction, the results showed that the societal difference in terms of whether the participants had donated anonymously was not mediated by relational mobility, indirect effect = -0.15, *SE* = 0.11, 95% CI = [-0.38, 0.05] (see Figure 4-4A). However, consistent with my prediction, the societal difference in terms of whether the participants had told others about their donations, was mediated by relational mobility, indirect effect = 0.26, *SE* = 0.12, 95% CI = [0.01, 0.50] (see Figure 4-4B). Americans had higher relational mobility than Japanese, $b = 0.63$, $SE = 0.06$, $p < .001$, 95% CI = [0.51, 0.75], which, in turn, was associated with a higher tendency to tell others about the donation in real life, $b = 0.40$, $SE = 0.20$, $p = 0.038$, 95% CI = [0.02, 0.79].

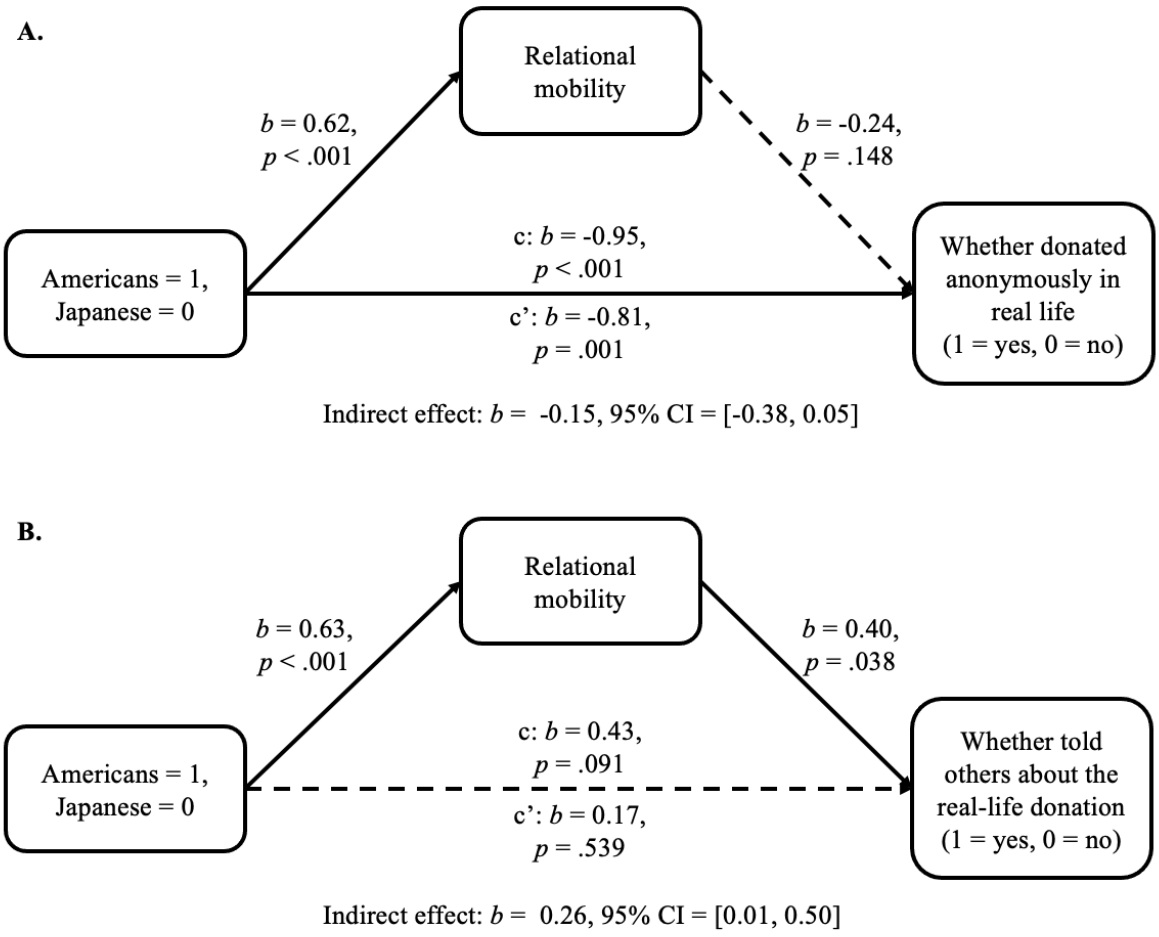

Figure 4-4. The mediating role of relational mobility in explaining the societal differences in (A) whether people donated anonymously in real life and (B) whether people told others about the real-life donation in Study 3. Unstandardized coefficients are reported. Solid lines indicate significant associations, while dashed lines indicate non-significant associations.

4.4 Discussion

Using the same hypothetical scenario as in Study 2, in Study 3, I found that relational mobility and negative expected reputation had a significant serial indirect effect in shaping the societal difference in individuals' likelihood of concealing prosocial behaviors. This finding was consistent with the finding in Study 2 that negative expected reputation had a significant mediating effect in the association between relational mobility and people's tendency to conceal prosocial behaviors. However, inconsistent with the non-significant mediating effect of positive expected reputation in Study 2, the results of Study 3 showed that relational mobility and positive expected reputation had a significant serial indirect effect in affecting people's likelihood of concealing prosocial behaviors. Considering the inconsistency of this finding, I further tested the underlying mechanisms of positive expected reputation and negative expected reputation in following studies.

Furthermore, testing people's donation experiences in real life, I obtained partial support for the ecological validity of the association between relational mobility and people's tendency to conceal prosocial behaviors. In particular, I found that Americans were more likely to tell others about their real-life donations than Japanese, and this cultural difference was explained by higher relational mobility in the United States. Moreover, Americans were less likely to donate anonymously in real life, but this cultural difference was not explained by higher relational mobility in the United States.

CHAPTER 5: STUDY 4

5.1 Introduction

Across Studies 1-3, the results in general provided support for my hypothesis that lower relational mobility would be associated with a higher likelihood of concealing prosocial behaviors, and the association would be mediated by expected reputation for publicized prosocial behaviors. However, the data of the three studies were correlational in nature, therefore it remains unknown whether relational mobility has a causal effect on people's tendency to conceal prosocial behaviors. In Study 4, I aimed at addressing this limitation by manipulating the perception of relational mobility in the social environment and comparing the tendency to conceal prosocial behaviors among people in different conditions of relational mobility (high relational mobility vs. low relational mobility). Furthermore, I tested the mediating roles of positive and negative expected reputation associated with publicized prosocial behaviors.

Specifically, I used the manipulation materials of relational mobility that were developed by L. M. W. Li et al. (2016). Several previous studies used the materials to manipulate people's perceptions of relational mobility (e.g., San Martin et al., 2019). The studies consistently found that the materials successfully activated different mindsets of high versus low relational mobility, which led to differences in individuals' psychological processes and behaviors. These findings suggested the reliability of the manipulation materials for relational mobility. Furthermore, the hypothetical donation scenario was the same as the one developed in Study 1 except for some minor changes, and the measures of positive and negative expected reputation were the same as the ones developed in Study 2.

5.2 Method

5.2.1 Participants

The participants of Study 4 were American citizens that I recruited via MTurk. In total, I recruited 251 participants to finish an online survey. In the survey, I used an attention-check item: "We want to test your attention, so please click on the answer '2. Disagree.'" Two participants were excluded from the analysis because they failed the attention-check item. Five participants were excluded from the analysis since they were not American citizens, not current residents in the United States, or English was not their native language. Furthermore, one participant was not included in the analysis because the participant did not request payment in MTurk. The valid sample included 243 participants (140 women (58%), age range: 19-72, mean age = 39.14, *SD* = 11.71). The participants received 2 USD for remuneration. All participants provided consent before they started the survey.

5.2.2 Procedure

5.2.2.1 Manipulation of Relational Mobility

First, I manipulated relational mobility following the paradigm used in L. M. W. Li et al.'s (2016) research. The paradigm has been used in several subsequent studies, and it has been suggested to be able to manipulate relational mobility successfully (e.g., L. M. W. Li et al., 2018; Xiaoxiao Zhang & Zhao, 2020). Specifically, participants were randomly assigned to one of two conditions of relational mobility (high relational mobility vs. low relational mobility). In the high relational mobility condition, participants were asked to imagine working in a company that had a flexible, project-based organizational structure, with employees working with different team members for each project. In the low relational mobility condition, participants were asked to imagine working in a company that had a

stable organizational structure, with employees working with the same team for a long time. To strengthen the manipulation effect, participants were then asked to answer three questions about the life and relationships in the company in as many details as possible. Detailed information on the manipulation materials could be found in Appendix B.

5.2.2.2 Manipulation Check of Relational Mobility

After the manipulation task, I measured participants' perceptions of relational mobility in the company setting and used it as the manipulation check of relational mobility. Specifically, I adapted a short version of the Relational Mobility Scale, which included 6 items. Sample items included a) "People working in this company have many chances to get to know other people." and b) "People working in this company are able to choose, according to their personal preferences, the people whom they interact with in their daily life." Participants indicated their answers on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). A higher score on this measure indicated higher relational mobility in the company setting. Unexpectedly, this measure had low reliability (Cronbach's alpha = .58) in this study.

Because of the unexpected low reliability of the short-version of the Relational Mobility Scale, I tested the reliability scores of the two correlated factors included in the scale out of exploratory purpose: the meeting factor and the choosing factor (Thomson et al., 2015). Specifically, the meeting factor included two items that asked the participant to what extent the people working in the company setting had opportunities to meet others. A sample item for the meeting factor was "People working in this company have many chances to get to know other people." The choosing factor included four items that asked the participant how much choice the people working in the company setting had in establishing or leaving interpersonal relationships. A sample item for the choosing factor was "People working in

this company are able to choose the groups and organizations they belong to." The results showed that the meeting factor of the relational mobility scale had high reliability, Cronbach's alpha = .78, while the choosing factor of the relational mobility scale had low reliability, Cronbach's alpha = .55. Considering the inconsistency in reliability scores between the two factors, I also analyzed the meeting factor and the choosing factor separately in the following analyses about relational mobility.

5.2.2.3 Decision in Whether to Conceal Prosocial Behaviors

Next, participants read a scenario in which they donated to disaster victims via a fund in the company. The materials were identical to the ones used for the company setting (i.e., "ingroup members" condition for the identity of observers) in Study 1, except for some minor adaptations to increase fluency of sentences (see Appendix B for detailed materials). Similar to Study 1, I asked participants how much they would donate, and this donation amount variable was used as a controlling variable in the following analysis. Importantly, I next asked participants whether they would actively conceal their donation or not.

5.2.2.4 Positive and Negative Expected Reputation Associated with Publicized Prosocial Behaviors

Next, I measured participants' expectation of positive and negative reputation associated with publicized prosocial behaviors. The measures were the same as the ones used in Study 2. Specifically, I asked participants how they perceived their colleagues (other than the fund organizers) would judge them if their name was publicized within the company as a donor. The positive expected reputation items included: "My colleagues will judge me positively" and "My colleagues will like me" (Cronbach's alpha = .88). The negative expected reputation items included "My colleagues will judge me negatively" and "My

colleagues will dislike me" (Cronbach's alpha = .92). Participants indicated their answers using a 7-point Likert scale (1 = *strongly disagree*; 7 = *strongly agree*). In this study, positive expected reputation was negatively related to negative expected reputation, $r = -.67$, $p < .001$.

Finally, participants provided their demographic information.

5.3 Results

5.3.1 Descriptive Statistics

First, I analyzed the descriptive statistics of the measured variables for the two relational mobility conditions (high relational mobility vs. low relational mobility). Table 5-1 shows the results. Then, I analyzed the zero-order correlations between the measured variables (see Table 5-2 for the results).

Table 5-1. Descriptive statistics of the primary variables for the two relational mobility conditions in Study 4.

Variable			*M*	*SD*	%	Reliability (α)
Relational mobility		HRM	3.69	0.50	/	0.20
		LRM	2.95	0.76	/	0.68
Meeting factor		HRM	5.41	0.75	/	0.75
		LRM	3.50	1.16	/	0.57
Choosing factor		HRM	2.83	0.78	/	0.48
		LRM	2.68	0.79	/	0.64
Positive expected reputation		HRM	4.71	1.16	/	0.88
		LRM	4.95	1.13	/	0.87
Negative expected reputation		HRM	2.76	1.43	/	0.90
		LRM	2.79	1.49	/	0.94
Concealing donation	Yes	HRM	/	/	85.1	/
		LRM	/	/	66.7	/
	No	HRM	/	/	14.9	/
		LRM	/	/	33.3	/

Note. HRM indicates the high relational mobility condition, while LRM indicates the low relational mobility condition.

Table 5-2. Zero-order correlations between the main variables in Study 4.

	Relational mobility	Meeting factor	Choosing factor	Positive expected reputation	Negative expected reputation
Relational mobility	-	-	-	-	-
Meeting factor	.72***	-	-	-	-
Choosing factor	.80***	.16*	-	-	-
Positive expected reputation	-.04	-.04	-.03	-	-
Negative expected reputation	.04	.01	.06	-.67***	-
Concealing donation	.12†	.17*	.03	-.32***	.28***

Note. * $p < .05$, *** $p < .001$, † $p < .1$.

In the following analyses, I used statistical tests to examine 1) whether the manipulation of individuals' perceptions of relational mobility was successful, 2) whether the two relational mobility groups differed in the tendency to conceal prosocial behaviors, and 3) whether the indirect effects of positive as well as negative expected reputation were significant in shaping in the group difference in concealing prosocial behaviors.

5.3.2 Manipulation Check of Relational Mobility

Next, I tested whether the manipulation of relational mobility was successful. The results showed that participants in the high relational mobility condition ($M = 3.69$, $SD = 0.50$) perceived higher relational mobility in the company than those in the low relational mobility condition ($M = 2.95$, $SD = 0.76$), $t(241) = 8.77$, $p < .001$.

As stated earlier, the high reliability of the meeting factor but the low reliability of the choosing factor in the Relational Mobility Scale suggested that the manipulation materials may have differing effects on the two factors. Therefore, I further examined whether the manipulation of relational mobility successfully manipulated both the choosing factor and the meeting factor of relational mobility. The results showed that participants in the high relational mobility condition ($M = 5.41$, $SD = 0.75$) had higher score in the meeting factor than those in the low relational mobility condition ($M = 3.50$, $SD = 1.16$), $t(241) = 15.07$, p

< .001. However, there was no significant difference in the score of the choosing factor between the high relational mobility condition (M = 2.83, SD = 0.78) and the low relational mobility condition (M = 2.68, SD = 0.79), $t(241) = 1.46$, $p = .147$. The results suggested that the manipulation paradigm in Study 4 only manipulated the meeting factor of relational mobility successfully, but failed to manipulate the choosing factor of relational mobility.

5.3.3 Decision in Whether to Conceal Prosocial Behaviors

Next, I analyzed whether participants in the two relational mobility conditions had difference in their decision in whether to conceal their prosocial behaviors or not. Contrary to my expectation, the results showed that participants in the high relational mobility condition (85.1%) were more likely to conceal their donations than participants in the low relational mobility condition (66.7%), χ^2 (1, N = 243) = 11.04, $p < .001$. Results were similar when I controlled for the donation amount.

5.3.3.1 Indirect Effect of Positive as well as Negative Expected Reputation

I then tested whether positive expected reputation and negative expected reputation would have indirect effects on the group difference in the tendency to conceal prosocial behaviors. I used PROCESS macro (model 4, Hayes, 2017) in SPSS to run the mediation analysis. In the analysis, the outcome variable (i.e., the decision in whether to conceal donation) was a binary variable (1 = conceal donation, 0 = publicize donation). Furthermore, positive expected reputation and negative expected reputation were entered as mediators simultaneously. The results showed the neither positive expected reputation, indirect effect = 0.13, SE = 0.10, 95% CI = [-0.03, 0.38], nor negative expected reputation, indirect effect = -0.01, SE = 0.07, 95% CI = [-0.16, 0.13], had a significant indirect effect in shaping the difference in the tendency to conceal prosocial behaviors between the two relational mobility

conditions (see Figure 5-1). Results remained similar when I controlled for the donation amount.

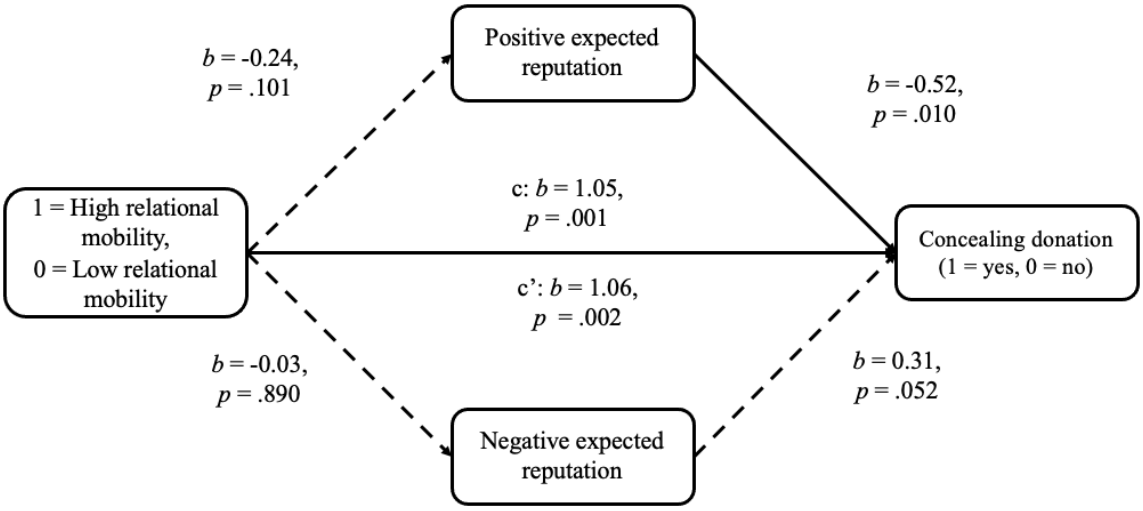

Figure 5-1. The mediation model tested in Study 4. Unstandardized coefficients are reported. Solid lines indicate significant associations, while dashed lines indicate non-significant associations.

5.4 Discussion

The results of Study 4 did not support my hypothesis. I speculated that the unexpected results were due to the limitation of the manipulation paradigm. Specifically, the scenario in the high relational mobility condition emphasized the instability of one's team memberships, but the change in team memberships may not be based on one's active choice but may be subject to the arrangement of the company. Likewise, the scenario in the low relational mobility condition emphasized the stability of team memberships, but it failed to make it clear that the stability was not subject to one's active choice and that the employees had limited freedom in choosing or leaving their team members, whether they liked them or not. Consistently, the manipulation paradigm only successfully manipulated the meeting factor but not the choosing factor of relational mobility, thus the manipulation failed to activate the concept of relational mobility which emphasizes individuals' high (low) degree of *freedom* to *choose* their relationship partners in high (low) relational mobility societies. Therefore, the limitation of the manipulation paradigm may account for the failure of Study 4 to detect the predicted effect. I conducted Study 5 to address this limitation.

CHAPTER 6: STUDY 5

6.1 Introduction

In Study 4, I failed to find supporting evidence for my hypothesis, presumably due to the limitation of the manipulation materials. In Study 5, I tested the causal effect of relational mobility on people's tendency to conceal prosocial behaviors using new manipulation materials for people's perceptions of relational mobility. In the new manipulation materials, I highlighted the high (low) degree of freedom in choosing and leaving team members in the high (low) relational mobility conditions. Furthermore, because the 6-item version of the Relational Mobility Scale yielded low reliability, I used the 12-item version of the Relational Mobility Scale as the manipulation check measure. Moreover, I developed a new donation scenario to test the hypothesis.

6.2 Method

6.2.1 Participants

I recruited 200 Americans via MTurk to participate in an online survey. Each participant received 2 USD for remuneration. Seven participants were excluded because they were not citizens of the United States, not current residents in the United States, or English was not their native language. Furthermore, one participant was excluded from analysis because they had an extremely short duration of the survey (no more than 4 minutes, while the median duration among all participants was about 12 minutes). The valid sample included 192 participants (109 women (57%), age range: 19-75, mean age = 41.61, *SD* = 13.94).

6.2.2 Procedure

6.2.2.1 Manipulation of Relational Mobility

First, I manipulated perceptions of relational mobility. Participants were randomly assigned to one of two conditions of relational mobility (low relational mobility vs. high relational mobility). In the low relational mobility condition, participants imagined that they worked in a large multi-department company with a stable workforce and organizational structure. The company determined the work teams for employees and employees worked with the same team for a long time, whether they liked it or not. In the high relational mobility condition, participants imagined that they worked in a large multi-department company with a fluid, project-based organizational structure. In this company, employees selected each other to form project teams and worked in the teams based on mutual agreement and compatibility. Furthermore, the employees had many opportunities to meet different members of the organization (see Appendix B for the detailed materials). To

strengthen the manipulation effect, participants were then asked to answer three questions about the life and relationships in the company in as many details as possible.

6.2.2.2 Manipulation Check of Relational Mobility

After the manipulation task, I used an adapted version of the 12-item Relational Mobility Scale as the manipulation check of relational mobility (Yuki et al., 2007) (Cronbach's alpha = .95). Sample items included a) "People working in this company have many chances to get to know other people." and b) "People working in this company are able to choose, according to their own preferences, the people whom they interact with in their daily life." Participants provided their answers using a 6-point Likert scale (1 = *strongly disagree*; 6 = *strongly agree*). A higher score on this scale indicated higher relational mobility perceived in the company setting.

6.2.2.3 Likelihood of Concealing Prosocial Behaviors

Next, participants read a hypothetical donation scenario, in which they donated money for helping the victims of a major natural disaster via a fund in the company (where they worked). Later, they received an email from the fund, notifying them that they were one of the most generous donors in the company, and that the fund intended to publicize their name on the page of "Major Benefactors" in the online newsletter of the company. The participants were also informed that, if they did not want the fund to publicize their donation, they could reply to the email to ask to be an anonymous donor. After reading the donation scenario, participants answered how likely it would be for them to reply to the email to ask the fund to make their donation anonymous. They answered the question using a 6-point Likert scale (1 = *definitely*; 6 = *definitely not*). I used the reversed score of the item to indicate the likelihood of concealing prosocial behaviors.

6.2.2.4 Positive and Negative Expected Reputation

Then, I measured participants' positive and negative expected reputation from the observers (i.e., colleagues in the company) associated with publicized prosocial behaviors. The items were the same as the ones used in Study 2. Similarly, both positive expected reputation (Cronbach's alpha = .87) and negative expected reputation (Cronbach's alpha = .96) had high reliability. In this study, positive expected reputation was negatively related to negative expected reputation, $r = -.58$, $p < .001$.

Finally, participants provided their demographics.

6.3 Results

6.3.1 Descriptive Statistics

First, I analyzed the descriptive statistics of the measured variables for the two relational mobility conditions (high relational mobility vs. low relational mobility). Table 6-1 summarizes the results. Next, I tested the zero-order correlations between the measured variables (see Table 6-2 for the results).

Table 6-1. Descriptive statistics of the primary variables for the two relational mobility conditions in Study 5.

Variable		*M*	*SD*	Reliability (α)
Relational mobility	HRM	4.41	0.82	.87
	LRM	2.18	0.75	.87
Meeting factor	HRM	4.27	1.07	.89
	LRM	2.45	0.94	.78
Choosing factor	HRM	4.51	0.96	.87
	LRM	1.99	0.74	.82
Positive expected reputation	HRM	5.26	0.91	.82
	LRM	4.87	1.12	.89
Negative expected reputation	HRM	2.50	1.25	.97
	LRM	2.93	1.36	.95
Likelihood of concealing donation	HRM	3.90	1.84	/
	LRM	4.25	1.75	/

Note. HRM indicates high relational mobility condition, while LRM indicates low relational mobility condition.

Table 6-2. Zero-order correlations between the main variables in Study 5.

	Relational mobility	Meeting factor	Choosing factor	Positive expected reputation	Negative expected reputation
Relational mobility	-	-	-	-	-
Meeting factor	.90***	-	-	-	-
Choosing factor	.96***	.75***	-	-	-
Positive expected reputation	.24**	.26***	.19**	-	-
Negative expected reputation	-.18*	-.18*	-.16*	-.58***	-
Likelihood of concealing donation	-.14†	-.13†	-.12	-.27***	.33***

Note. * $p < .05$, ** $p < .01$,*** $p < .001$, † $p < .1$.

In the following, I adopted statistical tests to examine 1) whether the manipulation of relational mobility was successful, 2) whether the group difference in the likelihood of concealing prosocial behaviors was significant, and 3) whether negative expected reputation and/or positive expected reputation significantly mediated the group difference in the likelihood of concealing prosocial behaviors.

6.3.2 Manipulation Check of Relational Mobility

First, I ran an independent t-test to examine whether the manipulation of relational mobility was successful. The results showed that the high relational mobility group (M = 4.41, SD = 0.82) perceived higher relational mobility at the company than the low relational mobility group (M = 2.18, SD = 0.75), $t(189) = 19.62$, $p < .001$. The results further revealed that, when the subscales of relational mobility were divided, participants in the high relational mobility condition (meeting factor: M = 4.27, SD = 1.07; choosing factor: M = 4.51, SD = 0.96) scored higher than those in the low relational mobility condition (meeting factor: M = 2.45, SD = 0.94; choosing factor: M = 1.99, SD = 0.74) in both the meeting factor, $t(189) = 12.54$, $p < .001$, and the choosing factor, $t(190) = 20.52$, $p < .001$, of relational mobility.

These results suggested that the new manipulation materials in Study 5 manipulated both the meeting factor and the choosing factor of relational mobility successfully.

6.3.3 Likelihood of Concealing Prosocial Behaviors

Next, I ran an independent t-test to analyze whether the two relational mobility conditions significantly differed in the likelihood of concealing prosocial behaviors. The results showed that people in the low relational mobility condition (M = 4.25, SD = 1.75) were more likely to conceal their prosocial behaviors than people in the high relational mobility condition (M = 3.90, SD = 1.84), $t(190) = -1.37$, $p = .172$, 95% CI for mean difference = [-0.87, 0.16], though the difference did not reach significance (see Figure 6-1).

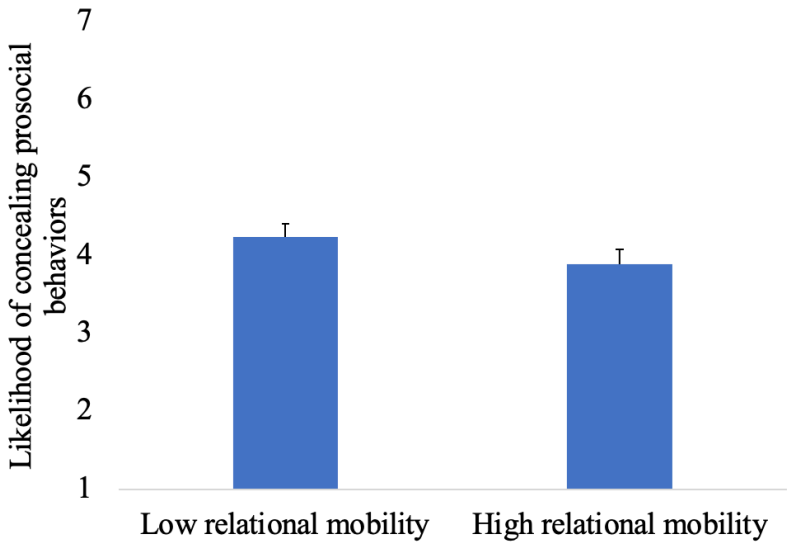

Figure 6-1. The difference between the two relational mobility conditions in the likelihood of concealing prosocial behaviors in Study 5. Error bars represent standard errors.

6.3.3.1 Indirect Effects of Positive and Negative Expected Reputation

Next, I analyzed whether positive as well as negative expected reputation would have indirect effects on the group difference (high relational mobility condition vs. low relational mobility condition) in the likelihood of concealing prosocial behaviors. I used PROCESS

macro (model 4, Hayes, 2017) in SPSS to run the mediation analysis. In the analysis, positive expected reputation and negative expected reputation were entered as mediators simultaneously. The results revealed that the indirect effect via negative expected reputation, indirect effect = -0.15, *SE* = 0.08, 95% CI = [-0.32, -0.02], but not positive expected reputation, indirect effect = -0.08, *SE* = 0.07, 95% CI = [-0.24, 0.05], was significant. Specifically, high relational mobility brought about less negative expected reputation associated with publicized prosocial behaviors, *b* = -0.43, *SE* = 0.19, *p* = .026, 95% CI = [-0.80, -0.05], which, in turn, led to lower likelihood of concealing prosocial behaviors, *b* = 0.35, *SE* = 0.11, *p* = .002, 95% CI = [0.13, 0.58]. Figure 6-2 shows the results of the mediation analysis.

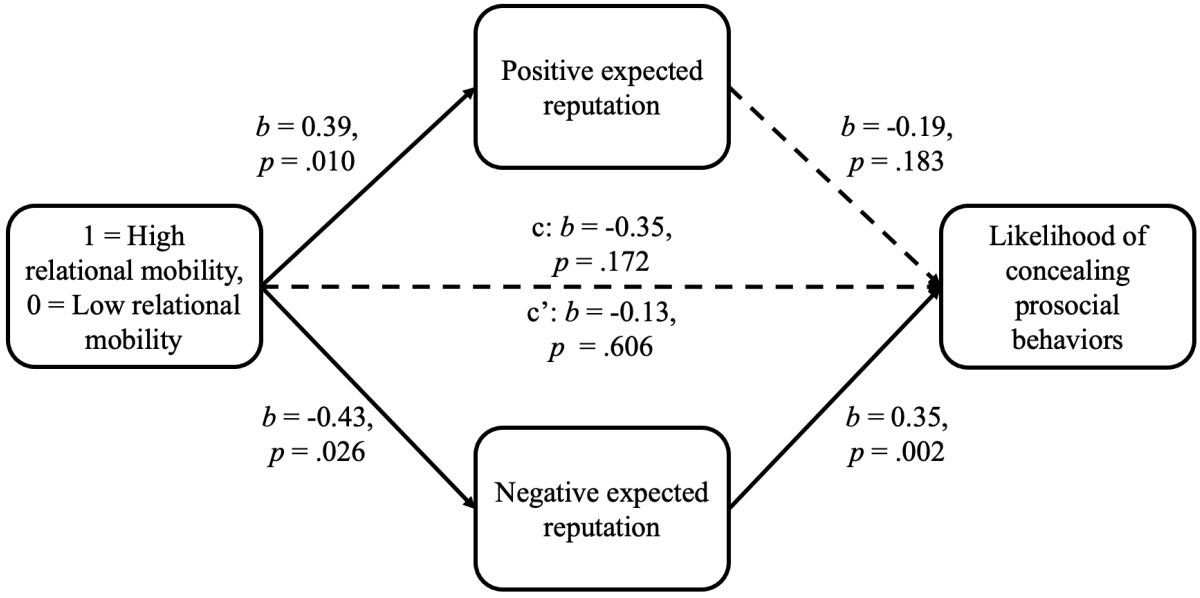

Figure 6-2. The mediation model tested in Study 5. Unstandardized coefficients are reported. Solid lines indicate significant associations, while dashed lines indicate non-significant associations.

6.4 Discussion

Using new manipulation materials for people's perceptions of relational mobility that emphasized high (low) relational choice in high (low) relational mobility conditions, Study 5 addressed the limitation of Study 4 and provided support for my hypothesis. In particular, the results showed that the manipulation of lower relational mobility (vs. higher relational mobility) in one's immediate society was associated with more negative expected reputation for publicized prosocial behaviors, which, in turn, was associated with a higher likelihood of concealing prosocial behaviors. This finding was consistent with results in Study 2 and Study 3. In contrast, the mediating role of positive expected reputation was not significant, replicating the results in Study 2 (but not Study 3).

CHAPTER 7: GENERAL DISCUSSION

7.1 Summary of Findings

With a large body of research chasing the truth of human beings' prosocial behaviors, we still have limited knowledge regarding the factors, especially socio-ecological ones, that influence individuals' tendency to conceal prosocial behaviors. In this research, I investigate whether and how relational mobility, one of the socio-ecological factors attracting increased attention (Salvador et al., 2020; San Martin et al., 2019; Thomson et al., 2018; Yuki & Schug, 2020; Xiaoxiao Zhang & Zhao, 2020), influences people's tendency to conceal prosocial behaviors. In particular, I focus on the influence of relational mobility on individuals' tendency to conceal prosocial behaviors via the indirect effect of expected reputation following publicized prosocial behaviors. In support of my hypothesis, the results of the five studies, including three correlational studies and two experiments, found a robust indirect effect via negative expected reputation following publicized prosocial behaviors. However, the results regarding the indirect effect via positive expected reputation were inconsistent across studies. Specifically, in Study 2, negative expected reputation but not positive expected reputation significantly mediated the association between relational mobility and people individuals' tendency to conceal prosocial behaviors. In Study 3, the serial mediating paths from relational mobility to both negative expected reputation and positive expected reputation were significant in shaping people's tendency to conceal prosocial behaviors in the hypothetical scenario. In Study 5, the low relational mobility condition (compared with high relational mobility condition) had a significant indirect effect via negative expected reputation but not positive expected reputation in inducing a higher tendency to conceal prosocial behaviors. The findings of the five studies converged to support that a social ecology with lower relational mobility is associated with more negative expected reputation following publicized prosocial behaviors, which, in turn, is associated with a higher tendency to conceal prosocial behaviors among individuals.

To establish a comprehensive understanding of the association between relational mobility and concealing prosocial behaviors, it is also meaningful to summarize and discuss the association before considering the role of expected reputation (i.e., the "total effect") and the association after considering the role of expected reputation (i.e., the "direct effect"). In general, the findings were mixed for both the "total effect" and the "direct effect". Regarding the "total effect", without considering (controlling for) the role of expected reputation, lower perceived relational mobility was associated with a higher tendency to conceal prosocial behaviors in Study 1 (though the total effect was only marginally significant). Likewise, in Study 3, people in Japan, a low relational mobility society, were more likely to donate anonymously and less likely to tell others about their donation experience in real life, compared with people in the United States, a high relational mobility society. Furthermore, the lower relational mobility in Japan mediated the cultural difference in whether people told others about the real-life donation. Nevertheless, the association between relational mobility and concealing prosociality was not significant in Study 2 and Study 5 without considering the role of expected reputation. Regarding the "direct effect", after considering (controlling for) the role of expected reputation, interestingly, lower relational mobility was related to a lower tendency to conceal prosocial behaviors in Study 3 and Study 4, but the association was not significant in Study 1, Study 2, and Study 5.

Taken together, these findings converged to suggest a complicated association between relational mobility and individuals' tendency to conceal prosocial behaviors. Furthermore, there may be multiple mechanisms that underlie this association. In this research, I have demonstrated the underlying mechanism of expected reputation following publicized prosocial behaviors, but there could be other mechanisms that shape this association. Future research is needed to fully understand the influence of relational mobility on individuals' tendency to conceal prosociality.

7.2 Implications

This research has some important implications. First, the findings highlight the role of social ecology in shaping individuals' tendency to actively conceal prosocial behaviors. The phenomenon of actively concealing/anonymizing prosocial behaviors has been understudied, as previous research on prosocial behaviors mostly focused on the mechanisms necessitating the publicity/observability of people's prosocial behaviors (Fehr & Gächter, 2002; Gintis et al., 2001; Nowak & Sigmund, 1998; Trivers, 1971). Some early attempts on this understudied topic have investigated antecedents or consequences of concealing prosocial behaviors (Burtch et al., 2016; Y. Chen & Gao, 2021; Peacey & Sanders, 2013; Raihani, 2014). Specifically, these studies on antecedents of concealing prosocial behaviors all focused on the proximal, micro-level factors, such as the amount and the timing of the donation (Peacey & Sanders, 2013; Raihani, 2014). Extending these studies, my research demonstrates that distal, macro-level factors (i.e., relational mobility in this research) are also important antecedents of people's tendency to conceal prosocial behaviors.

Furthermore, the findings of this research suggest that concealing prosocial behaviors is, at least partly, based on egocentric motivation related to reputation management. Some researchers have argued that anonymous prosocial behaviors are selfless altruism that is driven by purely altruistic motivation (e.g., White, 2014). Consistently, some studies used anonymous giving as an indicator of pure altruism (e.g., Kamas et al., 2008). In contrast, some researchers have argued that anonymous prosocial behaviors entail multifaceted and complicated motivations including both selfless, non-egocentric motivations and egocentric motivations (Schervish, 1994; Sisco & Weber, 2019). For example, in a survey among 173 donors who have made anonymous donations on the crowdfunding platform GoFundMe, Sisco and Weber (2019) found that only 11% of the anonymous donors denied "every plausible egoistic goal", while other anonymous donors at least indicated one egoistic goal

(e.g., “helping feels good”) underlying their anonymous donations. Furthermore, several studies found that anonymous donations were driven by donors’ prevention-related motives, such as avoiding future incessant donation solicitations (e.g., Schervish, 1994). Supporting but extending this latter view of anonymous prosocial behaviors, my research demonstrates that the tendency to actively anonymize prosocial behaviors could be heightened by one’s expectation of a more negative reputation that accompanies publicized prosocial behaviors. This finding broadens the extant view of anonymous prosocial behaviors by emphasizing reputation management as one of egocentric motivations that undergird people’s anonymous prosociality. To fully capture to what extent anonymous prosocial behaviors are purely altruistic, future research should further investigate the psychological processes underlying people’s decision to actively anonymize their prosocial behaviors.

Moreover, this research provides some insight for understanding prosocial behaviors in low relational mobility societies like Japan. Some research has showed that people in low relational mobility societies display lower level of prosocial behaviors than people in high relational mobility societies (Romano et al., 2021; Thomson et al., 2018). However, it is still unclear what drives the low cooperation level among the people in low relational mobility societies. The findings of this research suggest that the higher tendency to conceal prosociality in low relational mobility societies may be a potential underlying mechanism. People in low mobility societies may cooperate out of empathy or for feeling good, but they may tend to avoid observable or publicized prosocial behaviors. Concealing prosociality, which disallows one’s friends from knowing the prosocial appeal, might negatively affect the cooperation level in the society. It would be meaningful for future research to investigate how the tendency to conceal prosociality would influence the cooperation level in the society.

This research also provides some insights for the research on collectivism. Prior theories on collectivism mostly argued that people in collectivistic countries view group goals

and group interests as more important than personal goals and personal interests (e.g., C. C. Chen et al., 1998; Triandis, 1995). Based on these theories, one might expect people in collectivistic countries to be less likely to conceal prosocial behaviors compared with people in individualistic countries, as concealing prosocial behaviors may restrict their possibility of signaling the contribution and commitment to the group. However, my findings did not support this notion. Specifically, in Study 3, people in Japan, a well-studied collectivistic society, and people in the United States, a well-known individualistic society, did not significantly differ in the likelihood of concealing prosocial behaviors in a hypothetical context of helping an ingroup. Furthermore, contrary to the previous notion of collectivism, lower relational mobility in Japan had an indirect effect, via more negative expected reputation and less positive expected reputation about publicized prosocial behaviors, in inducing a higher tendency among the individuals to conceal prosocial behaviors in the hypothetical ingroup helping context. This finding suggests the importance to refine our understanding of collectivism and understand that people in collectivistic countries could value personal reputation management more than showing group commitment.

7.3 Limitations and Future Directions

This research has some limitations. First, as discussed earlier, the studies obtained inconsistent evidence for the role of positive expected reputation in mediating the association between relational mobility and individuals' tendency to conceal prosocial behaviors. The results across studies suggest that negative expected reputation robustly mediates the association between relational mobility and individual's tendency to conceal prosocial behaviors. These findings suggest that people conceal prosociality not because they expect less positive reputation from others, but because they expect more negative reputation from others (if the prosociality were publicized). The findings were consistent with previous research which showed that positive reputation seeking and negative reputation avoidance are distinct reputation concerns (Kawamura & Kusumi, 2018). Future research is needed to establish a clear understanding of whether and how positive expected reputation and negative expected reputation differentially shape individuals' tendency to conceal prosociality.

Second, my samples in this research only included participants from three cultures (i.e., Japan, the United States, China), and I recruited the participants from crowdsourcing sites or professional sampling sites. Although using crowdsourcing samples has some advantages, such as allowing us to recruit non-student samples with a broader age range, it also has some disadvantages. Some research has revealed that the crowdsourcing samples, such as the MTurk workers, have more knowledge about behavioral economics experiments, which is likely to reduce the power of the research (Chandler et al., 2014). Future research should use more representative sampling methods and recruit participants from other cultures to test the generalizability of the current findings.

Third, this research mainly tested the concealment of prosocial behaviors in charitable giving contexts. In the donation scenarios tested, the donation was not completely anonymous, as the agency of helping knew about all donors' decisions in whether to

anonymize their donation. Particularly, except for the Internet donation scenario in Study 1, all other donation scenarios in this research were company-based scenarios, in which the agency organizers of donation (i.e., the fund organizers) were also the participants' coworkers in the company. Some research has found that an anonymous donor is perceived as kinder than a donor who discloses their donation (Shorr & Shorr, 1995). Therefore, the participants might expect that the fund organizers would somehow give them some credits and benefits if they chose to conceal their donations. As I discussed in the Introduction section, concealing prosocial behaviors could vary at different levels (e.g., concealed from everyone vs. concealed from the general public but disclosed to the recipient) and could be reflected in different ways, including denying about one's prosocial act and refraining from telling others about one's prosocial act. An interesting avenue for future research is to investigate whether the current findings would be replicated when the degree of concealment is higher (e.g., even the agency does not know about the donation) or when other indicators of concealing prosocial behaviors are used. It would be also important for future research to investigate the potential moderators in the association between relational mobility and people's tendency to conceal prosocial behaviors. In the current research, the results showed that the identity of observers (Study 1) and the donation amount (Study 2 & 3) did not significantly moderate the influence of relational mobility. Future research should further test the moderating roles of other factors, such as whether the publicity of prosocial behaviors was normative, and whether the prosocial act itself was normative.

7.4 Conclusion

Though prosocial behaviors have been extensively investigated in social sciences, it is still a mystery what kinds of social environments would breed the active concealment of prosociality among human beings. Adopting a socio-ecological approach, this research identifies that relational mobility is one of important socio-ecological factors that shape individuals' tendency to conceal prosociality. Across five studies, this research demonstrates that lower relational mobility would be associated with a more negative expected reputation for publicized prosocial behaviors, which, in turn, predicts a higher tendency to conceal prosocial behaviors among individuals. The findings of the current research highlight the importance of investigating the effect of social ecology on individuals' prosocial behaviors.

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APPENDICES

Appendix A: Participants Composition and Characteristics of All Studies

Table S1. Participants' composition and characteristics of all studies.

Study	Study 1	Study 2	Study 3		Study 4	Study 5
Country (*n*)	China (269)	China (281)	Japan (237)	US (241)	US (243)	US (192)
Gender						
Man	55.4%	54.1%	45.1%	51.5%	42.0%	41.7%
Woman	44.6%	45.9%	53.2%	48.1%	57.6%	56.8%
Age mean	33.9	32.6	36.5	40.3	39.1	41.6
City size of the current place						
Rural area	/	2.8%	0.8%	7.9%	11.9%	9.4%
Small town or village	/	6.0%	12.2%	14.1%	15.6%	18.2%
Small city	/	28.8%	40.5%	24.1%	28.0%	22.9%
Medium-sized city	/	19.9%	23.2%	31.5%	29.2%	27.1%
Large city	/	42.3%	23.2%	22.4%	15.2%	22.4%
City size of the longest-lived place						
Rural area	/	6.4%	1.7%	6.6%	10.3%	9.9%
Small town or village	/	9.3%	20.3%	14.5%	18.5%	18.2%
Small city	7.1%	27.0%	38.8%	24.1%	25.9%	24.5%
Medium-sized city	13.0%	20.6%	21.1%	30.7%	32.5%	24.0%
Large city	79.9%	36.7%	18.1%	24.1%	12.8%	23.4%
Socioeconomic status (SES) of the current household						
Low income	/	2.5%	16.0%	12.9%	10.7%	13.0%
Lower middle class	/	26.0%	30.8%	30.3%	25.5%	28.6%
Middle class	/	56.2%	42.6%	46.5%	51.4%	42.7%
Upper middle class	/	14.9%	8.4%	10.0%	11.5%	15.1%
Wealthy	/	0.4%	2.1%	0.4%	0.8%	0.5%
SES of the household where one grew up						
Low income	3.0%	6.0%	9.7%	12.9%	12.3%	13.5%
Lower middle class	11.9%	36.7%	21.9%	28.6%	25.5%	29.2%
Middle class	62.8%	45.2%	43.9%	39.4%	47.3%	39.1%

Study	Study 1	Study 2	Study 3		Study 4	Study 5
Country (*n*)	China (269)	China (281)	Japan (237)	US (241)	US (243)	US (192)
Upper middle class	21.9%	11.7%	21.9%	18.7%	14.0%	17.2%
Wealthy	0.4%	0.4%	2.5%	0.4%	0.8%	1.0%
Educational level						
Middle school or earlier	/	0.4%	0.8%	0.4%	0%	0%
High school or equivalent	/	7.1%	24.9%	18.7%	18.9%	25.0%
Junior college/trade school	/	16.7%	16.5%	14.5%	16.5%	18.2%
4 year college/university	/	65.5%	49.8%	47.3%	48.1%	39.1%
Graduate degree - masters	/	10.3%	6.3%	14.5%	13.6%	15.1%
Graduate degree - doctoral	/	0%	1.7%	4.6%	2.9%	2.6%

Appendix B: Research Materials

The Donation Scenario Used in Each Study

Study 1

The Ingroup Members Condition.

You work in a company. A major natural disaster has occurred somewhere within the U.S. In response, a new charity has been launched recently by a group of your colleagues and it is now collecting donations within the company for the victims of the disaster. You intend to donate for the victims.

The Strangers Condition.

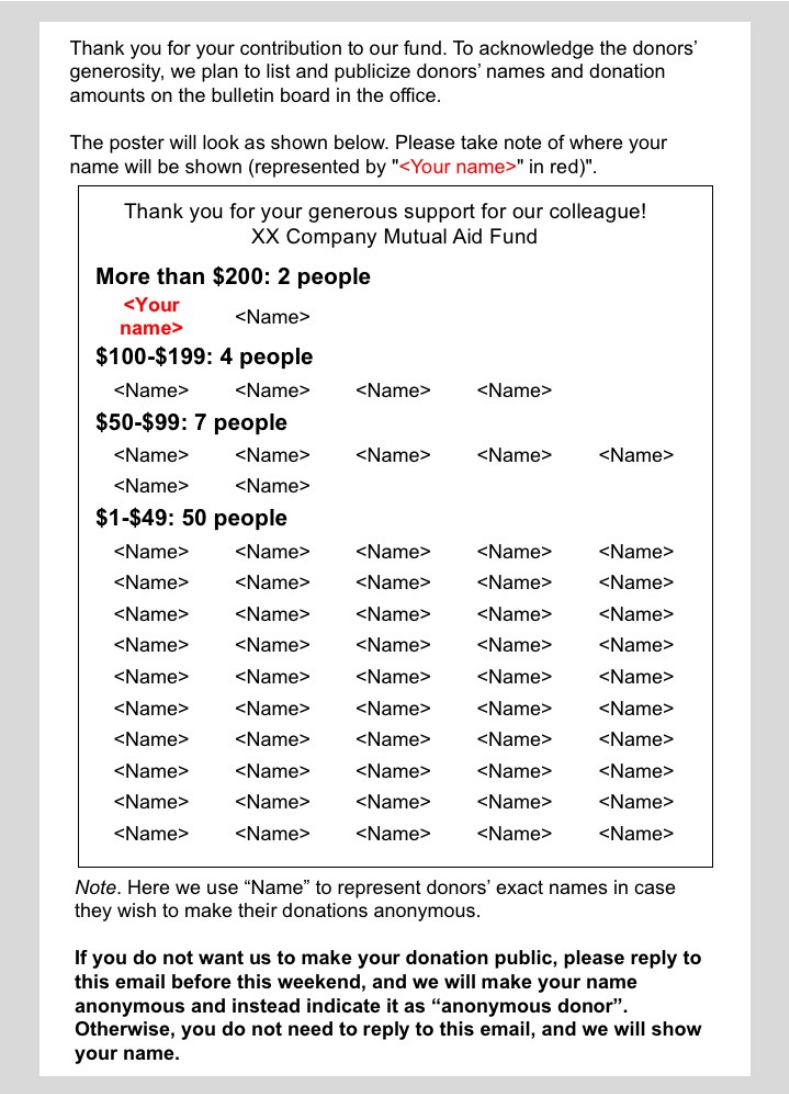
A major natural disaster has occurred somewhere within the U.S. In response, a new charity group has been launched recently and is collecting money for the victims of the disaster via its website. You intend to donate for the victims.

Study 2 & Study 3

Superior Donation Condition.

You are an employee in a company. Recently, one of your colleagues has been diagnosed with a rare disease, and the high treatment cost for the disease is not covered by health insurance. Then a group of other colleagues has launched a fund within the company to help the colleague with disease financially. You donated to the fund.

Today, you received an email from the fund organizers:



Thank you for your contribution to our fund. To acknowledge the donors' generosity, we plan to list and publicize donors' names and donation amounts on the bulletin board in the office.

The poster will look as shown below. Please take note of where your name will be shown (represented by "<Your name>" in red)".

Thank you for your generous support for our colleague!
XX Company Mutual Aid Fund

More than $200: 2 people

<Your name> <Name>

$100-$199: 4 people

<Name> <Name> <Name> <Name>

$50-$99: 7 people

<Name> <Name> <Name> <Name> <Name>
<Name> <Name>

$1-$49: 50 people

<Name> <Name> <Name> <Name> <Name>
<Name> <Name> <Name> <Name> <Name>
<Name> <Name> <Name> <Name> <Name>
<Name> <Name> <Name> <Name> <Name>
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<Name> <Name> <Name> <Name> <Name>
<Name> <Name> <Name> <Name> <Name>

Note. Here we use "Name" to represent donors' exact names in case they wish to make their donations anonymous.

If you do not want us to make your donation public, please reply to this email before this weekend, and we will make your name anonymous and instead indicate it as "anonymous donor". Otherwise, you do not need to reply to this email, and we will show your name.

Normative Donation Condition.

You are an employee in a company. Recently, one of your colleagues has been diagnosed with a rare disease, and the high treatment cost for the disease is not covered by health insurance. Then a group of other colleagues has launched a fund within the company to help the colleague with disease financially. You donated to the fund.

Today, you received an email from the fund organizers:

Thank you for your contribution to our fund. To acknowledge the donors' generosity, we plan to list and publicize donors' names and donation amounts on the bulletin board in the office.

The poster will look as shown below. Please take note of where your name will be shown (represented by "<Your name>" in red)".

Thank you for your generous support for our colleague!
XX Company Mutual Aid Fund

More than $200: 2 people

<Name> <Name>

$100-$199: 4 people

<Name> <Name> <Name> <Name>

$50-$99: 7 people

<Name> <Name> <Name> <Name> <Name>
<Name> <Name>

$1-$49: 50 people

<Name>	**<Your name>**	<Name>	<Name>	<Name>
<Name>	<Name>	<Name>	<Name>	<Name>
<Name>	<Name>	<Name>	<Name>	<Name>
<Name>	<Name>	<Name>	<Name>	<Name>
<Name>	<Name>	<Name>	<Name>	<Name>
<Name>	<Name>	<Name>	<Name>	<Name>
<Name>	<Name>	<Name>	<Name>	<Name>
<Name>	<Name>	<Name>	<Name>	<Name>
<Name>	<Name>	<Name>	<Name>	<Name>
<Name>	<Name>	<Name>	<Name>	<Name>

Note. Here we use "Name" to represent donors' exact names in case they wish to make their donation anonymous.

If you do not want us to make your donation public, please reply to this email before this weekend, and we will make your name anonymous and instead indicate it as "anonymous donor". Otherwise, you do not need to reply to this email, and we will show your name.

Study 4

Please recall the scenario you read at the beginning of this study and imagine that you have run into the following situation at your company. Then please answer the questions that follow.

A major natural disaster has occurred somewhere within the U.S. In response, a new fund has been launched recently by a group of your colleagues and it is now collecting

donations within the company for the victims of the disaster. You intend to donate for the victims.

Study 5

Please recall the scenario you read at the beginning of this study and imagine that you have run into the following situation at your company. Then please answer the questions that follow.

A major natural disaster occurred somewhere within the U.S. In response, a group of employees in your company launched a new fund and called for donations to help out the victims. You made a donation.

Today, you received an email from the fund:

"Thank you for your contribution to our fund! We are happy to notify you that we have received many donations to our fund, and you are one of the ten most generous donors in this company! We will be proud to list your name on the "Major Benefactors" page in our online newsletter which we send out to everyone at the company. Thank you again. We are honored to have you with us.

However, just in case you do not want us to make your donation public, please reply to this email before this weekend, and we will remove your name and label your donation as anonymous. Otherwise, you do not need to reply to this email, and we will display your name."

The Measure of Expected Reputation Associated with Publicized Prosocial Behaviors

Study 1

The Ingroup Members Condition.

Suppose you do not select the anonymity option above and your name and donation amount is publicized within the company. How do you think the colleagues in your company other than the charity group members would judge you?

1: very negatively – 4: neutral – 7: very positively

The Strangers Condition.

Suppose you do not select the anonymity option above and your name and donation amount is publicized on the website. If as a result some strangers came to know about it, how do you think they would judge you?

1: very negatively – 4: neutral – 7: very positively

Studies 2-4

Suppose you do not reply to the email, and your name and donation amount are publicized within the company. How do you think your colleagues in your company other than the fund organizers would judge you? Please indicate to what extent you agree with the following statements. (1: Strongly disagree – 7: Strongly agree)

1. My colleagues will judge me positively.
2. My colleagues will like me.
3. My colleagues will judge me negatively.
4. My colleagues will dislike me.

Study 5

Suppose you do not reply to the email, and your name appears on the page of major benefactors on the online newsletter of the company. How do you think your colleagues in your company other than the fund organizers would judge you? Please indicate to what extent you agree with the following statements. (1: Strongly disagree – 7: Strongly agree)

1. My colleagues will judge me positively.
2. My colleagues will like me.
3. My colleagues will judge me negatively.
4. My colleagues will dislike me.

Note. The items were the same as Studies 2-4. Study 5 only modified the instructions in accordance with the change in scenario.

The Measure of Relational Mobility

Study 1

How much do you feel the following statements accurately describe people in the immediate society in which you live (such as your friends and acquaintances, colleagues in your workplace, and people in your neighborhood etc.)? Regarding those people around you, please indicate to what extent you agree or disagree with the following statements. (1: Strongly disagree – 6: Strongly agree)

NOTE: The term “groups” in some items refers to collections of people who know each other or who share the same goals, such as friendship groups, hobby groups, sports teams, and companies.

1. They (the people around you) have many chances to get to know other people.

2. It is common for these people to have a conversation with someone they have never met before.

3. They are able to choose, according to their own preferences, the people whom they interact with in their daily life.

4. There are few opportunities for these people to form new friendships.

5. It is uncommon for these people to have a conversation with people they have never met before.

6. If they did not like their current groups, they could leave for better ones.

7. It is often the case that they cannot freely choose who they associate with.

8. It is easy for them to meet new people.

9. Even if these people were not completely satisfied with the group they belonged to, they would usually stay with it anyway.

10. They are able to choose the groups and organizations they belong to.

11. Even if these people were not satisfied with their current relationships, they would often have no choice but to stay with them.

12. Even though they might rather leave, these people often have no choice but to stay in groups they don't like.

Study 2 & Study 3

We would like to ask about the people around you, such as your friends and acquaintances, colleagues in your workplace, and people in your neighborhood. How much do you feel the following statements accurately describe them before the current COVID-19 pandemic? Please indicate to what extent you agree or disagree with the following statements (1: Strongly disagree – 6: Strongly agree).

Note: The term “groups” in some items refers to collections of people who know each other or who share the same goals, such as friendship groups, hobby groups, sports teams, and companies.

1. Before COVID-19, they (the people around you) had many chances to get to know other people.
2. Before COVID-19, it was common for these people to have a conversation with someone they had never met before.
3. Before COVID-19, they were able to choose, according to their own preferences, the people whom they interacted with in their daily life.
4. Before COVID-19, there were few opportunities for these people to form new friendships.
5. Before COVID-19, it was uncommon for these people to have a conversation with people they had never met before.
6. Before COVID-19, if they did not like the groups they were in, they could leave for better ones.
7. Before COVID-19, it was often the case that they could not freely choose who they associated with.
8. Before COVID-19, it was easy for them to meet new people.
9. Before COVID-19, even if these people were not completely satisfied with the group they belonged to, they usually stayed with it anyway.
10. Before COVID-19, they were able to choose the groups and organizations they belonged to.
11. Before COVID-19, even if these people were not satisfied with their relationships, they often had no choice but to stay with them.

12. Before COVID-19, even though they might rather leave, these people often had no choice but to stay in groups they did not like.

Study 4 (as Manipulation Check)

Please answer the following questions regarding the working environment described in the writing task. (1: Strongly disagree – 6: Strongly agree)

1. People working in this company have many chances to get to know other people.

2. People working in this company are able to choose, according to their personal preferences, the people whom they interact with in their daily life.

3. It is often the case that people working in this company cannot freely choose who they associate with.

4. It is easy for people working in this company to meet new people.

5. Even if people working in this company were not completely satisfied with the group they belonged to, they would usually stay with it anyway.

6. People working in this company are able to choose the groups and organizations they belong to.

Study 5 (as Manipulation Check)

Please answer the following questions regarding the working environment described in the writing task. (1: Strongly disagree – 6: Strongly agree)

1. People working in this company have many chances to get to know other people.

2. It is common for people working in this company to have a conversation with someone they have never met before.

3. People working in this company are able to choose, according to their own preferences, the people whom they interact with in their daily life.

4. There are few opportunities for people working in this company to form new friendships.

5. It is uncommon for people working in this company to have a conversation with people they have never met before.

6. If people working in this company did not like their current groups, they could leave for better ones.

7. It is often the case that people working in this company cannot freely choose who they associate with.

8. It is easy for people working in this company to meet new people.

9. Even if people working in this company were not completely satisfied with the group they belonged to, they would usually stay with it anyway.

10. People working in this company are able to choose the groups and organizations they belong to.

11. Even if people working in this company were not satisfied with their current relationships, they would often have no choice but to stay with them.

12. Even though they might rather leave, people working in this company often have no choice but to stay in groups they don't like.

Manipulation Materials of Relational Mobility

Study 4

High Relational Mobility Condition.

Please take the next few minutes to put yourself in the following situation and write down as much as possible about it.

Imagine that you are offered a job that you have always wanted. The job is with a large multi-department company. The company has a fluid, project-based organizational structure in which employees come together on temporary teams to work on particular projects. The teams dissolve once the project is complete and recombine in different configurations for the next set of projects. In other words, employees work on non-overlapping teams that change membership frequently, and they have frequent opportunities to meet and work with different members of the organization.

Please describe in as much detail as possible when you answer the following questions.

Q1. What will it be like to work with different team members for each project?

Q2. What is good and bad about it?

Q3. How do you think it will affect your relationships with other coworkers? For example, what kind of interpersonal relationships will you have at work place?

Low Relational Mobility Condition.

Please take the next few minutes to put yourself in the following situation and write down as much as possible about it.

Imagine that you are offered a job that you have always wanted. The job is with a large multi-department company. The company has a stable workforce and organizational structure in which employees work together as an interconnected unit for an extended period of time across a number of different projects. Turnover is low, and employees work with the

same, small set of people in slightly different configurations depending on the project. In other words, employees are linked to each other in a dense network with overlapping ties, and they have frequent opportunities to interact with the same set of coworkers.

Please describe in as much detail as possible when you answer the following questions.

Q1. What will it be like to work with the same team for a long time?

Q2. What is good and bad about it?

Q3. How do you think it will affect your relationships with other coworkers? For example, what kind of interpersonal relationships will you have at work place?

Study 5

High Relational Mobility Condition.

Imagine that you are working in a large multi-department company.

The company has a fluid, project-based organizational structure. Employees can join extant projects, or establish a new project and invite others to join their project. To facilitate this process, the company occasionally provides opportunities for the employees to meet different members of the organization.

It is important to note that work teams are formed based on mutual selection and agreement. Thus, to join a team, each employee must also be selected by the targeted team members in return.

If they agree, employees may work with the same team for repeated projects. On the other hand, when they feel that their current team is no longer a good fit, they can leave and move to other projects.

Please describe in as much detail as possible when you answer the following questions.

Q1. What will it be like to work in this company where employees select each other to form project teams and work in those teams based on mutual agreement and compatibility?

Q2. What are the good and bad points about working at this kind of organization?

Q3. How do you think it will affect your relationships with other coworkers? For example, what kind of interpersonal relationships do you think you will have at the workplace?

Low Relational Mobility Condition.

Imagine that you are working in a large multi-department company.

The company has a stable workforce and organizational structure. The company assigns work teams for employees, and they work with the same people for an extended period (typically for several years, excepting retirements) across many different projects. Employees regularly see the same people in one's team and do not have many opportunities to meet other people in the organization.

It is important to note that the company decides the configuration of work teams, and that employees do not have any input in the selection of their teammates.

The frequency of moving between teams and job turnover is low, which means that, whether they like it or not, most employees remain in the same team for an extended period.

Please describe in as much detail as possible when you answer the following questions.

Q1. What will it be like to work in this company where the company determines the work teams and employees work with the same people for a long time?

Q2. What are the good and bad points about working at this kind of organization?

Q3. How do you think it will affect your relationships with other coworkers? For example, what kind of interpersonal relationships do you think you will have at the workplace?

Appendix C: Additional Analyses

Study 1

The Moderating Role of the Identity of the Observers Condition in the Association Between Relational Mobility and Concealing Prosocial Behaviors

I used the PROCESS macro (model 1, Hayes, 2017) in SPSS to test whether the identity of the observers condition moderated the association between relational mobility and the tendency to conceal prosocial behaviors in Study 1. Results showed that the identity of the observers condition did not moderate the association between relational mobility and the tendency to conceal prosocial behaviors, the interaction effect: $b = 0.87$, $SE = 0.47$, $p = .064$, 95% CI = [-0.05, 1.79]. Results were similar when the effect of donation amount was controlled.

The Serial Mediating Effect of Relational Mobility and Expected Reputation in the Association Between City Size of the Birthplace and Concealing Prosocial Behaviors

I explored whether relational mobility and expected reputation associated with publicized prosocial behaviors would have a serial indirect effect in shaping the differences in concealing prosocial behaviors among people who grew up in different places varying in city size. I used the PROCESS macro (model 6, Hayes, 2017) to run the mediation analysis. In the analysis, city size of the birthplace was included as a multi-categorical variable (small cities = 1, medium cities = 2, large cities = 3), and those who grew up in small cities were used as a reference group.

The results showed that the serial indirect effect of relational mobility and expected reputation was significant in shaping a lower tendency to conceal prosocial behaviors among those who grew up in big cities compared with those who grew up in small cities, relative indirect effect = -0.13, $SE = 0.08$, 95% CI = [-0.32, -0.02]. Likewise, the serial indirect effect

of relational mobility and expected reputation was also significant in shaping a lower tendency to conceal prosocial behaviors among those who grew up in medium cities compared with those who grew up in small cities, relative indirect effect = -0.18, *SE* = 0.10, 95% CI = [-0.42, -0.03]. Specifically, those who grew up in medium cities, *b* = 0.46, *SE* = 0.18, *p* = .011, 95% CI = [0.11, 0.81], and those who grew up in big cities, *b* = 0.34, *SE* = 0.15, *p* = 0.023, 95% CI = [0.05, 0.64], had higher relational mobility than those who grew up in small cities, which, in turn, was associated with more positive (less negative) expected reputation associated with publicized prosocial behaviors, *b* = 0.75, *SE* = 0.11, *p* < .001, 95% CI = [0.55, 0.96], which eventually was related to a lower tendency to conceal prosocial behaviors, *b* = -0.51, *SE* = 0.14, *p* < .001, 95% CI = [-0.79, -0.23].

Study 2

The Moderating Role of the Donation Amount in the Association Between Relational Mobility and the Tendency to Conceal Prosocial Behaviors

I used the PROCESS macro (model 1, Hayes, 2017) in SPSS to test whether the donation amount (superior donation vs. normative donation) moderated the association between relational mobility and the tendency to conceal prosocial behaviors in Study 2. Results showed that the donation amount did not moderate the association between relational mobility and the tendency to conceal prosocial behaviors, the interaction effect: *b* = 0.19, *SE* = 0.29, *p* = .500, 95% CI = [-0.37, 0.76].

The Serial Mediating Effect of Relational Mobility and Expected Reputation in the Association Between City Size and Concealing Prosocial Behaviors

I explored whether relational mobility and positive as well as negative expected reputation associated with publicized prosocial behaviors would have serial indirect effects in affecting the association between the city size of the place where the participant had lived the

longest and their likelihood of concealing prosocial behaviors. I used the PROCESS macro (model 81, Hayes, 2017) to run the mediation analysis. In the analysis, city size of the previous living place was treated as a continuous variable. Furthermore, positive expected reputation and negative expected reputation were entered as mediators simultaneously.

The results showed that the serial indirect effect of relational mobility and negative expected reputation was significant, indirect effect = -0.01, *SE* = 0.01, 90%CI = [-0.02, -0.001], 95% CI = [-0.02, 0.0003]. Specifically, previously living in a city with larger city size was associated with higher relational mobility, $b = 0.06$, $SE = 0.03$, $p = .042$, 95% CI = [0.002, 0.12], which, in turn, was associated with less negative expected reputation associated with publicized prosocial behaviors, $b = -0.66$, $SE = 0.14$, $p < .001$, 95% CI = [-0.93, -0.40], which eventually was related to a lower likelihood of concealing prosocial behaviors, $b = 0.21$, $SE = 0.07$, $p = .003$, 95% CI = [0.07, 0.34]. However, the serial indirect effect of relational mobility and positive expected reputation was not significant, indirect effect = -0.001, *SE* = 0.002, 90%CI = [-0.005, 0.002], 95% CI = [-0.01, 0.003]. The results remained similar when the donation amount (superior donation = 1, normative donation = 0) was controlled in the analysis.

Study 3

The Moderating Role of the Donation Amount in the Cultural Difference in Concealing Prosocial Behaviors in the Hypothetical Scenario

To test whether the donation amount moderated the cultural difference in concealing prosocial behaviors in the hypothetical scenario in Study 3, I conducted a two-way ANOVA on the likelihood of concealing prosocial behaviors. Results did not support the moderating role of the donation amount, as the interaction effect between the donation amount condition and country was not significant, $F(1, 474) = 0.55$, $p = .458$, partial $\eta^2 = .001$ (see Figure S1).

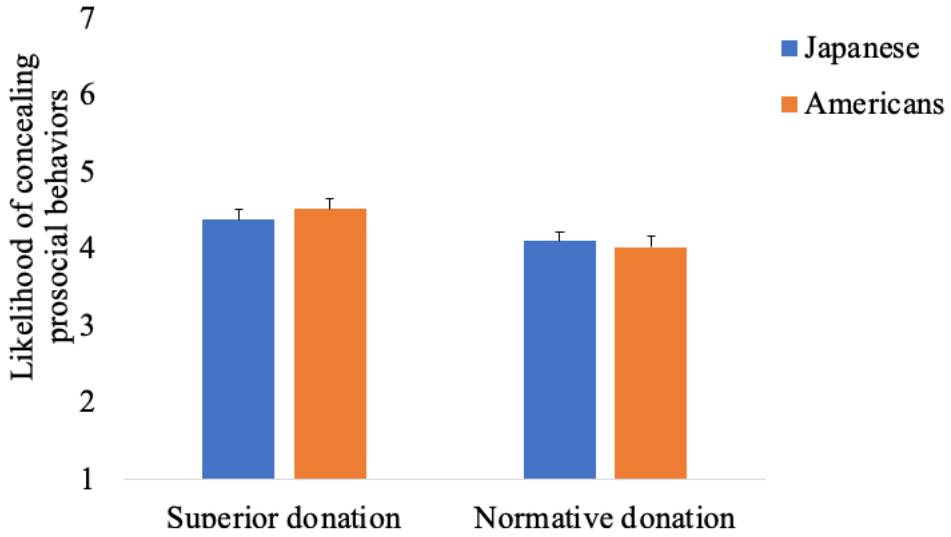

Figure S1. Likelihood of concealing prosocial behaviors in the hypothetical scenario in different groups in Study 3.

Additional Analysis on Whether Participants Donated Anonymously in Real-Life

With including those who chose "I do not remember", there was still significant difference between Japanese and Americans in the choices to this question, χ^2 (2, N = 477) = 39.36, p < .001. A higher proportion of American participants (38.3%) than Japanese participants (16.0%) publicized their donations, while a lower proportion of Americans (56.3%) than Japanese participants (66.2%) donated anonymously in real life, ps < .05 (see Figure S2).

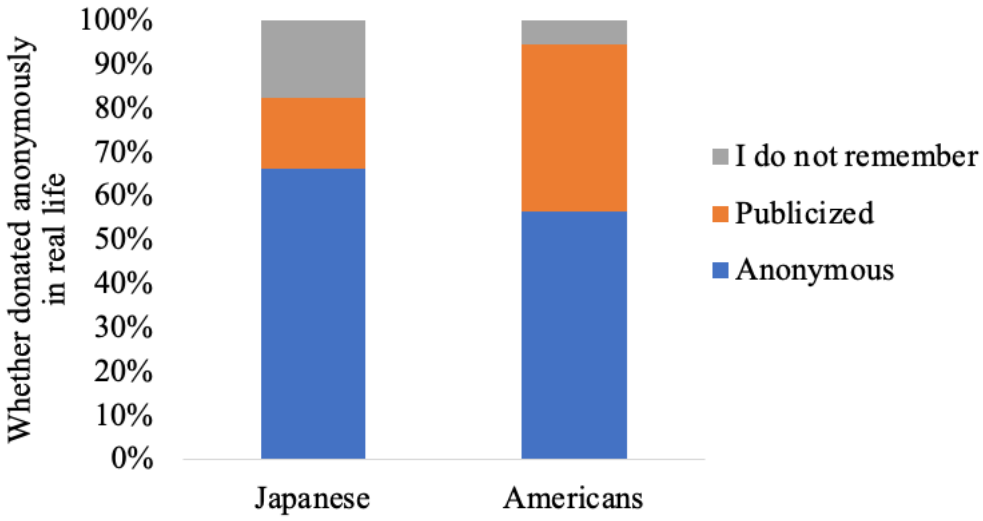

Figure S2. The difference between Japanese and Americans in whether people donated anonymously in real life in Study 3, including those who chose "I do not remember."