Fostering Selflessness through I-Sharing

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Abstract

Although previous research has shown that perceived objective similarity (Me-sharing) and perceived subjective similarity (I-sharing) both increase liking for strangers, perceived subjective similarity may have a unique effect on selflessness. Study 1 addressed this possibility by focusing on whether I-sharing (but not Me-sharing) promotes greater willingness to share a desired good. After interacting with three ostensible partners (an I-sharer, a Me-sharer, and a Not Similar Other), participants indicated their liking for each of these partners and distributed a desired good between themselves and each partner. Although participants reported higher liking for both the I-sharer and the Me-sharer than for the dissimilar other, when it came to the allocation of the desired good, they showed generosity only to the I-sharer. Study 2 addressed questions lingering from Study 1 by manipulating I-sharing and Me-sharing in a between participants design, by equalizing the importance of the I-sharing and Me-sharing dimensions, and by looking at a separate indicator of selflessness (i.e., helping intentions). Results conceptually replicated those of Study 1, with participants reporting significantly higher helping intentions when they I-shared with their partner than when they Me-shared with their partner (even though participants reported equivalent levels of liking in both partner conditions). Taken, together these findings suggest that subjective similarity contributes uniquely to a person's ability to behave selflessly.

Keywords: Subjective Similarity, I-sharing, Altruism, Helping, Selflessness

Fostering Selflessness through I-Sharing

“Let us try to teach generosity and altruism, because we are all born selfish.”

— Richard Dawkins, *The Selfish Gene*

“Every man must decide whether he will walk in the light of creative altruism or in the darkness of destructive selfishness.”

— Martin Luther King Jr.

If we are all born selfish (as Dawkins suggests) and if selfishness is destructive (as Martin Luther King Jr. suggests) how can we promote acts of selflessness? Thinkers from different walks of life have their own opinions on the matter, social psychologists included. Many social psychologists have long thought that altruistic behavior increases towards those with whom we share similarities (Sole, Marton, & Hornstein, 1975; Karylowski, 1976; Colaizzi, Williams, & Kayson 1984; Rushton, 1989). But do all perceived similarities increase the likelihood that one will act selflessly?

We consider this question here. As others have before us (Pinel, Long, Landau, & Pyszczynski, 2004; Pinel, Long, Landau, Alexander, & Pyszczynski, 2006), we make a distinction between two forms of similarity, perceived subjective similarity (the belief that one has the same, phenomenological experience as another person, or, I-sharing) and perceived objective similarity (the belief that one shares objective traits about the self with another person,

or, Me-sharing). We propose that perceived subjective similarity (I-sharing), more so than perceived objective similarity (Me-sharing), fosters acts of selflessness.

To make our case, we begin with a discussion of some earlier work on similarity, paying special attention to whether this previous research provides evidence of true selflessness. Next we introduce research on I-sharing, and elaborate on why I-sharing can increase the chances that one will act in a truly selfless manner.

The Effects of Similarity

Social psychologists have long studied the role that perceived similarity plays in interpersonal outcomes, including (most prominently) liking (Montoya, Horton, & Kirchner, 2008) and helping (Sole, Marton, & Hornstein, 1975). Considering first the work on liking, we know that perceived similarity increases reported interpersonal attraction (Montoya, Horton, & Kirchner, 2008). The similarities studied include, among others factors, similarity with regard to demographic characteristics (Buss & Barnes, 1986), attitudes (Byrne, London, & Reeves, 1968; Bosson, Johnson, Niederhoffer, & Swann, 2006; Weaver & Bosson, 2011), personality (Griffit, 1969; Goldman, Rosenzweig, & Lutter, 1980), and physical attractiveness (Berscheid, Dion, Walster, & Walster, 1971). This preference for similar others even occurs in infants. Mahajan and Wynn (2012) showed that very young babies, after reaching for one of two foods, overwhelmingly grabbed for a stuffed animal that had shown a preference for their chosen food over a stuffed animal that had shown a preference for the food they forwent.

In addition to examining similarity's effects on interpersonal attraction, researchers have often found evidence suggesting that similarity can foster seemingly selfless behavior (Karylowski, 1976; Sole, Marton, & Hornstein, 1975). For example, Karylowski (1976) showed that participants who believed that a partner possessed similarities to them on a number of traits

(mainly personality traits) ended up working harder to make money for their partner in a subsequent button pressing task. In another study, Sole, Marton, and Hornstein (1975) “accidentally” left stamped donation packets to aid in curing tuberculosis scattered around in different neighborhoods. These packets also contained a completed opinion questionnaire, with answers that reflected varying degrees of similarity to the predominant opinions of the neighborhoods. In the three experiments conducted, the rate of helping (measured by the number of packets mailed in) increased as a function of the similarity between the opinions expressed on the letter, and the predominant opinions of the neighborhood. Moreover, this finding emerged regardless of the importance of the questions.

Even a seemingly trivial similarity can increase what presents as benevolent behavior. In a classic experiment, Tajfel, Billig, Bundy, and Flament (1971) showed that individuals favor members of their own groups, by distributing to them more real rewards, even when the groups were formed based on seemingly simple similarities (judgments of liking one painter over another).

Clearly similarity can go a long way toward both making people like one another, and want to do positive things for one another. The question that we ask here is whether these effects hinge on a specific type of similarity. Pinel and colleagues (Pinel et al., 2006) have explicitly articulated two varieties of perceived similarity exist (i.e. Me-sharing and I-sharing), and have provided evidence for their unique contributions to liking. Here we ask, when one disentangles I-sharing and Me-sharing, whether I-sharing uniquely predicts prosocial outcomes.

The Constructs of I-sharing and Me-sharing

To describe Me-sharing and I-sharing, we turn to James’ (1890) distinction between the self-as-object (the Me) and the self-as-subject (the I). The Me represents everything about

ourselves that we reflect on and look upon as an object. It is the self-concept, the self-picture, the objective self, and is made up of everything that is known about the self. The I, in contrast, represents the moment-to-moment experience of the stimuli to which one gets exposed. It is the knower rather than what is known. It is a state of consciousness that changes from one moment to the next, as one's experience changes (James, 1890/1918; Pinel et al., 2006; Long, 2007).

To help draw out the distinction between the Me and the I, Pinel and colleagues have frequently used a mirror analogy (Pinel et al., 2006; Pinel, Long, & Crimin, 2010). When one looks in a mirror, the image that one sees and all that is known about the self from it, represents a part of the Me. In contrast, the experience of one's image – the feeling of excitement at one's signs of increasing wisdom, the confusion over whether that little round spot is a tick or a beauty mark – is one's I. As the experience of the image changes, so too does the I, even though the person in the mirror remains the same.

Keeping this distinction between the Me and the I in mind, we can say that people are objectively similar – that is, that they *Me-share* – when they believe that they have objective features of the self in common. When people share demographic backgrounds, physical characteristics, general value system classifications (such as if one identifies as a Democrat, Republican, Chicago Bulls fan, etc.), or anything else one declares about oneself, we can say that they Me-share. In contrast, we can say that people are subjectively similar – this is, that they *I-share* – when they believe that they have had the same subjective experience, when they believe that their “I”s coincide (Pinel et al., 2006).

How does one go about studying these two ostensibly unique forms of similarity? Pinel and colleagues (Pinel et al., 2006; Pinel, Long, & Crimin, 2008; Pinel, Long, & Crimin, 2010; Pinel & Long, 2012; Pinel et al., 2015) have successfully done so by manipulating the cues that

offer the most foolproof evidence of I-sharing. These consist of *simultaneous* and *identical* reactions to the *same* stimulus. When two individuals simultaneously smile at the same cooing baby, laugh at the same slapstick comedy, or offer up the same word in a game of Mad Libs, they feel as though they have I-shared. Moreover, they will make this inference even if they do not share objective features of the self in common (i.e. regardless of the extent to which they Me-share).

Translating this into a research paradigm, when Pinel and colleagues (2006, 2010, 2012) have studied I-sharing, they manipulated the extent to which their participants share objective features of the self (such as self-views or social identities) with an interaction partner, so that sometimes they do (in the Me-share condition) and sometimes they do not (in the no-Me-share condition). Importantly, they also manipulated the extent to which participants have simultaneous and identical reactions to the same novel stimulus. For instance, in one series of three separate studies (Pinel & Long, 2012), participants learned that they and one of their interaction partners reacted identically to a majority of nonsensical stimuli (i.e. that they I-shared) but that their other interaction partner reacted differently to a majority of nonsensical stimuli (i.e. that they did not I-share). Pinel and Long (2012) manipulated whether the I-sharer was also a Me-Sharer or whether he/she was not a Me-sharer. Results indicated that participants preferred the Me-sharer when that person also shared their I, but that participants preferred the non-Me-sharer instead when he or she shared their I and the Me-sharer did not. These findings attest to the importance of disentangling Me-sharing from I-sharing empirically.

Recently, Pinel and colleagues (Pinel, Long, & Huneke, 2015) have further demonstrated the importance of simultaneity for I-sharing inferences. These researchers randomly assigned participants to either an objective similarity condition (in which they interacted with a bogus

partner with whom they shared objective features of the self), or a subjective similarity condition (in which they interacted with a bogus partner with whom they shared subjective reactions to novel stimuli). Participants learned of their objective similarity to their partner either immediately upon providing their own data, or after a 10-second lag. As predicted by I-sharing theorizing, the delay manipulation moderated the effect of subjective similarity but not the effect of objective similarity. Specifically, those who experienced delayed subjective similarity cooperated less in Prisoner's Dilemma game than did those who experienced simultaneous subjective similarity (i.e. I-sharing). We take these data to underscore the importance of simultaneity for inferences about I-sharing, but not for inferences about Me-sharing, and thus to offer yet another empirical demonstration of the uniqueness of these two constructs.

We use the same methodology developed to study I-sharing, distinct from Me-sharing, to get to the bottom of work on similarity and selfless behavior. Previous work on this topic did not explicitly attempt to disentangle Me-sharing and I-sharing, which is problematic because people can sometimes infer I-sharing from Me-sharing. Consider for instance, when a new father learns of another man who has also just now incorporated "father" into his self-concept (i.e., his Me). He may think that the other man shares his feelings of fatigue from the sleepless nights and his hesitancy at discovering what lurks within a dirty diaper, but these assumptions of I-sharing could be completely off target. It could be, for instance, that the other man has a newborn who sleeps through the night, or that he has no diaper changing responsibilities. Similarly a Republican might expect another Republican to express his same distaste for a Democratic candidate; imagine his surprise when his fellow Republican declares that he is voting for Bernie Sanders!

In short, because Me-sharing implies I-sharing, unless researchers make a concerted effort to disentangle the two constructs, we cannot know whether the effects of the similarity they study stem from Me-sharing, I-sharing, or some combination of the two. Here we disentangle I-sharing from Me-sharing with the goal of understanding which form of similarity contributes to acts of selflessness (or whether both do). In the next section we explain why.

Why I-Sharing Might Promote Selflessness

Experimental research on I-sharing highlights its potency. In the first I-sharing papers, Pinel et al. (2004; 2006) underscored its effect on liking for strangers, as well as its uniqueness from objective similarity (or Me-sharing). Since then, these researchers have shown us that I-sharing gives people the strength to combat conformity pressures (Pinel, Long, & Crimin, 2010), that it counteracts the robust tendency for people to prefer the ingroup (Pinel & Long, 2012), and that it counteracts the also robust tendency for people to inhumanize outgroup members (i.e. judge them as less than human) (Pinel, Rensky, Long, & Brenna, 2015).

Pinel and colleagues have intimated that I-sharing has this powerful effect because of its unique ability to make people who are otherwise existentially isolated feel existentially connected. Existential isolation refers to a fundamental separateness that exists between people with regard to experience (Pinel et al., 2004; Pinel, Long, Johnson, & Murdoch, 2015; Yalom, 1980). We cannot ever experience stimuli through another person's sense organs, nor can we interpret those stimuli using their higher level perceptual apparatuses. We can communicate the details of our subjective experiences clearly and articulately through words, but we cannot offer up our innately personal experience of a stimulus for another person to experience it as we experience it. The closest we can come to ever feeling, then, as though someone appreciates firsthand what we experience is when we I-share with another person.

Importantly, according to Pinel and colleagues (2004; 2006), our needs for belief validation (Festinger, 1954; Solomon, Greenberg, & Pyszczynski, 1991; Swann, 1996) and connectedness (Baumeister & Leary, 1995; Bowlby, 1969; Brewer, 1991; Florian, Mikulincer, & Hirschberger, 2002) hinge on this feeling of existential connectedness. We cannot feel confident that we know the world, nor can we feel confident that other people truly love us and want to be with us, to the extent that we remain mired in feelings of existential isolation. Thus, via I-sharing, we also achieve a sense that we know the world and that we belong in it.

Consistent with the claim that I-sharing offers some relief from existential isolation, research suggests that existential isolation accounts for at least some of I-sharing's allure. When Pinel and colleagues (2006) manipulated feelings of existential isolation in their participants, those who wrote about a time when they felt existentially isolated showed the strongest preference for an I-sharer over a Me-sharer. When participants wrote about time when they did not I-share with others, they experienced surges of existential isolation (Pinel, Long, Johnson, & Murdoch, 2015). Moreover, participants high in existential isolation respond particularly strongly to I-sharers. In one study, participants high in existential isolation preferred people who I-shared with them over people who shared their values (Pinel & Long, 2012); it did not matter whether the I-sharers came from a racial outgroup and the value-sharers from racial ingroup, or vice versa. Pinel (2011) proposed that I-sharing should foster prosocial outcomes because it constitutes a form of existential connection and thus satisfies people's basic self-needs, needs that existential isolation thwarts. In support of her argument, the more existentially connected people felt, the higher they scored on basic need satisfaction and egalitarianism. Moreover, basic need satisfaction mediated relation between existential isolation/connectedness and egalitarianism (Pinel, Long, Johnson, & Murdoch, 2015). Further support for the connection

between I-sharing and prosocial outcomes comes from another correlational study in which participants rated how much they believed they experienced the world similarly (I-shared) with a person sitting next to them, and how much they thought they would help that individual (Huneke & Pinel, 2015). Not surprisingly results showed that the higher the levels of perceived I-sharing the more participants thought they would help that individual.

Given both the theorizing and the correlational data collected thus far, we predicted that I-sharing would have a stronger effect on prosocial outcomes than Me-sharing. Me-sharing, when disentangled from what it may say about I-sharing, does not constitute a form of existential connection and thus would not meet people's self-needs in the same way as I-sharing would. I-sharing, on the other hand, when disentangled from Me-sharing, is still deeply relevant because it implicitly indicates that one experiences the world similarly to another person and thus that one is not existentially alone. In so doing, I-sharing meets people's basic needs for validation and connection, enabling them to act selflessly toward others.

Note that although we predict that I-sharing uniquely predicts acts of selflessness and other prosocial outcomes, we recognize that both I-sharing and Me-sharing ought to foster liking (albeit for different reasons). Over a dozen studies have already demonstrated that I-sharing, disentangled from Me-sharing, promotes liking (Pinel et al., 2006; Pinel, Long, & Crimin, 2008; Pinel & Long, 2012; Pinel et al., 2015). And, although it is only recently that researchers have begun to disentangle I-sharing from Me-sharing, good reasons exist for believing that Me-sharing disentangled from I-sharing would still promote liking. Me-sharing can increase future self-benefit beliefs by forming the basis for in-groups, group exchange structures, and coalitions (Yamagishi & Mifune, 2008). For instance people might like someone who shares their race, and even act more positively towards them, because they believe they can benefit personally

from forming a partnership with a member of their ingroup. Importantly, though, Yamagishi and Mifune (2008) showed that this seemingly prosocial behavior only occurs when the other person knows one acted prosocially. If the act is completely anonymous prosocial behavior in such a situation disappears. One should also thus consider whether a behavior that looks like selflessness remains present under conditions of anonymity, for only then can it be considered a true act of selflessness. .

In what follows, we present two experimental studies that test the hypothesis that I-sharing – but not Me-sharing – promotes genuine selflessness. In Study 1 we used a within participants design to ask whether people would anonymously share more of a desired good with an I-sharer than with a Me-sharer, or with someone who is neither a Me-sharer, nor an I-sharer. In Study 2, we used a between participants design and a more powerful manipulation of Me-sharing to ask whether I-sharing but not Me-sharing fosters helping intentions. In both studies we also measured liking to see if the previously found similarity-liking effects replicate for both the I and Me in the current studies.

Study 1

Study 1 tests the hypothesis that I-sharing, more so than Me-sharing, inspires generosity when called upon to distribute a desired good. Participants interacted with three other ostensible participants (i.e. interaction partners) over the computer. We rigged the computer such that one interaction partner I-shared with participants but did not Me-share with them (the I-sharer), one interaction partner Me-shared with our participants but did not I-share with them (the Me-sharer), and one interaction partner neither I-shared nor Me-shared with our participants (for more on the necessity of disentangling Me-sharing and I-sharing information in this way, see Pinel & Long, 2012).

After this similarity manipulation, participants assumed the role of “allocator” in a dictator game, with the three other ostensible participants serving as the receivers. We used the dictator game to eliminate any concerns that how the participants divided the M&Ms might affect how many M&Ms they might receive in the future. Thus participants unilaterally allocated the desired goods, in this case M&M’s. Participants also reported their level of liking for each of the other participants.

We also manipulated the degree to which participants might feel truly anonymous while distributing the desired good. This approach was inspired by previous published work on altruism (Eckel & Grossman, 1996; Bohnet & Frey 1999a, b; Burnham, 2003), which maintains that people’s behavior reflects true altruism if they enact that behavior under conditions of full anonymity. Put differently, if a seemingly altruistic act occurs only under conditions where one’s reputation may be at stake (Yamagishi and Mifune, 2008; Mifune, Hashimoto, & Yamagishi, 2010), another plausible attribution for that altruistic act exists (i.e. saving one’s reputation). Following this logic, we elected to further enhance some of our participants’ feelings of anonymity as a means of more thoroughly approaching the question of whether I-sharing fosters selflessness. To this end, in addition to separating ostensible participants via different rooms and removing the researcher during allocations for all participants, we also explicitly told half the participants that their allocations would remain completely anonymous (the other half received no added instructions).

We hypothesized that, consistent with past research, both I-sharing and Me-sharing would promote liking. In terms of selflessness, however, we hypothesized that I-sharing alone would increase truly selfless behavior, and that we would thus observe greater generosity in the I-sharing condition, regardless of the added anonymity assurances. For Me-sharing, however,

we expected participants either not to allocate more M&Ms to the Me-sharer over the dissimilar other (not show ostensible altruism at all), or, following past work (Yamagishi and Mifune, 2008), to act seemingly altruistic only when their reputation might possibly be on the line.

Method

Participants

Sixty undergraduates from a medium-large university in Vermont participated in this study for extra credit in psychology courses. We did not analyze the data of five participants who expressed doubt during the post-experimental interview that their partners were real. The mean age of the remaining 55 participants was 19.02 years old (ages ranged from 18-21). 67.3% of participants self-identified as female; 32.7% self-identified as male. The majority of our participants self-identified as only White (90.9%); 1.8% identified as Black or African, 1.8% identified as only Asian, one participant chose not provide racial information, and the remaining 3.6% identified as both White and Asian,. With regard to ethnicity, only a small subset of participants identified as Hispanic or Latino (3.6%); the rest identified as non-Hispanic.

Procedure

We adopted a 2 (Anonymity Condition: Anonymity assurance, No anonymity assurance) X 3 (Similarity: I-sharer, Me-sharer, Neither) mixed design with anonymity as the between participants factor and similarity as the within participants factor. We randomly assigned participants to the two anonymity conditions, and we randomized the order of the within participants factor.

We recruited participants through their courses, and brought them to the lab in groups of two to four, separating them by dividers. A research assistant first gave participants consent forms and, as the participants read and signed the consent forms, excused himself so that he

could go check that the ostensible participants in other rooms had arrived and were set up for the study. Upon returning, the research assistant signed and collected consent forms, and then informed them that the computer would assign them three separate partners, each of which would be located in a different room. Participants then began the study, which took place on the computer. Once on the computer, participants first picked out a unisex name (Jessie, Peyton, or Emerson), which, we explained, was for privacy purposes. In actuality, this procedure provided an explanation for why all three of the participants' ostensible partners also had unisex names as we sought to reduce external objective demographic data that could change how much participants believed they Me-shared with another (the computer presented no other information, besides the Me-sharing manipulation, that one could glean demographic data from).

Manipulating Me-sharing. The computer first asked participants to fill out a series of demographic questions, which served as the basis for our manipulation of Me-sharing. Participants indicated their ethnicity, age, gender, and their year in college. Having provided this demographic information, participants then saw a screen displaying the unisex names of each of their three partners, and their years in college. One of the ostensible partners shared the participants' year in college and thus was a Me-sharer (i.e., he/she was objectively similar to the participants). Two of the partners did not share the participants' year in college (they were NOT Me-sharers). These two other partners were either the I-sharer (see next section) or the dissimilar other. Following this delivery of information, we verified that participants absorbed the information by asking them each partner's year in college. All participants passed this manipulation check.

Manipulating I-sharing. Following the demographic exchange, participants underwent the I-sharing manipulation. Specifically, participants completed an inkblot task with their three

partners. In this task, participants examined 12 Rorschach inkblots, one at a time, and picked one of five possible options to describe what they saw in the inkblots. Each time the participants provided their response, they then learned what their partners had seen in the inkblots. Across the 12 trials, one of the partners (one who had not Me-shared with them; see above) agreed with the participants on 9 out of 12 trials, and thus I-shared with them. The other two partners (the Me-sharing partner as well as the dissimilar partner) agreed with participants on only 1 out of 12 trials. Following this manipulation, we once again asked participants each of their partner's year in college. Once again, participants showed they remembered.

As we discussed earlier, Me-sharing – even sharing the same year of college – could matter to people precisely because it implies I-sharing, (that one experiences the world similarly). Similarly, I-sharing could matter to people because it implies Me-sharing. This explains why we told participants who interacted with a Me-sharer that the Me-sharer did NOT see what they saw in the inkblots, and why we told participants who interacted with an I-sharer that the I-sharer was in a different place in their college career. We did so to disentangle the effects of Me-sharing and I-sharing and thus to ensure that we had pure manipulations of the two constructs.

Resource Allocation Task and Anonymity Manipulation. After the I-sharing manipulation came the resource allocation task. At this point, the research assistant stepped into the room and asked participants to choose from four envelopes that would randomly determine whether participants would be selected as an allocator or as a receiver. In actuality, all participants always got assigned to the role of allocator (See Yamagishi & Mifune, 2008 for a similar manipulation). With their assignment in hand, participants turned once again to the computer for further instructions. Before participants started the allocation task, the research

assistant once again left the room, ostensibly to deliver the remaining envelopes. We removed the researcher from the room to reduce any experimental pressure to act altruistically.

Once back on the computer, participants underwent different conditions of anonymity depending on their random assignment. Specifically, the computer informed participants in the anonymous condition that their allocations were completely anonymous, and that the recipients of the resources would never know who divided up the resources (See Yamagishi and Mifune, 2008, for a similar manipulation). In contrast, the computer gave the other participants no added instructions.

Next began the allocations. Participants allocated 15 M&Ms three times, and each time they divvied up the M&Ms between themselves and one of their partners (in randomized order). We used this “dictator” game allocation method (where the participant divides the resources and the partner has no power whatsoever) as our allocation task to remove any expectancy that how a participant divided resources would influence how many goods they might receive. Each time participants divvied up the M&Ms, they followed up the resource allocation by responding to a six-item measure of liking on a nine point Likert scale ranging from ‘not at all’ to ‘extremely’ for the partner with whom they just divvied up the M&Ms ($\alpha=.844$). This liking measure comes from previous I-sharing research (e.g. to what extent do you like your partner; to what extent do you feel close to your partner; see Pinel et al., 2010). Following this task, participants completed a series of questionnaires not relevant to the current manuscript, underwent a post-experimental interview and an oral debriefing, and received 45 M&Ms.

Results

We expected participants would like both the similar others – the I-sharer and the Me-sharer – more than the dissimilar other. However, we expected that participants would only give

preferential treatment to the I-sharers when it came to resource allocation. We expected that participants would either not allocate more M&Ms to the Me-sharers than to the dissimilar others, or that they would only allocate more when there was still a chance that their decision could conceivably tarnish their reputation (when we didn't provide the added anonymity assurances).

We ran two 2 (Anonymity Condition: Anonymity Assurance vs. No Anonymity Assurance) X 3 (Similarity: I-sharer, Me-sharer, Dissimilar) repeated measures ANOVAs, with similarity as the within participants factor. For the first analysis, we used reported liking as our dependent measure; for the second, we used M&M allocation as our dependent measure.

Looking first at liking, we found the expected effect of similarity, $F(2, 106) = 25.56, p < .001$. Planned contrasts revealed that participants reported liking the I-sharer ($M=5.13, SD=1.61$) significantly more than the Me-sharer ($M=4.56, SD=1.90$), $t(54)= 4.82, p < .001, d=.324$, or the dissimilar other ($M=4.32, SD=1.75$), $t(54)= 7.21, p < .001, d=.482$. As predicted, participants also reported liking the objectively similar partner (Me-sharer) significantly more than the dissimilar partner, $t(54)= 2.24, p < .05, d = .131$. Anonymity instruction condition did not emerge as a main effect ($p=.145$), nor did it qualify the effect of similarity condition ($p=.905$).

Looking next at resource allocation, we also found the expected effect of similarity, $F(2, 106) = 64.40, p < .001$. Planned contrasts revealed that participants allocated significantly more M&Ms to the I-sharer ($M=12.05, SD=3.28$) than to the Me-sharer ($M=8.02, SD=1.63$), $t(54)= 8.32, p < .001, d=1.556$, or to the dissimilar partner ($M=8.09, SD=2.22$), $t(54)= 8.18, p < .001, d=1.414$. As expected, and unlike with liking, participants did *not* allocate significantly more M&Ms to the Me-sharer than to the dissimilar other, $t(54)= -.452, p=.653$. Anonymity

instruction condition did not emerge as a main effect ($p=.143$), nor did it qualify the effect of similarity condition ($p=.739$).

Study 2

The findings of Study 1 are consistent with the claim that I-sharing uniquely fosters selflessness. That said, we conducted Study 2 to address some of the shortcomings of Study 1 and to see if our results would conceptually replicate using a different methodological approach. First, we recognize that the Me-sharing dimension chosen for use in Study 1 – same year in college – may not resonate with some as an extremely meaningful form of objective similarity. We thus cannot completely rule out that our effect of I-sharing could have occurred because participants perceived the inkblot images, outside of what they say about experiencing the world similarly, as more important, significant, and meaningful than shared year in college. Study 2 then, utilizes a more personally significant operationalization of Me-sharing. We derived this operationalization from past work on shared reality, which emphasizes the profoundly important role that sharing beliefs – a form of Me-sharing – plays in people’s lives (Hardin & Higgins, 1996; Bar-Tal, 2000). To this end, we rigged the computer so that participants who interacted with a Me-sharer interacted with someone who shared their beliefs. Although we continued to manipulate I-sharing by varying the extent to which participants and their interaction partners had the same in-the-moment experience to a novel stimulus, we also changed the stimuli participants interpreted to ensure that Study 1’s results were not just an artifact of a particular manipulation.

Another key change in Study 2 involved a shift to a between participants design. Although past published work on I-sharing has used both within and between participants designs and yielded identical results, we wanted to rule out the possibility that our participants in

Study 1 were pitting the I-sharers against their other two comparison partners. To this end, we randomly assigned participants in Study 2 to interact with one person: someone with whom they I-shared but did not Me-share (I-share Condition) or someone with whom they Me-shared but did not I-share (Me-share Condition).

Finally, we extended our study of selflessness to a different dependent measure. Specifically, following the manipulation of similarity, participants indicated the extent to which they desired to help their interaction partner. As in Study 1, we also measured liking. Although with the potentially more significant Me-sharing manipulation we now expected participants to show equal levels of liking in the I-sharing and Me-sharing conditions, we nonetheless continued to expect that participants who interacted with an I-sharer would evince stronger helping intentions than those who interacted with a Me-sharer.

Method

Participants

Thirty undergraduates from a medium-large university in Vermont participated in this study for extra credit in psychology courses. The mean age of participants was 21.43 years old (ages ranged from 18-43). 80% of participants self-identified as female; 20% self-identified as male. The majority of our participants self-identified as White (96.7%) and 3.3% self-identified as Black or African. 16.7% of participants also identified as Hispanic or Latino, the rest identified as non-Hispanic.

Procedure

We recruited participants individually to the lab and randomly assigned them to one of the two similarity conditions. When participants first arrived, a research assistant gave them two consent forms and, as the participants read and signed the consent forms, excused himself so that

he could go check that the ostensible participant in the other room had arrived and was set up for the study. Upon the experimenter's return, and after participants had signed the consent forms, the computer-based experiment began.

First, participants completed a demographic questionnaire indicating their age, race, and gender. After completing this questionnaire, participants underwent the I-sharing and Me-sharing manipulations.

Manipulating I-sharing. We manipulated I-sharing by combining the Imaginiff manipulation used in previous published work (Pinel & Long, 2012) with the inkblot manipulation described in Study 1. Participants saw the faces of strangers and provided their gut-level response to the question "If this person were an inkblot, which inkblot would they be?" Specifically, participants saw 10 pictures of strangers (ostensibly college students), one at a time. After viewing each picture, participants picked one of four inkblots to represent their gut-level reaction to what inkblot best represented the person in the picture. Each time participants provided their response, they learned which inkblot image the other ostensible participant had chosen. For participants in the I-sharing condition, their ostensible interaction partner agreed with them on 7 out of 10 trials. For participants in the Me-sharing condition, their ostensible interaction partner agreed with them on 2 out of 10 trials.

Manipulating Me-sharing. The computer then asked participants to indicate on a 4 point Likert scale ranging from 1 to 4 the extent to which they agreed with 10 different beliefs. The beliefs were about things that participants had likely thought about before and that they thus had an opinion about and that therefore implicated their Me (e.g. I believe the most attractive color is blue; I believe the works of Shakespeare are boring). Participants once again either

received feedback that agreed with their own answers 7 out of 10 times (if in the Me-sharing condition) or 2 out of 10 times (if in the I-sharing condition).

Measuring liking and helping. Participants then filled out the same short 6-item liking questionnaire ($\alpha=.7$) used in Study 1. Participants filled out other questionnaires not pertinent to the current study before answering, on a one to nine point Likert scale ranging from not at all likely to extremely likely, the measure of helping intentions. Specifically participants indicated how likely they thought it was that they would help their partner if their partner needed help. For exploratory purposes – and because past research suggests that other people’s intentions toward us influence our reactions to them (Fiske, Cuddy, & Glick, 2006) – we also included an item measuring the extent to which participants felt their partner would help them if they needed help. In addition, to test whether our I-sharing manipulation, more so than our belief sharing manipulation, might have somehow increased the extent to which individuals thought they shared beliefs with the other participant, we asked participants to what extent they believed they and the other ostensible participant share similar beliefs. Likewise we also asked participants to indicate, on a 9-point Likert scale ranging from not at all to extremely, their degree of perceived similarity to their partner. When the experiment was over, participants were probed for suspicion, debriefed, and thanked for their time.

Results

We expected participants would show higher helping intentions if they I-shared than if they Me-shared. This we expected would occur regardless of how much participants said they liked the other participant. We also asked, as a secondary question, whether participants would expect more helping from an I-sharing partner than from a Me-sharing partner.

We ran three independent samples t-tests with similarity condition (I-sharer vs. Belief Sharer) as the independent variable and liking, helping intentions, and perceived partner's helping intentions as the dependent variables.

Consistent with the results of Study 1, participants who interacted with the I-sharer had significantly stronger intentions to help their interaction partner ($M = 7.25$, $SD = 1.39$) than participants who interacted with the Me-sharer ($M = 5.71$, $SD = 1.98$), $t(28) = 2.49$, $p < .05$, $d=.90$. This result occurred despite the fact that participants who interacted with the Me-sharer liked their partner ($M = 4.73$, $SD = 1.18$) just as much as participants who interacted with the I-sharer ($M = 4.92$, $SD = .79$), $t(28) = .524$, ns . Finally, participants' beliefs about their partner's helping intentions mirrored their own helping intentions. Specifically, those who interacted with an I-sharer thought their partner had stronger helping intentions toward them ($M = 6.19$, $SD = 1.47$) than those who interacted with a Me-sharer ($M = 4.79$, $SD = 1.72$), suggesting that participants believed their interaction partners reciprocated their own helping intentions, $t(28) = 2.41$, $p < .05$, $d=.88$.

Did participants evince more selflessness toward the I-sharer because they somehow saw the I-sharing information, relative to the Me-sharing information, as more significant or as suggesting more similarity toward their partner? When looking at the one-item belief sharing and similarity questions, the data indicate the answer is "no." As predicted, participants in the I-sharing condition did NOT believe their interaction partner shared beliefs with them ($M=4.06$, $SD=1.81$) any more so than participants in the belief sharing condition ($M=5.00$, $SD=1.47$) ($t(28)=-1.55$, $p=.133$). If anything, the means trended in the opposite direction. Likewise participants in the I-sharing condition did NOT believe their interaction partner was more similar to them ($M=4.31$, $SD=1.25$) any more so than did participants in the belief sharing condition

($M=4.79$, $SD=1.25$) ($t(28)=-1.03$, $p=.31$). Once again if anything, the means trended in the opposite direction. These findings assure the reader that the effect of our I-sharing manipulation did not stem from inferences about the extent to which one thought he or she was similar or shared beliefs with an I-sharer.

General Discussion

In the two studies reported here, participants displayed more selflessness toward an I-sharer than toward a Me-sharer. In Study 1, participants more generously distributed a desired good to an I-sharer than to both a Me-sharer and someone with whom they neither I-shared nor Me-shared. In Study 2, participants assigned to an I-sharing partner, compared to those assigned to a Me-sharing partner, expressed a greater desire to help their partner. Note that these selflessness findings replicated across two different study designs, using two different ways of operationalizing I-sharing and Me-sharing, and two different ways of measuring selflessness.

We do not mean to suggest by these findings that, when it comes to interpersonal relationships, I-sharing matters but Me-sharing does not. To the contrary across both studies, as well as across a multitude of published studies, we find that Me-sharing does matter: it fosters liking. Where I-sharing seems unique, however, concerns its ability to foster context and content independent selflessness. Whereas Me-sharing in itself either does not foster selflessness, or seems only to have this effect when a goal is attainable through cooperation or when one's reputation is at stake (Yamagishi & Mifune, 2008), our results suggest that I-sharing fosters selflessness even when participants believe they are performing their selfless acts *completely anonymously*.

These findings may have important implications that extend across a variety of contexts, including the psychotherapy context, the workplace, and even international affairs. In therapy,

many couples seek the advice of a third party on how to help the members of the couple exude more graciousness and selflessness toward one another. Therapists who develop techniques that foster I-sharing between these couple members may also help them to develop a more selfless stance toward one another (Pinel, Bernecker, & Rampy, 2014). In the workplace, especially in organizations requiring teamwork, employers can generate a more charitable and conflict-free workplace to the extent that they allow for opportunities for their employees to I-share with one another. And, when it comes to communicating across nations, fostering I-sharing may help bridge the feeling that the two parties literally come from two different worlds and produce more agreeable discussions. Put broadly, to the extent that I-sharing encourages selflessness, any situation requiring such behaviors, whether it involves couples in a relationship, groups historically at odds with one another, or employers and employees, may benefit from a dose of I-sharing.

Our results suggest that Me-sharing efforts (extracted from any I-sharing that they may imply), may not have the same desired effect. Across the two studies reported here, although participants liked Me-sharers, they did not act more selflessly toward them, nor did they report higher helping intentions toward them. It is very possible, however, that Me-sharing that implies I-sharing could have effects much like those observed in the pure I-sharing conditions created here. Indeed, we suspect that the intertwining in people's minds of Me-sharing and I-sharing might explain why some past researchers – who did not make an explicit effort to disentangle I-sharing from Me-sharing – observed an effect of similarity on altruism (see Karylowski, 1976; Sole, Marton, & Hornstein, 1975; Tajfel, Billig, Bundy, and Flament, 1971 discussed earlier). One need only consider the ways in which these researchers manipulated similarity – for example, through similar dot estimations and shared preferences of novel artwork – to see that it

seems highly plausible that these similarities implicate the I. Indeed, Long, Pintel, & Yawger (2015) have observed that participants in a minimal groups paradigm believe they I-share with those who share their artistic preferences, and that this belief underlies their ingroup favoring point allocations.

Although our studies are very encouraging, we would be remiss not to acknowledge some of their shortcomings. We recognize that we never tested selflessness when it came to a highly valued good. Although we suspect that college students love chocolate just as much as the rest of us, this resource was admittedly more expendable than some of the other options out there. It would be helpful to see how far the edge of the envelope can get pushed when it comes to I-sharing and selflessness. Participants gave almost all of their allotted M&Ms to the I-sharer; would they have done the same if we had handed them 100 dollar bills to allocate?

From a theoretical standpoint, we see no reason why I-sharing, relative to other forms of similarity, would promote selflessness when it comes to allocating objects of small monetary value, but not when it comes to the allocation of objects of more substantial monetary value. In such a scenario, we might certainly expect participants to keep a higher proportion of the money for themselves, but this does not necessarily mean that they would fail to show an allocation preference for an I-sharer relative to people with whom they are objectively similar or dissimilar.

More generally, future research might want to look at measures of selflessness that would complement the ones employed here, as well as a range of potential process variables. For instance, some researchers have argued that the existential connection I-sharing facilitates may fuse people's identities, whereby the borders between the self and others become porous (Swann, Jetten, Gómez, Whitehouse, & Bastian, 2012). Studies investigating this identity fusion have shown that fused individuals are more willing to sacrifice for others- including even giving one's

life to help others (Swann et al., 2014). It would be interesting to look at whether the existential connection I-sharing facilitates leads to greater fusion of identities, and also whether this might account for some of I-sharing's effect on selfless behavior. Future research could also investigate whether, under some conditions, existential connection leads to greater self/other overlap (see Aron, Aron, & Smollan, 1992; although some data suggests this may not be the case, see Pinel et al. 2006, footnote 7), perspective taking (Batson, Early, & Salvarani, 1997), perceived goal congruence (Aronson & Bridgeman, 1979), and empathic concern (Zahn-Waxler & Radke-Yarrow, 1990).

Moving beyond the consideration of additional measures, we acknowledge a potential shortcoming created by the potential lack of power in Study 2. With an exceedingly large sample (882, to be precise!), we may have found an advantage of I-sharing over Me-sharing on not just the helping intentions measure, but also on the liking measure. Such a finding, however, would not negate the implications of the findings we report here. Namely, even if we found a potential very small effect of the I-sharing manipulation used in Study 2 on liking, we would still conclude that I-sharing has a strong unique effect on helping intentions, as compared to Me-sharing, and that the effect is not explainable by any minimal difference in liking. Power considerations likely did not play a role in Study 1, in which we did not find an effect of Me-sharing on selfless behavior and where any effect of Me-sharing on selfless behavior would likely not emerge with additional power as participants actually allocated slightly fewer M&Ms to their partners in the Me-sharing condition than in the dissimilar condition despite liking them more.

Readers might also wonder whether I-sharing might exert its effect via something it implies about objective similarity with one's I-sharing partner. Although we agree that I-sharing

can at times lead to inferences of Me-sharing, just as Me-sharing can at times lead to inferences of I-sharing, we took careful measures to limit the possibility of these inferences by telling participants in the I-share condition that they I-shared but did not Me-share with their partner, and vice versa. We believe this methodology addresses a sizeable chunk of this concern. A determined critic could argue, however, that despite these concerted efforts, individuals could conclude that they Me-share with I-sharers on dimensions that we do not address in our manipulations. For instance our use of inkblots, which some clinicians use as a means to measure some meaningful aspects of the self that could be classified as the “Me” (such as one’s values or needs) may lead participants with training or knowledge about the meaning of particular inkblots to conclude they may share some declarable aspect of the “Me” with another individual. Although we did not ask whether participants had training in diagnosing responses to inkblots, our participants, who were just starting to study psychology, likely had no understanding of what the interpretations of those inkblots might mean. In addition in study 2, instead of stating what participants saw in inkblots, we changed the manipulation such that participants instead stated which inkblot looked the most like a random individual, something that clinicians never do and that has no diagnostic value for clinicians.

It is still in the realm of possibility though that participants might have thought the inkblot images were diagnostic of some shared aspect of the “Me” (something known about the self) not derived from any previous knowledge of inkblots, and concluded that they Me-shared in some other important or meaningful way such as having a shared value or need. Recall that Pinel and Long (2012) tackled this matter directly, in a study that pitted what is arguably the most significant form of Me-sharing – value-sharing (Rokeach, 1973) – against I-sharing. Pinel and Long (2012) still found an effect of I-sharing for the very people for whom one would

expect it: people high in existential isolation. The results of our added measures in Study 2 also support our interpretation of the data. Participants in Study 2 did NOT believe they shared more beliefs with the I-sharer than with the Me-sharer; if anything, the trend suggested the reverse (as they should have, given the specifics of our manipulations). Also, participants in Study 2 did NOT believe they were more similar to the I-sharer than to the Me-sharer; once again the trend suggested the reverse. These two findings corroborate our interpretation, one that emphasizes the *qualitative* difference between the two types of similarity, and make it unlikely that increases in some aspect of the “Me” by our I-sharing manipulation led to our effects.

These results, when taken as whole, suggest that I-sharing exerts its effect, not because it is a more significant form of Me-sharing in disguise, but because it is a unique form of similarity that draws its potency from its ability to quell feelings of existential isolation. That said, future researchers might wish to probe this matter empirically. It would be interesting to delve further into determining what people specifically infer after an I-sharing experience. We suspect that the most likely inference under such conditions would be that they are two people who experience random stimuli in the same way, or that they experience a variety of stimuli in the same way. Note that such inferences would be consistent with an I-sharing framework, and implicate the I over the Me, as they are not discernable aspects of the individual, but rather descriptions of how one experiences the world the same as another. With I-sharing, unlike Me-sharing, the content of the similarity does not seem to matter. Regardless of objectively dissimilarity with regard to their year in college (Study 1), beliefs (Study 2), social identities with which they identify highly (Pinel & Long, 2012), or even values (for those high in existential isolation; Pinel & Long, 2012) – I-sharing about any subject (such as responses to nonsensical questions about people, images seen in inkblots, or which inkblot represents a

person) has a meaningful effect. We have witnessed this effect on liking (Pinel et al., 2006), ingroup preference (Pinel & Long, 2012), conformity (Pinel, Long, & Crimin, 2010), and infracommunication (Pinel, Rempel, Long, & Brenna, 2015), and now here on two separate indicators of selflessness.

In Study 1, the use of the anonymity instructions, the separation of ostensible participants via different rooms, the removal of the researcher during allocations, and the use of an allocation method where participant's partners could not reciprocate, make it very likely that our participants' actions toward the I-sharers reflect true selflessness. In Study 2 we showed that the results of Study 1 replicated, and were not just an artifact of the methodology used in Study 1. Even in the very brief interactions investigated here, I-sharing substantially increased participants' selflessness, indicating that just a little bit of I-sharing can go a long way.

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