

# Social preferences shaped by conflicting motives: When enhancing social welfare creates unfavorable comparisons for the self

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## Abstract

The construction of social preferences often requires one to reconcile various social motives, such as concern with unfavorable inequality and maximization of social welfare. We propose a novel theory whereby people's level of agency influences the relative intensities of their social motives, and thus their social preferences. Agency in this context refers to decision makers' active involvement in the processes that produce social outcomes. Nonagentic decision makers are not involved in creating the outcomes. Therefore, the comparison between self and others is highly informative for them and they shun settings in which their outcome appears to be inferior. Conversely, agentic decision makers, who take action to influence social outcomes, care more about others' outcomes and are more inclined to promote social welfare. We report five studies testing the agency hypothesis. Participants were presented with realistic scenarios involving outcomes for themselves and another person. In each scenario, the outcome for oneself was fixed, while the outcome for the other person varied. The participants' task was to indicate their satisfaction with the other person obtaining either the same outcome as their own or a better one. We found that participants who were involved in creating the outcomes (agentic condition) were more satisfied with the other getting the better option than were participants who were not involved (nonagentic condition). Even low levels of influence on the outcomes were sufficient for a strong agency effect to occur. We discuss the agency hypothesis in relation to theories of social preference, the effects of voicing and participation in decision processes, and trade-offs in public policy.

Keywords: decision making, social preferences, inequality aversion, resource allocation, social comparison, prosocial behavior.

## 1 Introduction

Imagine the following scenario. After buying a new camera, you find out that a colleague of yours bought the same camera. You consider the possibility that she might have bought the camera for less than you, so you ask her how much she paid. Would you rather find out that she paid the same price as you, or less? Two conflicting reactions might surface in your mind. In particular, you might worry that your outcome would look poorer by comparison and thus you would prefer to find out that she paid the same price, not less. Yet you might hope to find out that she paid less, since this benefits her and does not cost you anything.

People's reactions to such scenarios reflect their social preferences, that is, their satisfaction with social outcomes obtained by themselves and others (Fehr & Fis-

chbacher, 2002; Loewenstein, Thompson, & Bazerman, 1989; Murphy, Ackermann, & Handgraaf, 2011). Decision makers' social preferences in settings like the camera scenario involve a conflict between two social motives—avoidance of inferior social comparisons, and concern about the well-being of others. We propose that decision makers' resolution of the conflict, and hence their social preferences, depend on their experience of *agency* in the setting. Thus people's social preferences depend heavily on whether or not they have a role in creating the outcomes. People tend to be more other-regarding in their preferences to the extent that they have agency in the situation.

The role of agency has been documented in recent studies in which participants were first paid for performing a task in the lab, and were then asked to consider the pay for another (matched) participant for the same task (Choshen-Hillel & Yaniv, 2011). Participants in one condition were asked to determine the salary for a matched participant, while participants in another condition were asked to indicate how satisfied they would be with various predetermined salaries for the matched participant. The participants who chose the outcomes were far more generous than the participants who rated their satisfaction with predetermined outcomes. In particular, they were

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more likely to favor the option of paying another participant more than they had received themselves.

Choshen-Hillel and Yaniv (2011) attributed this shift in social preference to participants' level of *agency*. Individuals are considered "nonagentic" when they experience social outcomes that were not brought about by their intentional actions. In contrast, individuals are considered "agentic" when they act purposefully to produce social outcomes, with the outcomes being related to their actions. How might agency affect social preferences?

The proposed theory draws on the insights of theories of social comparison and social utility. It has been suggested that individuals are generally sensitive to social comparisons and tend to draw self-inferences based on the differences they observe between themselves and others (Festinger, 1954). People are said to interpret differences in favor of others as negative signals about their own social status (Bazerman, Blount White, & Loewenstein, 1995) and consequently tend to shun settings that evoke uncomfortable comparisons (Brickman & Bulman, 1977; Fehr & Schmidt, 1999; Messick & Sentis, 1985; Tricomi, Rangel, Camerer, & O'Doherty, 2010). Our suggestion is that, in settings where individuals hold nonagentic roles, their inequality aversion is so strong that it dominates their prosocial motives (Choshen-Hillel & Yaniv, 2011). For individuals who hold agentic roles, however, the balance between the motives changes. Agentic individuals do not view the comparison as conveying important social information, since it is the consequence of their own deliberate action. Being involved in creating the outcomes for others, they also care more about the welfare of others, an effect consistent with the notions of "warm glow" (Andreoni & Miller, 2002) and welfare maximization (Bar-Hillel & Yaari, 1993; Charness & Grosskopf, 2001). Thus, agentic individuals (compared with nonagentic ones) pay less attention to unfavorable inequalities and care more about maximizing social welfare.

Our theoretical analysis suggests that people construct their social preferences depending on their level of agency in the setting. Applying this analysis to the camera scenario implies that people should express more other-regarding preferences when they are involved in creating an outcome for the other person than when they are not. We tested this prediction in the following studies.

## 1.1 The current studies

The present research further investigated the effect of agency on social preference, aiming to validate and extend previous findings. We tested the role of agency in a range of real-life social settings where individuals act with the intention of producing certain consequences. We created vivid scenarios portraying fairly common so-

cial experiences. The scenarios enabled us to manipulate agency and measure its effects on decision makers' preferences. In particular, each scenario depicts a social interaction involving a distribution of outcomes for oneself (i.e., the protagonist in the scenario) and another person. The kinds of outcomes to be considered were the size of a college scholarship and the price paid for a camera. In each scenario, the participant's own outcome was fixed. The participant's task was to indicate his or her preference between two alternative outcomes for the other person, either the same outcome as for oneself or a better one. While the first alternative maintained equality between self and other, the second led to a better joint outcome. According to our theory, the choice between the two alternatives should invoke conflicting motives, maintaining equality and maximizing social welfare; moreover, our theory implies that agency should influence how participants reconcile these two motives.

Agency was manipulated by varying the role played by the protagonist in the process leading to the social outcomes. In the nonagentic condition, the protagonist described in the scenario was not involved in creating the outcome for the other person in any way; s/he merely observed the other person's outcome. In the agentic condition, in contrast, the protagonist took action with the intention of influencing the outcome for the other person (e.g., s/he gave the other person a recommendation or cast a vote). According to our theoretical framework, the manipulation of agency in this sense should affect the participants' social preferences. Specifically, we hypothesized that participants should find the outcome favoring the other person more attractive in the agentic than in the nonagentic condition.

In this research we extend our previous work in several ways. First, we tested the agency effect using different methods and across different types of settings. Second, we investigated how subtle forms of agency could produce meaningful differences in social preferences. In previous research, agency had extreme levels. The agentic participants were asked to determine the outcomes for self and other, and thus had complete control over the social outcomes (Choshen-Hillel & Yaniv, 2011). The nonagentic participants had no control at all. In the current studies, agency is graded. The agentic participants' actions had partial or uncertain influence on the social outcome. If an agency effect is found using such manipulations, this would indicate that the effect of agency is broader and applies to more settings than previously demonstrated. Third, the methods used in the present research allowed us to create intermediate levels of agency (rather than all-or-none) and test their systematic influences on social preference.

The influence of agency was evaluated in five studies. Study 1 examined the basic agency effect, while Studies

2–4 sought to eliminate alternative accounts of the findings. Study 5 further tested the distinction between intermediate levels of agency. If an agency effect were consistently obtained, it would provide convergent validation of our theory, and deepen our understanding of the role of agency in the construction of social preferences.

## 2 Study 1

Study 1 used realistic scenarios to test the effect of agency on social preferences. Specifically, students participating in the study were asked to imagine they had been awarded a scholarship for a certain amount. Each participant was then asked to judge how satisfied he or she would be with two possible scholarships for another student (the participant's counterpart) one for the same amount as the participant had received, and the other twice as large. Participants were assigned to either an agentic or nonagentic condition. We predicted that the agentic participants would be more favorable to the possibility that the other student would be awarded a larger scholarship.

### 2.1 Method

Thirty-two undergraduate students participated in a brief study conducted via e-mail. They were assured that their answers would remain anonymous and confidential. In return for participation they were entered into a lottery that offered a prize of 50 Israeli Shekels (1 IS equaled \$0.30).

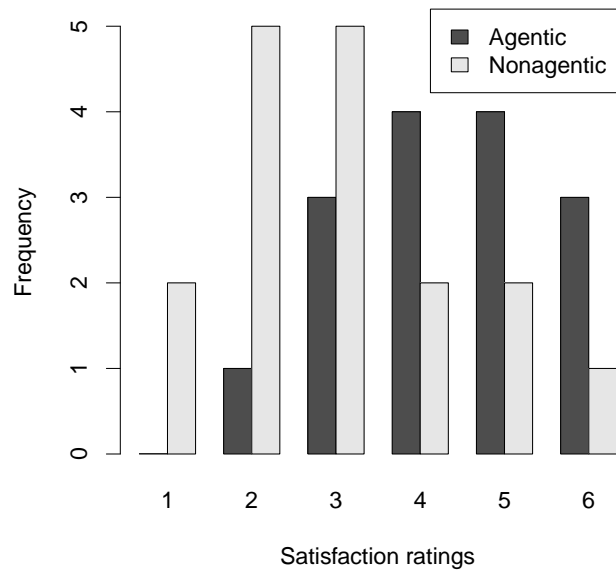
Participants read one of two versions of the scholarship scenario, in which the only difference was in the last sentence:

“Imagine that during the first term of the current school year the mayor of your hometown announced a scholarship program for students who had graduated from the local high schools. You applied for a scholarship and were awarded a one-time sum of 1000 IS. It is now the second term and you are told that the mayor has just sponsored a second scholarship program. To the best of your knowledge, the amount now being awarded to each student is either 1000 or 2000 IS, but you are not sure which. In any event, you are not eligible to apply for this scholarship, since you already won one for the first term. You are told that there is a fellow student in your division who graduated from a high school in your hometown and did not apply for the first-term scholarship.”

*Nonagentic condition* ( $n = 17$ ): “This student applied for the second-term scholarship. You decide to ask this student how large his/her scholarship is to be.”

*Agentic condition* ( $n = 15$ ): “This student is not aware of the second-term scholarship and could miss it. You decide to tell her/him about it.”

Figure 1: Distribution of satisfaction ratings by condition in Study 1.



Note: The distributions of satisfaction ratings obtained in Studies 2–3 were highly similar to this one. They are not presented in the interest of saving space.

Next, all participants indicated their tendency toward either one of two outcomes for the other, on a 6-point scale anchored at 1 (“I would be more satisfied to find out that the other student received 1000 IS”) and 6 (“I would be more satisfied to find out that the other student received 2000 IS”). This bipolar scale pitted the two social motives against each other. Specifically, one end of the scale represented equality, that is, equal outcomes for the protagonist and the other student (a 1000 IS scholarship). The other end of the scale represented greater social welfare; that is, the outcome for the other student was twice as large (2000 IS). The participants used this scale to indicate their preferred balance between the two motives. Low ratings imply greater concern about inequality, while high ratings imply greater concern for increasing social welfare.

### 2.2 Results and discussion

When indicating their preference between equal and better outcomes for another person, the agentic participants favored more the latter option than did the nonagentic participants (4.33 vs 3.00), ( $SDs = 1.41; 1.23$ ),  $t(30) = 2.82$ ,  $p < .01$ . The effect size was  $d = 1.03$ , a large effect according to Cohen (1992). The distribution of satisfaction ratings in each condition is shown in Figure 1.

Compared with the nonagentic participants, the agentic participants, who apparently took some action to influence their counterparts' outcomes, seemed less con-

cerned about the possibility that the counterparts would be awarded a larger scholarship. Although the observed difference in social preferences is consistent with the agency hypothesis, it could have alternative accounts, which we address in Studies 2–4. According to one such account (Study 2), the agentic participants favored the idea that their counterparts would receive a better outcome because they expected their counterparts to reciprocate. According to a second account (Study 3), they found a good outcome for the other person rewarding to themselves since it attested to their own competence as decision makers; according to a third account (Study 4), the agentic participants simply tried to be consistent with their prior prosocial behavior (prior behavior implied by the scenario).

### 3 Study 2

According to one alternative account for the findings of Study 1, the participants in the agentic condition were driven by ulterior motives rather than social welfare concerns. Specifically, they preferred the better option for their counterparts because they imagined that the counterparts might reciprocate them for their advice. The nonagentic participants, in contrast, gave no such advice and therefore could not expect any reciprocation.

To address this concern we conducted a study with two factors. The first factor was agency and the second was anonymity (i.e., the other person was described as either known or unknown). The participants' task was to rate how satisfied they would be with their respective counterparts receiving either the same or a better outcome. If the effect observed in Study 1 was due to the agentic participants' expectation for reciprocation, then this effect should be obtained only when the counterparts were known. If our agency account is true, however, then the effect should be obtained in the unknown conditions as well. Namely, an agentic participant should prefer the better outcome for both a known and an unknown other person.

#### 3.1 Method

One hundred undergraduates (71 women and 29 men) participated in the study as part of their course requirements. The participants were presented with a short scenario describing the purchase of a camera. They were randomly assigned into four groups, according to a two-way design with agency (agentic vs nonagentic) and anonymity (known vs unknown other) as between-participants factors. In the following two conditions the other person was *unknown*.

Participants in the *nonagentic* condition ( $n = 22$ ) were told:

"Imagine that you were shopping for a new digital camera and you finally bought one at a shop for 1500 IS. Two months later, while browsing in a photography forum on the Internet, you come across a posting by an anonymous surfer who has just bought the same camera at the same shop. It occurs to you that the prices might have changed by now."

Participants in the *agentic* condition ( $n = 23$ ) were told:

"Imagine that you were shopping for a new digital camera and you finally bought one at a shop for 1500 IS. Two months later, while browsing in a photography forum on the Internet, you come across a posting by an anonymous surfer who wants to buy the same camera. You refer him to the same shop where you bought yours. It occurs to you that the prices might have changed by now."

Participants in both conditions were then instructed to rate their tendency towards either one of two outcomes for the other, on a 6-point scale anchored at 1 ("I would be more satisfied to know that s/he bought the camera for 1500 IS") and 6 ("I would be more satisfied to know that s/he bought the camera for 1200 IS").

In another pair of conditions the other person was described as *known*. The questionnaire versions were changed slightly. In the *nonagentic* version ( $n = 28$ ), the sentence about the anonymous surfer was replaced with "A colleague of yours tells you that s/he has just bought the same camera in the shop where you bought yours." In the *agentic* version ( $n = 27$ ), the equivalent sentence was replaced with "A colleague of yours tells you that s/he wants to buy the same camera." Thus the manipulation of agency was equivalent across the known and unknown conditions, and the participants rated their satisfaction on the same 6-point scale.

#### 3.2 Results and discussion

Table 1 presents the mean satisfaction ratings in each condition. A two-way analysis of variance with agency and anonymity as between-participants factors revealed a main effect of agency (indicated by the difference between the rows of Table 1). The agentic participants favored more the better option for the other than did the nonagentic participants (3.80 vs 2.39),  $F(1,96) = 30.41$ ,  $p < .001$ ,  $\eta^2 = .24$ . The effect size (Cohen's  $d$ ) for agency was 1.12 in the known-other condition and 1.10 in the unknown-other condition; both effect sizes were large and very similar to the one found in Study 1 (1.03). Anonymity did not have a significant main effect,  $F < 1$ , nor did it interact with agency,  $F < 1$  (the two simple (column) effects shown in Table 1 are nearly identical). It thus appears that agentic participants preferred the better

Table 1: Mean satisfaction ratings as a function of agency and anonymity in Study 2.

	Anonymity	
	Known other	Unknown other
Agency: Nonagentic	2.41	2.36
Agentic	3.89	3.70

Ratings were made on a 6-point scale. Higher ratings represent a preference for a better outcome for the other. The SDs for the four cells ranged from 1.15 to 1.42.

option for the other person regardless of whether s/he was known or unknown. These findings give little support to the idea that the agentic participants' preferences were driven by their expectation of reciprocation. Instead, they are consistent with our account based on the notion of agency.

## 4 Study 3

Studies 1 and 2 suggest that agentic decision makers (compared with nonagentic ones) favor good outcomes for other people, even when this makes their own outcomes inferior by comparison. We have suggested that agency lessens decision makers' concerns about social comparison, and makes the social welfare motive more influential in forming social preferences. One might argue, however, that agentic participants preferred a good outcome for their counterparts simply because this outcome attested to their competence as decision makers; that is, they interpreted the good outcome as evidence of their skills as advice-givers. The nonagentic participants did not favor the good outcome for their counterparts since they gave no advice, and so the outcome was not informative about their skills.

To test the validity of this explanation we conducted a study that compared the nonagentic condition with two variations of the agentic condition. One agentic condition was identical to the "agentic/unknown other" condition from Study 2. The other (new) agentic condition involved a weaker link between the protagonist's action and its consequence, so that the outcome for the other could barely be considered as evidence of the protagonist's competence.<sup>1</sup> If our agency hypothesis is correct, then an agency effect should be obtained even in the new agentic condition, a result that is not predicted by the alternative explanation.

<sup>1</sup>We thank Marcel Zeelenberg for suggesting this condition.

## 4.1 Method

Ninety-nine undergraduates (71 women and 28 men, average age 24.2) participated in the study as part of their course requirements. The participants were randomly assigned to one of the three following conditions.

Participants in the *nonagentic* condition ( $n=31$ ) were told:

"Imagine that you were shopping for a new digital camera and you finally bought one at a shop for 1500 IS. Two months later, while browsing in a photography forum on the Internet, you come across a posting by an anonymous surfer who has just bought the same camera at the same shop. It occurs to you that the prices might have changed by now."

Participants in the basic *agentic* condition ( $n=33$ ) were told:

"Imagine that you were shopping for a new digital camera and you finally bought one at a shop for 1500 IS. Two months later, while browsing in a photography forum on the Internet, you come across a posting by an anonymous surfer who wants to buy the same camera. You refer him to the same shop where you bought yours, and he indeed buys it at that shop. It occurs to you that the prices might have changed by now."

Participants in the new *agentic* condition ( $n=35$ ) were told:

"Imagine that you were shopping for a new digital camera and you finally bought one at a shop for 1500 IS. Two months later, while browsing in a photography forum on the Internet, you come across a posting by an anonymous surfer who wants to buy the same camera. You refer him to the same shop where you bought yours, but he mistakenly buys it at another shop. It occurs to you that the prices might have changed by now."

As in Study 2, all participants were then instructed to rate their tendency towards either one of two outcomes for the other, on a 6-point scale anchored at 1 ("I would be more satisfied to know that s/he bought the camera for 1500 IS") and 6 ("I would be more satisfied to know that s/he bought the camera for 1200 IS").

## 4.2 Results and discussion

The agency effect observed in Study 2 was replicated. Specifically, the participants were more likely to favor a better outcome for their counterparts in the basic agentic condition than in the nonagentic condition (3.27 vs 2.42), ( $SDs = 1.31; 1.31$ ),  $t(62) = 2.61$ ,  $p < .05$ ,  $d = 0.66$ . The new agentic condition differed from the nonagentic condition nearly as much (3.23 vs 2.42), ( $SDs = 1.37; 1.31$ ),  $t(64) = 2.44$ ,  $p < .05$ ,  $d = 0.61$ . Indeed, the mean rating in the new agentic condition was almost identical to that obtained in the basic agentic condition (3.27 vs

3.23),  $t < 1$ . The fact that the participants favored a good outcome even in the new agentic condition—where the consequences were only weakly related to the protagonists' actions—discredits the alternative explanation (i.e., that the agentic participants sought evidence of their own competence) and supports our claim that the critical factor affecting social preferences here is agency.

## 5 Study 4

Study 4 tested another challenge to the agency account that arises from the type of agency manipulation used in Studies 1–3. In these studies, each agentic participant was asked to imagine that he or she had referred another person to a particular venue (shop or scholarship office). One might argue that the agentic participants felt that making a referral implies that they held a positive attitude towards the other person. Thus, they should display further prosocial behavior and indicate a preference for the better outcome for the other. Nonagentic participants, in contrast, had no previous interaction with the other person, and so did not feel committed to any particular behavior. Study 4 was designed to rule out this concern.

This study involved the consideration of two policies for granting scholarships to students. One policy involved giving equal amounts to oneself and to others, while the second policy involved giving higher amounts to others than to oneself. All the participants were asked for their preferences. Agency was manipulated by telling the agentic participants (but not the nonagentic ones) that they had already participated in a vote on this issue. Obtaining the agency effect in this study should mitigate the foregoing concern because the agentic scenario could not be interpreted as implying a positive attitude towards the others.

### 5.1 Method

Sixty-one undergraduates (44 women and 17 men, average age 23.7) participated in this study as part of their course requirements. The participants were randomly assigned to two conditions that differed only in one sentence. Participants read the following scenario:

“Imagine that during the first term of the current school year, the mayor of your hometown announced a scholarship program for students graduating from the local high schools. You applied for a scholarship, and were awarded 10000 IS. It is now the second term and the municipality is about to sponsor a second scholarship program. The new scholarship is meant for students from your hometown who did not apply for a scholarship during the first

term. You are not eligible to apply for this scholarship, since you have already gotten one.

The municipality needs to make a decision on the size of the scholarship to be awarded in the second term. The amounts being considered are 10000 and 15000 IS.”

[Participants in the *agentic* condition only ( $n = 29$ ) read the following as well: “The municipality asked first-round recipients of the scholarship to vote (confidentially) for the size of the scholarship for the second semester. You have already cast your vote.”]

All participants were then asked the following question:

“Imagine now that the municipality has made a decision. In which of the following cases would you be more satisfied?”

1. I would be more satisfied to find out that the municipality decided to award scholarships for the amount of 10000 IS.
2. I would be more satisfied to find out that the municipality decided to award scholarships for the amount of 15000 IS.”

### 5.2 Results and discussion

A significant effect of agency was obtained. The nonagentic participants indicated that they would be more satisfied with the larger scholarship for the others in 25% of the cases, while the agentic participants indicated this option in 62% of the cases,  $\chi^2(1, N = 61) = 8.55, p < .01$ ; the effect size in terms of  $\varphi$  was 0.37. Thus, in line with our hypothesis, the participants expressed more positive attitudes towards a policy favoring others after merely being asked to imagine that they had been given a chance to vote (one way or the other) and affect the policy. Importantly, these findings mitigate the concern that the agentic participants in the previous studies favored the better outcome for the other because they wanted to be consistent with their prior prosocial behavior implied by the scenario.

The results of Study 4 also strengthen the findings of Study 3. The agency effect was obtained in Study 4 even though the outcomes for others did not provide any feedback about the protagonists' competence. In summary, the effect obtained here reinforces our general conclusion that being involved in the creation of outcomes alters decision makers' social preferences.

## 6 Study 5

Whereas agency was a binary factor in Studies 1–4, four gradations of agency were compared in Study 5. This allowed us to test the hypothesis that the attractiveness

of the prosocial option gradually increases as decision makers have more agency. Four versions of the scenario used in Study 4 were created. Agency was manipulated in terms of the influence that the judgment of the protagonist had on the decision about the size of the scholarship given to other recipients. The protagonist had accordingly either great, intermediate, little, or no influence on the decision. Our prediction was that the greater the extent of the agency, the higher the proportion of prosocial choices.

## 6.1 Method

One hundred and sixty undergraduates volunteered to participate in this study. The participants first read the scenario used in Study 4. In particular, they were asked to imagine that they had been awarded a 10000 IS scholarship given by the municipality of their home town and that the municipality was about to sponsor a second scholarship program, for which they would not be eligible. The new scholarship levels being considered were 10000 and 15000 IS. The participants were then randomly assigned to one of four different conditions: a nonagentic condition and three agentic conditions.

Participants in the *nonagentic* condition ( $n = 40$ ) were told: "Imagine that the municipality has made a decision. In which of the following cases would you be more satisfied?"

1. I would be more satisfied to find out that the municipality decided to award scholarships for the amount of 10000 IS.
2. I would be more satisfied to find out that the municipality decided to award scholarships for the amount of 15000 IS.

In the three agentic conditions, the participants were further told that: "The municipality has asked the first-round recipients of the scholarship to vote on the size of the scholarship to be given in the second term." Participants in the first agentic condition ( $n = 40$ ) were then told: "Many students are casting their vote, so that each vote has little influence on the outcome." Participants in the second agentic condition ( $n = 40$ ) were told: "Only a few students are casting their vote, so that each vote has much influence over the outcome." Participants in the third agentic condition ( $n = 40$ ) were told: "You are the only student who may vote, so your vote has complete influence over the outcome." The participants in the three agentic conditions were then asked which of the following options they would vote for:

1. I would vote that the municipality award scholarships for the amount of 10000 IS.

2. I would vote that the municipality award scholarships for the amount of 15000 IS.

The four conditions described above thus represent four levels of agency, ranging from no influence over the outcomes (nonagentic), to little influence ("your vote is one of many"), intermediate influence ("your vote is one of a few votes"), and great influence ("your vote is the only one that counts") in the agentic conditions.

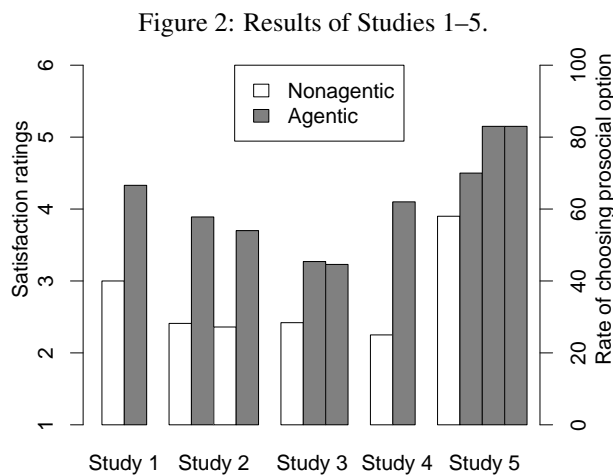
## 6.2 Results and discussion

The rates of prosocial choice were 58, 70, 83 and 83% for the nonagentic and three agentic conditions ("one of many", "one of a few", and "the only one that counts"), respectively. Consistent with the results of our previous studies, a significant effect of agency emerged. The agentic participants (across all three conditions) chose the prosocial option more often than the nonagentic participants (78% vs 58%),  $\chi^2(1, N = 160) = 6.62, p < .05$ ; the effect size in terms of  $\varphi$  was 0.20. Pairwise comparisons between the four conditions yielded a significant effect only between the nonagentic and either of the two conditions that involved higher levels of agency ("one of a few" and "the only one that counts"),  $\chi^2(1, n = 80) = 5.95, p < .05$ . A logistic regression analysis was conducted to test for a trend across the four conditions. This analysis confirmed that the rates of prosocial choice increased as a function of agency,  $\chi^2(3, n = 160) = 8.63, p < .05$ . Thus the more agency participants had, the more appealing they found the prosocial option.

## 7 General discussion

We have considered the manner in which two major social motives, concern about social welfare and inequality aversion, shape decision makers' social preferences. According to our theory, decision makers' experience of agency plays a pivotal role in affecting the relative strength of each motive and thus the decision makers' resulting social preference (Choshen-Hillel & Yaniv, 2011). In particular, compared with nonagentic decision makers, (i.e., passive observers of social outcomes) agentic decision makers (i.e., participants in the sequence of events that create the outcomes), are less threatened by unfavorable comparisons. Being more instrumental in the process, agentic decision makers also care more about social welfare. In line with this theory, we find that agentic decision makers show a greater preference for outcomes that enhance social welfare, even if they happen to promote inequality.

Our studies presented participants with hypothetical scenarios involving distributions of social outcomes to oneself and others. In scenarios of one type (Studies 1, 4



## Notes:

Studies 1–3 measured satisfaction ratings; Studies 4–5 measured the rate of choosing the prosocial option.

Study 2: The two leftmost bars show the agency effect in the known-other condition; the two rightmost bars show the agency effect in the unknown-other condition.

Study 3: The new agentic condition is the rightmost.

Study 5: The four bars correspond to the four conditions (no, low, intermediate, and high levels of agency, respectively, from left to right).

& 5) participants considered various scholarship amounts awarded to themselves and others; in other scenarios (Studies 2 & 3) participants considered the prices paid by themselves and others for the same good (a camera). In all the scenarios, the participant's own outcome was fixed, while the outcome for the other could be either the same or better. The participant's task was to indicate his/her satisfaction with the other person obtaining either the same or a better outcome. Importantly, the participants were assigned to agentic and nonagentic conditions; thus, they either did or did not take some action with the intent of influencing the other person's outcome. We hypothesized that the participants' social preferences (with respect to others' outcomes) would vary as a function of their agency.

Our studies document a substantial effect of agency on social preferences. Consistent with our theory, the agentic participants in Study 1 were more satisfied than the nonagentic ones with the other person receiving a better outcome (scholarship) than their own. Subsequent studies were designed to investigate the agency effect and eliminate alternative explanations. The findings of Study 2 showed that the agency effect could not be attributed to participants' expectation of reciprocation. Study 3 discredited the alternative explanation that agentic participants sought outcomes that would attest to their competence as decision makers. Study 4 ruled out the possibility

that the agentic participants favored a good outcome for the other person in order to be consistent with their prior prosocial attitude as implied by the scenario. Study 5 ascertained that participants' preferences become progressively more prosocial the more agency they have. It thus appears that while some particular alternative explanation could account for the results of a particular study, no such explanation accounts for all the results. The agency hypothesis, in contrast, predicts the results obtained across all the studies, and therefore emerges as the most parsimonious account of our findings. Figure 2 summarizes the agency effects found in Studies 1–5.

A clarification of the conclusions from this research is in order. In our studies, agentic participants embraced the other-regarding, prosocial option rather than the equal-outcome option. Yet agency should *not* be associated with a particular like or dislike for equality, but rather with an increased liking for prosocial options and care about the welfare of others. In cases where the equal-outcome option benefits others more than the alternative, agentic participants should find it more attractive.

An important contribution of the present research is showing the psychological impact of holding an agentic role on one's valuation of social outcomes, even when the link between the agentic act and the outcome is indirect or weak. In Studies 1–3, the agentic participants had (supposedly) intervened in the social process by making a recommendation (about a camera or a scholarship) to another individual, although the link between their recommendation and the actual purchase or the scholarship won by the other was indirect. The scenario in Study 4 stated that the agentic participants had cast a vote, but no information was given on the content or the effect of this vote. We found that the agentic participants, compared with the nonagentic ones, showed a greater preference for the option that yielded a superior outcome for the others, simply due to their supposed participation in the process that created the outcome. We thus conclude that decision makers' intentional actions to change social outcomes affect their social preferences, even when the link between the agentic act and the outcome is weak. This finding extends our understanding of the effect of agency, as previous research contrasted more extreme settings where the link between the agentic act and the outcome was either nonexistent or strong (Choshen-Hillel & Yaniv, 2011).

## 7.1 Agency and related concepts

Agency is considered a fundamental psychological factor affecting individuals' cognition, motivation, and behavior (e.g., Bandura, 2006; Eitam, Kennedy, & Higgins, 2011). The term "agency" has been used to refer to a wide range of mental states. Sato and Yasuda (2005, p. 241) suggest that agency is "the sense that I am the one



who is causing or generating an action” (see also Galagher, 2000; Sebanz, 2007). According to Wegner and colleagues, agency refers to the experience of having control over the outcomes of one’s actions (Wegner, Sparrow, & Winerman, 2004). Individuals may experience agency even when they have only partial control over the results of their actions. According to Bandura’s social cognitive theory (2006), one is agentic if one acts intentionally to influence one’s environment, even when the intended effect is not fully achieved.

In this article, we have considered the notion of agency in social contexts and defined it in terms of whether or not individuals take action to influence their own and others’ social outcomes. The effects of agency were found in a broad spectrum of settings that varied in the agent’s level of control over the outcomes. Indeed, in many social settings outcomes are determined by the interactive effect of several factors and cannot be fully attributed to the action of only one agent. In our view, individuals become agentic when they take intentional action, even if it has only a limited impact on the social outcomes and even when the chance of their intervention influencing the outcome is small. Importantly, even such a limited degree of control is psychologically distinct from having no agency at all. This distinction is indeed evidenced in the difference between the agentic and nonagentic decision makers’ social preferences in our studies.

Our view of agency and its effects on social preferences can be connected with other social and organizational phenomena, including the findings on voicing and participation effects. Past research has shown that participation in decision processes enhances workers’ satisfaction with the outcomes (Miller & Monge, 1986) and lowers their dislike for inequality (Folger, 1977). In one study, individuals who were invited to voice their opinion about resource allocation tended to view disadvantageous allocations as less aversive than others who had no such voice (Folger, Rosenfield, Grove, & Corkran, 1979). Similarly, individuals who were given a chance to voice their opinion were more likely to support affirmative-action policies that benefited others and had no positive effects for themselves (Hideg, Michela, & Ferris, 2010). Thus, the findings about the effects of voicing and participation can be taken as converging evidence for our present findings. According to our approach, individuals who participate in a decision process and voice their opinion are agentic, even if the consequences of their actions are limited or uncertain.

In a different vein, our distinction between agentic and nonagentic roles could suggest a new interpretation of previous findings in the literature on social preferences. Past studies showing people’s inequality aversion tended to engage participants in nonagentic roles (in our terms), such as having to judge the attractiveness of social out-

comes that they could not affect (Loewenstein et al., 1989; Messick & Sentis, 1985; Tricomi et al., 2010). In contrast, studies documenting participants’ concern about social welfare (rather than inequality aversion) tended to engage participants in agentic roles, such as having to determine the outcomes for themselves and others (e.g., Andreoni & Miller, 2002; Charness & Rabin, 2002; Engelmann & Strobel, 2004). Thus, the different patterns of preference expressed by the participants in these two streams of research can readily be accounted for by their roles (agentic vs nonagentic) in the experimental task.

Finally, our findings about the role of agency in resolving intrapersonal conflicts between social motives can help us better understand how individuals might react to public policy decisions. Consider the common conflict between the goals of equal allocation of resources and maximizing the output from the available resources. For example, higher-education resources are allocated more efficiently when college admissions are based on merit rather than on an egalitarian basis (Messick, 1995; Mitchell, Tetlock, Mellers, & Ordóñez, 1993). The fundamental tension described as the “equality/efficiency trade-off” has been the focus of much research on distributive justice and the formation of public policies (Mitchell, Tetlock, Newman, & Lerner, 2003). Our research informs this debate by suggesting that individuals’ involvement in the formulation of policies should influence their preferred trade-off between equality and efficiency. Our approach suggests that agentic individuals should show greater tolerance towards efficient policies even if they produce some inequality.

## 8 References

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