Paying It Forward or Paying Me Back?*

An Experimental Investigation of Mixed Generalized and Direct Reciprocity in Organizations

ABSTRACT

Drawing on cross-disciplinary insights from evolutionary biology, economics, sociology, social psychology, and management, we investigated the coexistence of paying it forward and direct reciprocity in employee-organization relationships. Two experimental studies based on behavioral economics games consistently showed that leaders paid forward generous compensation to their employees after the leaders themselves had received generous compensation before. When highly paid leaders paid forward generosity to their employees, they were not necessarily motivated by the expectation of reciprocity of their own employees. In addition, strong reciprocators (leaders who reciprocated generosity with high work effort) played an important role in instigating and sustaining a pay-it-forward system because they did not only reward direct reciprocity, they also paid forward generosity, especially to other strong reciprocators. Our research contributes to the organizational research on gift exchange, reciprocity, and paying it forward by enhancing our understanding of employee-organization exchange relationships.

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INTRODUCTION

Bell Bank, one of the largest independent banks in the U.S. with assets of more than $6 billion and business in 50 states, started its pay-it-forward program in 2007. In every Christmas, every full-time employee receives $1,000 and every part-time employee receives $500 at Bell Bank to give as they choose to people in need and/or causes they care about. Over the past 12 years, the organization and its employees have paid forward over $14 million to individuals, families or organizations in need.

Paying it forward is a generalized form of reciprocity. Reciprocity is a fundamental social norm in any society (Fehr & Gächter, 1998; Noonan, 1984; Nowak & Sigmund, 2002). As *homo reciprocans*, people often reciprocate generosity and kindness positively and miserliness and spite negatively. In direct reciprocity, beneficiaries pay back directly to their benefactor for the benefit they received. Thus, benefactors often expect something in return when they help the beneficiaries (e.g., I will scratch your back if you scratch mine). Different from direct reciprocity, generalized reciprocity or paying it forward is not about the return of a favor from beneficiaries to benefactors. Instead, it involves interlocked behaviors, in which beneficiaries reciprocate the benefit they have received by benefiting a third party, who has nothing to do with the previous benefactor (e.g., I help you, and you will help somebody else).

Paying it forward has been extensively studied in evolutionary biology, economics, social psychology, and sociology (e.g., Bartlett & DeSteno, 2006; DeSteno et al., 2010; Dufwenberg et al., 2001; Gray et al., 2014, Hamilton & Taborsky, 2005; Nowak & Sigmund, 1998; 2005; Pfeiffer, et al., 2005; Roth et al, 2004; Rutte & Taborsky, 2007; Simpson, et al., 2018). Except for a few studies (e.g., Baker & Levine, 2013; Baker & Bukley, 2014; Chambers & Baker, forthcoming), however, the phenomenon is relatively under-investigated in organizational research. The opening example of Bell Bank suggests that paying it forward does exist in organizations. Organizational scholars have also investigated other forms of paying it forward in organizations. For example, Baker and Bulkley (2014) investigated different mechanisms behind paying it forward in organizational citizenship behavior (OCB). Constant et al. (1996) examined how distant employees, who were strangers to each other, helped each other by exchanging technological advice through a large organizational network. More recently, Chamber and Baker (forthcoming)
experimentally investigated how ranking and reputation information affected indirect helping in systems of generalized reciprocity.

In the current research, we suggest that organizational research may incorporate paying it forward into employee-organization exchange models to better understand employment relationships in organizations. All organizational exchange theories and models are based on direct reciprocity between employers and employees (e.g., Adams, 1965; Blau, 1964; Camerer, 2003; Charness, 2004; Fehr et al., 1998; Fehr & Fischbacher, 2006; Fehr, Fischbacher, & Gächter, 2002; Gouldner, 1960; Thibaut & Kelley, 1959). On the one hand, for example, a host of organizational studies have demonstrated that underinvestment in employees often results in poorly paid, poorly trained, and poorly motivated employees, who are likely to reciprocate bad compensation and benefits with malfeasant behavior (e.g., Greenberg, 1990; 1993; Hollinger & Clark, 1983; Lazear, 1979; Pritchard, 1969). On the other hand, employer-employee exchange models in a number of different disciplines provide tremendous insights into employment relationships in highly paid organizations, which are characterized by higher than market salaries, positive HRM inducements and investments, reciprocal obligations, and better work performance (e.g., Charness, 2004; Fehr & Gächter, 2000; Shaw et al, 2009; Tsui et al, 1997). Despite a plethora of research in this field, almost none of these organizational studies has considered how employee-organization exchange relationships may go beyond direct reciprocity between employers and employees.

Different from the previous research, we investigate how paying it forward may be embedded in employer-organization exchange relationships. Different organizations and leaders often have different management philosophies about how to manage and reward employees. Many organizations are employing low-paid employees to sustain a low-cost and low-price strategy. For example, the minimum wage earned by many workers at McDonald’s, Starbucks, and Wal-Mart in 2012 was worth 30% less than it was in 1968 in purchasing power (Thoelcke, et al., 2012). In contrast, some other low-cost organizations adopt a different compensation strategy. For instance, Costco and Trade Joe’s, two low-price retailers, pay their employees substantially above the market-price salaries; Forbes named both of them the America’s Best Employers in 2017. We argue that an organization’s philosophy can be shaped
by its leader’s past experience because leaders’ past experience can affect their future management style and behavior (Kim & Toh, 2019). In particular, we suggest that leaders may “pay forward” their own experience to the new organization they found or join in the future. For example, organizational founders and leaders can be either appreciative or cynical when they were paid generously or ungenerously before. As a result, they may provide similarly generous or ungenerous compensations to their own employees when they found their own organization or join a new organization. At the same time, the employment relationships between founders/leaders and their employees will also be driven by direct reciprocity because employees will directly pay back their leaders’ generosity or stinginess by reciprocating either positively or negatively.

Thus, we suggest that employee-organization exchange relationships may be modeled as a mixture of both generalized and direct reciprocity. We conducted two laboratory experiments to investigate the co-existence of direct and generalized reciprocity in organizations, especially how leaders may transfer their previous organizational experience to new employees by paying forward generosity or miserliness to the employees. Our results support our predictions about paying it forward in employee-organization exchange relationships, suggesting that incorporating paying-it-forward into employee-organization exchange models will provide new insights about the direct reciprocity between employers and employees.

Our research makes several important contributions to organizational research. First, our research expands the current employee-organization exchange models by showing that paying it forward can be a unique type of organizational relationship in which leaders pay forward their previous organization’s generosity or meanness to their own employees. It is important to understand this phenomenon in organizations because the management philosophy that leaders and managers use to financially reward their own employees is likely to be influenced by what they have learned from their past experiences. Second, our research suggests that direct reciprocity and paying it forward may coexist in organizations because when leaders pay forward generosity or meanness to their own employees in a new organization, their employees will also reciprocate accordingly. Thus, it is essential to understand both direct and
generalized reciprocity in modeling employee-organization exchange relationships. Finally, our research also contributes to organizational research on cooperation and prosocial behavior, especially the role of strong reciprocators (leaders and employees who pay back generosity with hard work) in creating and maintaining generalized reciprocity in organizations.

THEORETICAL BACKGROUND AND HYPOTHESES

Direct Reciprocity and Employee-Organization Exchange Models

As the “core of the exchange concept” (Blau, 1963; p.140), direct reciprocity is the foundation for exchange models in organizational research. In economics, the gift exchange model started with Akerlof’s (1982) fair-wage hypothesis, which focuses on the impact of higher than market wages. “On the firm’s side, the ‘gift’ given is wages in excess of what (workers) could receive if they left their current jobs”; and “on the worker’s side, the ‘gift’ given is work in excess of the minimum work standard” (Akerlof, 1982, p.544). Akerlof and colleagues later developed efficiency wage theory (Akerlof, 1984; Akelorf & Yellen, 1988; 1990; Yellen, 1995). In addition, Fehr and other scholars have conducted a host of gift exchange games in experimental labor markets (see Camerer, 2003; Fehr & Gächter, 2000; Fehr, et al., 2009; for reviews). Both efficiency wage theory and findings from gift exchange games suggest that contrary to the prediction of neoclassic economic models, higher than market-rate wages often lead to greater worker effort because workers feel obliged to reciprocate their employers’ generous compensation. In contrast, low wages or imposing fines to monitor workers can result in decreased work effort and even hatred and retaliation because they signal distrust, miserliness, and unfairness (Camerer, 2003; Fehr & Gächter, 2001; Frey, 1993).

Exchange models have different traditions in sociology and social psychology. Both sociologists (Blau, 1964; Emerson, 1976; Gouldner, 1960; Homans, 1958) and social psychologists (Adams, 1965; Thibaut & Kelley, 1969) have developed social exchange theory, which posits that social interactions are often based on direct reciprocity, by which people who “give much to others try to get much from them, and persons that get much from others are under pressure to give much to them” (Homans, 1958, p. 606). Although social exchange theory broadly models social interactions instead of focusing on employment
relationships only, its underlying logic is similar to that of the gift exchange model in economics. Thus, like gift exchange models, a social exchange approach to employment relationships suggests that generous compensation can stimulate a strong sense of reciprocal obligation (e.g., Blau, 1964; Currall et al., 2005; Rousseau & Park, 1993; Weber et al., 2005), inducing employees to increase their work efforts and organizational citizenship behavior (Adams, 1965; Tepper & Taylor, 2003; Witt, 1991) and reduce their deviant or destructive working behaviors (Hollinder, 1986).

Management scholars have also incorporated social exchange theory to investigate employee–organization exchange relationships (e.g., Eisenberger et al., 2004; Hom et al., 2009; Tsui et al, 1997; Shaw et al., 2009; Shore et al., 2006). Employee-organization exchange models go beyond economic exchanges by broadly considering a variety of different investments and inducements that organizations can offer to their employees (e.g., Shaw et al, 2009). In addition, these models focus on whether the exchange relationships between employers’ inducements and employees’ contributions are balanced or imbalanced (Shore & Barksdale, 1998; Tsui et al., 1997). Similar to other exchange models, employee-organization exchange models suggest that when employers offer high inducements and investments to employees, employees often feel obligated to reciprocate with high job commitments and contributions that match the inducements provided by their employers. As a result, these felt obligations often result in employees’ “payments” in terms of a host of positive organizational outcomes, such as lower turnover and attrition rates, greater loyalty and commitment, and better performance and creativity (e.g., Eisenberger et al., 2001; Jia et al., 2014; Shaw et al., 2009; Tsui et al, 1997).

**Pay-it-forward in Organizations**

Despite their disciplinary differences, all the employee-organization exchange models are squarely based on direct reciprocity between employers and employees. Different from direct reciprocity, paying it forward is generalized reciprocity, meaning that “you have helped me and I will help somebody else”. In other words, it is not driven by a beneficiary’ obligation to pay back the initial benefactor. Instead, it is about the beneficiary’s desire to reward a third party indirectly implicated in a broad social exchange relationship with both the initial benefactor and beneficiary (Ekeh, 1974).
Paying it forward has been extensively studied in evolutionary biology, experimental economics, social psychology, and sociology (e.g., Bartlett & DeSteno, 2006; DeSteno et al., 2010; Dufwenberg et al., 2001; Gray et al., 2014, Nowak & Sigmund, 2005; Simpson, et al., 2018; Roth et al, 2004). In organizational life, paying it forward can manifest itself as a type of organizational citizen behavior (OCB) when employees help others because somebody else has helped them before (Baker & Bulkley, 2014; Deckop et al, 2003). Mentoring and apprenticeship programs are other common forms of paying-it-forward behavior in organizations (Walker & Yip, 2018). In addition, because distant employees in large organizations are literally strangers to each other, their help to unknown organizational members may also be regarded as paying it forward. For example, Constant et al (1996) found that distant employees provided technological advice to others in the absence of personal relationships or the expectation of direct reciprocity.

Employee-organization exchange relationships, however, have rarely been modeled as paying it forward because direct reciprocity is essential to employment relationships in organizations. In the current research, we suggest that paying it forward can be a special type of organizational relationship in which organizational leaders pay forward generosity or meanness to their own employees. Because some of today’s employees will always become tomorrow’s leaders, they will inevitably face the decision of how to manage and reward their own employees. Thus, an important but under-investigated research question is whether leaders may pay forward their boss’s generosity or meanness by providing similarly generous or ungenerous compensations to their own employees. Leaders’ past experiences can affect their management style and behavior in the future. For example, Kim and Toh (2019) found that leaders transferred their past cultural experience to new groups and organizations. Similarly, we expect that organizational leaders will learn and develop their own management philosophy from their past experiences. As a result, they may transfer their past experiences by paying forward generosity or stinginess to their own employees.

Previous research suggests that people who received others’ help are often grateful and therefore more likely to help others. For example, Bartlett and DeSteno (2006) found that gratitude led recipients of help to respond to a third party’s request for help. Deckop et al. (2003) showed that employees who received
help from a coworker were more likely to provide help to another employee. Other than altruism and generosity, people also pay forward greed and meanness. Gray and colleagues (2014), for instance, found that people paid forward greed by offering little money to future recipients in a dictator game when they faced a greedy dictator before. Building on these empirical studies, we suggest that when leaders have been previously lavished with above market pay and benefits, they should be more likely to pay forward the generosity received by offering similarly high wages to their own employees. In contrast, ceteris paribus, when leaders have been continuously undercompensated before, they are probably unwilling to spare no expense to pay a high premium for attracting and rewarding employees. Instead, they may pay forward meanness they received before by offering lower-than-market wages to their own employees in the future. Thus:

**H1: All else equal, leaders will be more likely to offer higher compensations to their own employees when they have been offered high vs. lower compensation before.**

The aforementioned pay-it-forward effect should be particularly strong for highly paid leaders who have positively reciprocated the generous compensation they received before because these leaders are often strong reciprocators who have a predisposition to cooperate (e.g., Fehr, Fishchbacher, & Gachter, 2002; Gintis, Bowles, & Fehr, 2005). Economists have developed different models of strong reciprocity (e.g., Dufwenberg & Kirchsteiger, 2004; Fehr et al., 1993; Levine, 1998; Rabin, 1993; Segal & Sobel, 1999). According to them, strong reciprocators have internalized cooperative values, which drive them to sacrifice their own economic interests to reward cooperative behavior and punish selfish behavior to promote better collective outcomes. In labor markets, for instance, a sufficient number of strong reciprocators often incentivize profit-seeking employers to pay fair, above-market wages because these strong reciprocators often reciprocate fair wages with high work effort (Fehr & Falk, 1999; Fehr & Gintis, 2007). Similarly, we suggest that when leaders are strong reciprocators themselves, they should be appreciative of their previous boss’s generosity. As a result, these strong reciprocators do not only feel obligated to reciprocate the generosity they received before, they may also feel necessary to pay forward the generosity they received to their future employees because they are likely to believe in sustaining fair,
positive, and mutually beneficial employer-employee relationships in the long run. Thus:

\textit{H2: All else equal, highly paid leaders who have reciprocated high compensation with high efforts before (strong reciprocators) will be more likely to pay forward high compensation to their employees than other highly paid leaders who have not adequately reciprocated before.}

\textbf{Coexistence of Forwarded Generosity and Direct Reciprocity}

It is worth noting that in our context, paying it forward is not to help total strangers who may bear no future relationship with the person who helps them. Instead, it represents a mixture of generalized and direct reciprocity. Figure 1a depicts paying it forward among strangers. After A helps B, B feels gratitude and helps C in return. In contrast, Figure 1b depicts our model of coexistence of paying it forward and direct reciprocity in organizations. After A helps B, B also helps A back in the first stage. Next, B is further motivated to help C, who also helps B back in the second stage. In our context, paying it forward occurs when a leader (B) pays forward generosity to his/her own employee (C) because of his/her previous experience with A (e.g., A paid B generously before). Different from pure paying it forward, however, after B pays forward his/her generosity to C, there will be a direct reciprocity between B and C. In other words, C will reciprocate B’s generosity either positively or negatively. Similarly, there was also a direct reciprocity between A and B before. Thus, different from the previous research, we suggest that both generalized reciprocity (pay-it-forward) and direct reciprocity may co-exist in organizations because when leaders pay forward generosity to their own employees, their employees will also reciprocate accordingly.

\textit{---------- Insert Figures 1a and 1b about here ----------}

Our model of mixed generalized and direct reciprocity suggests that paying it forward in organizations is not only driven by pure altruism or prosociality. Instead, leaders may have two mixed motives\(^1\) when they pay forward generosity to their employees. First, leaders pay forward generosity to their employees

\(^1\) Another possible motive is reputation building, which suggests that individuals may strategically engage in paying it forward or unilateral giving to build a positive reputation (Alexander, 1987; Baker, 2011; Baker & Bulkley, 2014; Baker & Levine, 2013; Nowak & Sigmund, 1998; 2005). Researchers often treat reputation building as indirect or downstream reciprocity instead of generalized reciprocity although both can be combined in a generalized exchange system (Simpson et al., 2018). We do not focus on reputation building in our research because of the complexity of reputation in our context. We address this mechanism for future research in our discussion.
because they appreciate the generous treatment they received before. Thus, their gratitude instigates the initial act of paying it forward. Second, leaders may also expect employees to reciprocate their forwarded generosity in a positive manner because the leaders are likely to believe in the virtuous cycle of employment relationships in which employees positively reciprocate leaders’ generous compensation. When employees fail to reciprocate generosity properly, leaders may not only become unwilling to keep paying forward generosity to employees, they may also alter their behavior by being ungenerous and punitive (Andreoni & Miller, 1993).

It is not entirely clear from the previous research how these two mixed motives may drive paying it forward in organizations. On the one hand, paying it forward is a form of altruistic or costly prosocial behavior because it is unilateral resource giving (Takahashi, 2000). Some individuals are altruists who truly enjoy the satisfaction of being altruistic even when doing is costly to themselves (Andreoni, 1990, 1995; Batson, 2011). For the majority of other people, however, research suggests that paying it forward primarily operates through gratitude (Baker, 2011; Baker & Bulkley, 2014; Baker & Levine, 2013; Bartlett & DeSteno, 2006; Chang, Lin, & Chen, 2012; McCullough et al., 2008). In particular, a number of recent studies have shown that gratitude is the key mechanism behind paying it forward because it plays a more important role than alternative explanations such as adherence to norms (DeSteno et al., 2010), third-party influence and social contagion (Tsvetkova & Macy, 2014), and general positive mood (Bartlett & DeSteno, 2006).

Gratitude motivates the act of paying it forward because being grateful for the help received leads people to help a third party in need. Thus, leaders may feel obligated to pay forward generosity to their own employees because they are grateful for the generosity and support they have received before. Baker (2011) borrowed the term of moral sentiments from Adam Smith (1759) to describe gratitude as an underlying mechanism behind the acts of paying it forward. Similarly, Simmel (1950) argued that gratitude is the “moral memory” that motivates reciprocal obligations for unilateral giving. As a result of gratitude, leaders may treat their own employees generously and consider less about the economic costs of being generous. For them, paying forward the generosity they have received before may represent a
management philosophy rather than any strategic actions. This view suggests that paying it forward does not necessarily involve consideration of future returns because leaders do not strategically expect that their generosity must stimulate future benefits from their employees. In other words, when leaders pay forward generosity to employees, they do not exactly demand a direct return from their employees although their generosity is often likely to increase employees’ cohesion and commitment. Thus, the gratitude and obligation argument suggests that leaders may still keep paying forward generosity to their employees even though some employees sometimes do not demonstrate high effort at work.

*H3a: Highly paid leaders will still pay forward generosity to their employees when employees fail to reciprocate their generosity with high work effort.*

On the other hand, however, the principle of direct reciprocity suggests that although highly paid leaders may first decide to pay forward generosity to employees because of their gratitude, it does not necessarily mean that they will continue to pay forward generosity to their own employees when employees do not or cannot pay back their generosity. First, because the goodwill paid forward by altruists may be exploited by selfish defectors, it is often believed that paying it forward is unstable or can only survive in very small groups (Boyd & Richerson, 1989). Thus, leaders are unlikely to pay forward generosity if they realize that employees take advantage of their generosity (Baker and Levine, 2013). Second, if leaders are sensitive to employees’ direct reciprocity, they may also view pay-it-forward as a misdirected act of gratitude when employees lack the ability or opportunity to pay back their generosity. Taken together, the principle of direct reciprocity suggests that highly paid leaders should become less willing and less likely to keep paying forward generosity to their employees when employees do not or cannot reciprocate their generosity in a positive manner. This leads to a competing hypothesis about the moderation effect of employees’ direct reciprocity on paying it forward:

*H3b: Highly paid leaders will become less likely to pay forward generosity to employees when employees do not or cannot reciprocate their generosity with high work effort.*

Finally, we also expect that leaders who have reciprocated generous compensation favorably (strong reciprocators) will be particularly sensitive to employees’ fair reciprocity because strong reciprocators are
often unconditional cooperators, who do not only reward fair and cooperative behavior, but also punish unfair and selfish behavior, both in an altruistic manner (e.g., Boyd, Gintis, & Gächter, 2003; Fehr & Fischbacher, 2003; Fehr & Gächter, 2002). When employees reciprocate generosity with animosity (e.g., low work effort), strong reciprocators should be strongly discouraged and will likely punish their employees instead of continuing to pay forward any kindness. In contrast, however, strong reciprocators will probably become even more generous when their own employees are also strong reciprocators who pay back generosity with hard work. Thus, we predict that strong reciprocators will be most likely to pay forward generosity to their own employees when strong reciprocators themselves were compensated generously before and when their employees are also strong reciprocators who pay back their generosity with hard work. Thus:

\[ H4: \text{There will be a three-way interaction such that previously highly paid leaders will be most likely to offer high compensation to their employees when the highly paid leaders have paid back high compensation with high work effort before (leaders are strong reciprocators) and when their employees also pay back high compensation with high effort (employees are strong reciprocators too).} \]

THE CURRENT RESEARCH

We investigated paying it forward in experimental labor markets using a set of behavioral games that allowed us to control potentially extraneous effects in our investigation. In the past two decades, a large and important body of research in economics has modeled employer-employee relationships as gift-exchange in labor markets. In particular, Fehr and other scholars have conducted numerous gift-exchange games to investigate employer-employee relationships in experimental labor markets (e.g., see Camerer, 2003; Fehr & Gächter, 1998; 2000, Fehr & Schmidt, 2006; for reviews). Drawing this line of research, we adopted gift-exchange games to investigate paying it forward and direct reciprocity in our research.

Our design employed parsimonious behavioral games to precisely assess employees’ direct and generalized reciprocity. Moreover, by tightly controlling for unnecessary noise and exogenous variables in experimental labor markets, we minimized the influence of nuisance factors that may be extremely difficult to isolate in the field to test the direct causal relationship in our design (e.g., Camerer, 2003,
Specifically, Study 1 manipulated both compensation and direct reciprocity using two sequential modified Gift Exchange Games (Charness, 2004; Fehr et al., 1993) to test Hypotheses 1, 2, and 3. Study 2 used two full Gift Exchange Games to replicate Study 1’s results and further test Hypothesis 4 about the effects of strong reciprocators on paying it forward.

**Study 1**

Study 1 employed a 3 (above vs. at vs. below market wages) × 3 (high vs. normal vs. no reciprocity) factorial design to test Hypotheses 1, 2, and 3. We recruited 674 participants, averaging 20.88 years of age, and 66% females, from a major Hong Kong University. All of the participants played two modified gift giving games (Game 1 and Game 2) sequentially. We manipulated compensation and direct reciprocity in the two games and participants were randomly assigned to one of the experimental conditions. Participants were paid a standard HK$50 (about US$6.41) participation fee. In addition, they all received a variable, extra game bonus from either one or both games.

**Game 1 (Gift Exchange Game to manipulate compensation).** Following previous research, Game 1 used a modified, repeated gift exchange game (Charness, 2004; Kirchler et al., 1996; Fehr et al., 1993) to manipulate the exchange relationships between employers and employees in a laboratory market. About half of the participants were randomly assigned as employees and the other half as employers. All the employers and employees were anonymously matched in random pairs.

The game lasted for 10 rounds. Unlike previous studies (e.g., Charness, 2004; Fehr et al., 1993), employers and employees were matched in fixed pairs instead of being assigned to different pairs in each round. This design allowed us to create a lasting exchange relationship between each pair of employer and employee to motivate the act of paying it forward in the next stage. At the start of each round, all of the employers were given an endowment of 100 Guilders. Guilders were converted into Hong Kong dollars at the rate of 20 guilders to each HK$1 (about US$0.13). Employers were asked to make a wage offer to their paired employee in each round. In the above-market-price condition, each wage offer employer made must be no less than 60 guilders. In the market-price condition, each wage offer must be between 30 and 50
guilders. In the below-market price condition, each wage offer must be below 30 guilders.

Because our manipulations gave employers high restrictions in their wage offers, employers were generally unable to freely respond to employees’ work effort. Thus, we asked employers to make 10 wage offers continuously without being able to see their employee’s reciprocated effort. Employers’ offers were sent to their paired employees subsequently. Although employers made the 10 wage offers continuously, employees received each offer in a sequential order. When employees received each wage offer, they were also informed that the offer they had received was above, below, or at the market price (market norms). After employees received each wage offer, they were asked to determine their effort level in each round by choosing a number between 0.1 and 1.0. A higher number (denoting a higher level effort) always cost employees more than a lower number (denoting a lower level effort), with 0.1 costing employees 0 guilders and 1 costing them 18 guilders. However, the higher the number (denoting the higher level of effort) an employee chose, the higher his/her employer’s income would be in each round. Specifically, employers’ income was determined by the following formula:

\[
\text{Employer’s income in each round} = (100 - \text{wage offered}) \times \text{Employee’s effort}
\]

After employees decided their effort in each round, their decisions were made available to their paired employers. All the payoff calculation formulas were made available to both employers and employees. Thus, employers and employees had complete information about their own and their counterpart’s payoffs by the end of the game.

**Game 2 (gift exchange game to measure paying it forward):** The second game was a similar gift exchange game with a slightly different wage/effort formula. Only employees played Game 2; employers did not. In the game, all the employees were assigned as a leader and they were paired with a new worker who did not participate in Game 1. Leaders were asked to make wage offers to their new workers for 10 rounds. Similar to Game 1, leaders were endowed with 80 guilders in the beginning of each round with the same conversion rate of 20 guilders to each HK$1. Unlike Game 1, however, leaders had complete discretion to make whatever wage offers they liked to their paired workers in each round.

**Reciprocity manipulations.** We included three reciprocity manipulations in Game 2. In the normal
reciprocity condition, leaders’ income was determined in a similar manner as in Game 1; in the high reciprocity condition, workers’ reciprocated effort doubled supervisor’s income. In the third, no reciprocity condition, leaders’ income was not affected by workers’ reciprocity as workers had no opportunity to reciprocate (see the formulas below).

Normal reciprocity: Leader’s income per round = \( (80 - \text{wage offered}) \times \text{Worker’s effort} \)

High reciprocity: Leader’s income per round = \( (80 - \text{wage offered}) \times \text{Worker’s effort} \times 2 \)

No reciprocity: Leader’s income per round = \( 80 - \text{wage offered} \)

We manipulated workers’ reciprocity (high vs. normal vs. no reciprocity) to test the competing hypotheses of H3a and H3b about the effects of workers’ direct reciprocity on leaders’ acts of paying it forward. This design did not only allow us to investigate whether paying it forward was motivated by workers’ direct reciprocity, it also gave us the opportunity to test how the magnitude of reciprocity might affect paying it forward.

As in Game 1, we asked leaders to make 10 wage offers continuously without seeing their worker’s reciprocated effort in Game 2. Because leaders’ wage offers were independent from workers’ efforts, we ran all the workers in a later experiment to simplify the experimental procedures. Leaders were not aware of this during the entire experiment; leaders in the normal and high reciprocity conditions claimed their game bonus for Game 2 in a later stage.

Results

Table 1 presents descriptive statistics and correlations. Table 2 summarizes the regression analysis results. Model 1 included age, gender, leaders’ average effort in Game 1, and the dummy variables of high and no reciprocity conditions in Game 2; Model 2 added employers’ average wage offers in Game 1. H1 predicted that highly paid leaders would be more likely to offer higher wages to their employees than lowly paid leaders. After controlling for leader’s average effort in Game 1, employer’s average wage offer in Game 1 was significantly and positively related to the average wage leaders offered to their workers in Game 2 \( (\beta=.22, \ p<.0001) \), suggesting that the higher the employers’ wage offers in Game 1, the higher the leaders’ wage offers in Game 2. Thus, H1 was supported, suggesting that highly paid leaders paid forward
their employer’s generosity to their workers in Game 2.

H2 predicted highly paid leaders who demonstrated high reciprocity (i.e., strong reciprocators) would be more likely to offer high compensation to their workers than leaders who demonstrated low reciprocity. Model 3 added the interaction term between employers’ average wage offers in Game 1 and leaders’ average effort in Game 1. The interaction effect is positive and significant ($\beta=.11$, $p<.05$). We plotted a figure following the procedure of Aiken and West (1991) and Dawson (2014). (See Figure 2). As shown in Figure 2, highly paid leaders were more likely to offer average higher wages to their workers in Game 2 when they reciprocated their employer’s wage offers with high than low efforts. Thus, H2 was supported, suggesting that strong reciprocators were more likely to pay forward generosity to their workers.

H3a and H3b were two competing hypotheses. Whereas H3a predicted that highly paid leaders would still pay forward high wages to their workers even when their workers did not reciprocate high wages with high work effort, H3b predicted that employee’s low reciprocity would dampen the likelihood of leaders paying forward generosity. We tested H3a and H3 by analyzing whether highly paid leaders were more likely to pay forward high wages to their workers in the high and normal reciprocity conditions than in the no reciprocity condition. If leaders truly cared about employees’ reciprocity, they should be less likely to pay forward high wages in the no reciprocity condition, and more likely to pay forward high wages in the high reciprocity condition. We created and added two interaction variables in Model 4: the interaction of wage offers in Game 1 and no reciprocity condition in Game 2, and the interaction of wage offers in Game 1 and high reciprocity condition in Game 2. The results in Model 4 showed that neither interaction term was significant ($\beta=-.08$, $p=.35$; $\beta=-.09$, $p=.21$). In addition, analyzing leaders in the high compensation condition only showed that highly paid leaders paid similar wages in the three reciprocity conditions in Game 2 ($p=.13$). Thus, these results supported H3a instead of H3b, suggesting that highly paid leaders did not strategically expect direct reciprocity when they paid forward generosity to their workers.

**Discussion**
Study 1 provided some strong initial evidence of paying it forward in employee-organization exchanges. After controlling for direct reciprocity, highly paid leaders were more likely to pay forward generosity to their workers. Leaders’ forwarded generosity was motivated by their kindness and gratitude instead of their strategic expectations of a direct return from their own workers. In addition, strong reciprocators were more likely to pay forward generosity than other leaders. In Study 1, we manipulated compensation and direct reciprocity to cleanly test the effects of paying it forward. As a tradeoff, however, the lack of dynamic interaction between leaders and workers in Game 2 might have affected our results, especially how direct reciprocity might affect paying it forward. In particular, our reciprocity manipulation might have only tested leaders’ decisions when workers could not, rather than did not, reciprocate their generosity with high effort. To address this limitation, we designed Study 2 using two full gift exchange games by allowing all the players to play the games in real time to test the robustness of Study 1’s results.

**Study 2**

Study 2 used the same two sets of gift exchange games as in Study 1. Participants first played the gift exchange game in pairs of employers and employees for 10 rounds. Next, employees played the second gift exchange game as a leader with a different worker for 10 rounds. In both games, participants interacted instantly with each other in real time and they were allowed to freely choose whatever wage offers and effort levels they wished.

We recruited 408 participants from the same university in Hong Kong; they averaged 20.83 year of age; 60% were female. Participants were paid a standard HK$50 (about US$6.41) participation fee. In addition, they all received a variable bonus from either one or two behavioral games, depending on their role in the two games.

**Game 1.** As in Study 1, participants were randomly assigned and matched as employers and employees to play a gift exchange game. They played the game in guilders, which were later converted into Hong Kong dollars at the rate of 20 guilders to HK$1 (about US$ 0.13). At the beginning of the first round of the game, all the employers were endowed with 100 guilders and they made a wage offer to their
paired employees. After employees received their employers’ wage offer, they decided their reciprocal effort, which was then made available to the employers. These two decisions constituted one round and the game lasted for 10 rounds. Unlike Study 1, employers and employees could freely choose their wage offers and effort levels. Thus, there was no restriction of any kind on their decisions. Employers and employees had complete information about the other party’s decisions and payoffs during the entire game.

Game 2. After playing Game 1, employees played another gift exchange game with a new worker, who did not participate in Game 1. In Game 2, employees were leaders, who made wage offers to their paired workers. The procedure of Game 2 was identical to that of Game 1. At the beginning of the first round of the game, leaders were endowed with 80 guilders and they made a wage offer to their workers. Next, workers decided their reciprocal work effort. These two decisions constituted one round and each pair of leaders and workers played the game for 10 rounds. As in Game 1, leaders and workers had complete information about each other’s decisions and they could freely choose their wage offers and effort levels during the entire game.

Results

Table 2a displays means, standard deviations, and correlations of all the variables. Table 2b shows the regression analysis results. Model 1 included age, gender, leaders’ average effort in Game 1, and worker’s effort in Game 2. Model 2 added employer’s average wage offer in Game 1. As in Study 1, employer’s average wage offer in Game 1 was significantly and positively related to the average wage leaders offered to their workers in Game 2 ($\beta=.27$, $p=.005$), after controlling for leaders’ effort in Game 1. This result, which replicated our key finding in Study 1, continued to support H1 and suggest that leaders paid forward their employer’s generosity to their workers in Game 2.

---------- Insert Tables 2a and 2b about here ----------

Model 3 added three interaction variables: the interaction of employer’ wage and employees/leaders’ effort in Game 1, the interaction of employers’ wage in Game 1 and worker’s effort in Game 2, and the interaction of employee/leader’s effort in Game 1 and worker’s effort in Game 2. The interaction effect of
employers’ wage and leaders’ effort in Game 1 was not significant ($\beta=-.07, p=.39$). Thus, unlike Study 1, H2 was not supported, suggesting that strong reciprocators were not more likely than other highly paid leaders to pay forward generosity to their workers in this study. The interaction effect of employers’ wage in Game 1 and worker’s reciprocity in Game 2 was not significant either ($\beta=.08, p=.45$). Thus, again, the results supported H3a instead of H3b, suggesting that worker’s direct reciprocity did not affect the generosity that leaders paid forward in Game 2.

Finally, Model 4 added the three-way interaction of employers’ wage in Game 1, leader’s reciprocity in Game 1, and worker’s reciprocity in Game 2. The three-way interaction was positive and significant ($\beta=.30, p=.001$). To assess the interaction effect, we followed the procedure of Aiken and West (1991) and Dawson & Richter (2006) to plot the interaction effect (See Figure 3). Both Figure 3 and a slope difference test (Dawson & Richter, 2006) showed that leaders who chose high effort in Game 1 (i.e., strong reciprocators) were most likely to pay forward generosity to their own workers in Game 2 when the leaders received high wages in Game 1 and when their workers were also strong reciprocators who chose high effort in Game 2 ($p<.002$). Thus, H4 was supported, suggesting that strong reciprocators were sensitive to their workers’ fair reciprocity and as a result, they were mostly likely pay forward generosity to other strong reciprocators.

Discussion

Using a different design, Study 2 generally replicated Study 1’s results and provided consistent evidence of paying it forward. After controlling for other exchange factors, highly paid leaders were likely to pay forward generous compensation to their own workers after they themselves had received high compensation before. In addition, there was no evidence of highly paid leaders strategically paying forward generosity to simulate future returns from their own workers. Finally, strong reciprocators were mostly likely to pay forward generosity to workers who were also strong reciprocators, suggesting the importance of strong reciprocators in creating and sustaining pay-it-forward in organizations.

GENERAL DISCUSSION
The current research used mixed methods designs from behavioral economics, social psychology, and management to investigate both paying it forward and direct reciprocity in employee-organization exchange models. The results of two complementary experiments suggest that paying it forward may be particularly potent in employee-organization relationships because highly paid leaders pay forward generosity to their own employees. When leaders pay forward generosity to their employees, they do not strategically expect that their generosity will simulate future benefits for themselves. Finally, strong reciprocators seem to play a special role in initiating and sustaining paying it forward in employment relationships because they do not only display high reciprocity, they also reward other strong reciprocators by paying forward more generosity to them.

Our research has several theoretical and practical implications. First, although employee-organization exchange models have different traditions in economics, psychology, sociology, and management, all of them are based on direct reciprocity between employers and employees (e.g., Blau, 1964; Camerer, 2003; Fehr, Goette, & Zehnder, 2009; for reviews; Thibaut & Kelley, 1969). Reciprocity not only constitutes a fundamental social norm, it also reinforces other social norms in the workplace. The current research extends extant exchange models by investigating paying it forward in employee-organization exchange relationships. Paying it forward has been studied extensively in a host of disciplines such as evolutionary biology, social psychology, sociology, and experimental economics (e.g., Bartlett & DeSteno, 2006; DeSteno et al., 2010; Dufwenberg et al., 2001; Gray et al., 2014, Nowak & Sigmund, 2005; Roth et al, 2004). In organizations, mentoring and apprenticeship programs can both be modeled as paying it forward. So can be organizational citizen behavior (Baker & Bulkley, 2014; Deckop et al, 2003). Drawing on insights from the previous research studies, our research suggests that direct reciprocity and paying it forward may coexist in employee-organization relationship. By testing this mixed model, our research extends employee-organization exchange models by investigating new mechanisms and determinants underlying employment relationships. In particular, it enhances our understanding of how to combine both direct reciprocity and paying it forward to model employee-organization exchange relationships.
Second, our research sheds light on the importance of strong reciprocators in creating and maintaining the systems of generalized reciprocity. Although building a pay-it-forward culture of helping and generosity can enhance cohesion and commitment and increase future acts of positive reciprocity in organizations (Baker, 2011), implementing and sustaining a system of generalized reciprocity can be a difficult endeavor because there are always different disruptive organizational factors (Chambers & Baker, 2019). Moreover, because paying it forward is unilateral giving of resources and can easily be exploited by free riders (Yamagishi & Cook, 1993), it is often believed to be a cooperative myth. For example, Nowak and Roch (2007) suggested that paying it forward is a “misdirected act of gratitude” (p.605). Similarly, DeSteno et al. (2010) argued that paying it forward is incidental. In response to the myth, our results suggest that strong reciprocators may be particularly important in creating and maintaining a pay-it-forward culture in organizations. Previous gift exchange research suggests that strong reciprocators help transfer labor markets by motivating profit-seeking employers to offer fair wages (e.g., Fehr & Falk, 1999; Fehr et al., 1993; Fehr & Gintis, 2007, for a review). Similarly, our research suggests that strong reciprocators do not only pay back generosity, they may also pay it forward to other strong reciprocators through generalized reciprocity. Thus, organizations probably need to recruit and motivate a sufficient number of strong reciprocators to implement and sustain a system of general reciprocity. This finding has important implications for organizations who seek to empower their employees to go the extra mile to help each other and promote future acts of reciprocity.

Finally, our research contributes to the organizational literature by investigating how the decisions of organizational leaders may be shaped by their past experience. Organizations vary greatly from each other in terms of their management practices. Leaders often transfer their past experience to new organizations (Kim & Toh, 2019). But how and why they transfer their past experience to future management is not well understood. Our research suggests that leaders’ compensation decisions may be influenced by their experiences with their previous employers. In particular, our experimental results show that leaders’ act of paying it forward is more driven by the generosity they received before instead of how they strategically expected their employees to respond to their generosity. This suggests that leaders’ beliefs and philosophy
from past experience may sometimes play a more important role than their interactions with employees. Thus, instead of taking a static perspective of organizational exchange, our research provides useful insights into how organizational leaders and managers may make future management decisions by absorbing learning from their past experiences and applying it moving forward. Because some of today’s employees will always become tomorrow’s leaders, it is particularly important to understand how employees today may be influenced by their previous experience, especially how they interpret their past experiences and how they seek to apply learning from these experiences.

**Limitations and Future Research**

Like all research, ours is not without limitations, some of which provide additional venues for future research. First, we primarily focus on testing our model of coexistence of paying it forward and direct reciprocity in organizations. Paying it forward is also called generalized or upstream reciprocity. Previous research has identified another form of prosocial behavior in generalized exchange system: downstream or indirect reciprocity (e.g., Nowak & Sigmund, 2005; Simpson, et al., 2018). Unlike paying it forward, indirect reciprocity is primarily driven by reputation building. When a benefactor helps a beneficiary, the kind act helps the benefactor build a good reputation. As a result, someone else may help the benefactor because of his/her good reputation. Nowak and Sigmund (1998) demonstrated that public reputation (or image score) helped sustain evolutionary stability of indirect reciprocity. Baker and colleagues have also repeatedly shown that reputation building is one of the essential mechanisms behind indirect reciprocity in organizations (e.g., Baker, 2011; Baker & Levine, 2013; Baker & Bulkley, 2014; Chambers & Baker, 2019). Reputation building is also likely to be an important mechanism when leaders pay forward generosity to employees. We do not focus on reputation building in our studies because our experiments focus on fixed leader-employee pairs in repeated interactions. Thus, direct reciprocity may dampen the effects of reputation building during these reciprocal interactions. Future research should investigate how reputation building constitutes another mechanism behind leaders’ act of generalized reciprocity, especially whether leaders may strategically build different reputations for both internal and external actors (e.g., employees vs. other stakeholders).
Second, our studies mostly show how leaders pay forward generosity based on their past experience. Our results suggest that leaders transfer their past experience to future management. What is less known form our research, however, is when leaders avoid transferring past experience to their employees or organizations in the future. For example, leaders may not like their previous experience. They also learn good and bad lessons. It is reasonable to expect that sometimes they may choose to do exactly the opposite to what their boss did to them before. Thus, future research might investigate the boundary conditions of leader experience, especially when and how they transfer or do not transfer their past experience to future management.

Last but not least, our research is based on behavioral games in experimental labor markets. Although behavioral games effectively provided parsimonious, accurate, and causal tests of people’s behavior (Camerer, 2003; Fehr & Gintis, 2007; Murnighan & Wang, 2016), they may not entirely capture the complexity of dynamic employer-employee relationships. Thus, future research might further investigate different forms of paying it forward in employee-organization exchanges in the field.

CONCLUSION

People are *homo reciprocans* and direct reciprocity is the foundations of employee-organization exchange models in a number of different disciplines. Our research contributes to the organizational research by proposing and testing whether paying it forward and direct reciprocity may co-exist in organizations, especially when leaders transfer their past experience to new employees. Results from two complementary studies consistently showed that leaders paid forward generous compensation to employees after controlling for their employees’ direct reciprocity. Our research provides important new insights by introducing paying it forward as a new element in employee-organization exchange models. Future research would build on and expand our studies to investigate different mechanisms behind paying it forward and other kinds of generalized reciprocity in employee-organization relationships.

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2 We also have some initial field evidence, showing that supervisors paid forward generosity in terms of organizational support. We do not report this study in this paper due to limited space and the experimental nature of the current studies.
References


Kirchler, E, Fehr, E, & Evans, R (1996) Social exchange in the labor market: Reciprocity and trust versus


Tepper, BJ, & Taylor, EC (2003) Relationships among supervisors' and subordinates' procedural justice


Figure 1a. Paying it forward
First A helps B. Then B feels gratitude and helps C.

Figure 1b. Coexistence of paying it forward and direct reciprocity in organizations
First, A helps and B also helps A back. Then, B feels gratitude and helps C, and C also helps B back.
Figure 2. Effects of Interaction of Leaders’ Effort in Game 1 and Employers’ Wage offers in Game 1. (Study 1).
Figure 3. Effects of Interaction of Leaders’ Effort in Game 1, Employers’ Wage offers in Game 1, and Workers’ reciprocity in Game 2. (Study 2).
Table 1a 
Descriptive Statistics and Correlations, Study 1.

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Note: N=337. *** p <.001, ** p <.01, * p <.05
Table 1b.  
Regression Results of Average Wage Offers in Game 2, Study 1.

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*** p < .001, ** p < .01, * p < .05, † p < .10
### Table 2a
Descriptive Statistics and Correlations, Study 2.

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Note: N=136. *** $p < .001$, ** $p < .01$, * $p < .05$
Table 2b.
Regression Results of Average Wage Offers in Game 2, Study 2.

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</table>

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