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Center for Research in Economics, Management and the Arts

Awards are a Special Kind of Signal

Working Paper No. 2014-04

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AWARDS ARE A SPECIAL KIND OF SIGNAL

Bruno S. Frey and Jana Gallus¹

Abstract Awards appear in various forms, ranging from the title "Employee of the Month" to prizes, decorations, and other honors. This contribution develops a theory designed to analyze the widely-observed phenomenon of award giving. We use signaling theory as a basis for our discussion. The perspectives of the giver, and of (potential) recipients, of awards are studied in a principal-agent framework. The analysis highlights conditions under which signaling failures are likely to arise and compares awards with monetary compensation. The paper informs management practice by presenting a systematic appraisal of the signaling functions of awards. It proposes under which conditions awards tend to raise performance, and when monetary compensation proves to be superior.

Keywords Awards, prizes, incentives, signaling theory, principal-agent framework.

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INTRODUCTION

Awards in the form of prizes, medals, orders, and titles are often referred to as "ridiculous [and] outdated" (*The Economist*, 2004). They appear to be a clear waste of time and resources. This is particularly the case as awards are normally given out by top managers whose opportunity costs of time are the highest. Yet, Nelson (2005) observes that even profit-oriented firms hand out a great number of awards to their employees. *The Economist* (2013: 76) equally notes the "proliferation of [...] prizes" that has taken place over the past years in various fields ranging from business to the arts. Trice and Beyer (1984), in their study of organizational rites and ceremonials, bemoan that "no thorough studies of such ubiquitous phenomena as [...] award or retirement ceremonies [...] appear in the literature" (1984: 665). The theory of awards hasn't had any major developments since then (single, noteworthy studies on awards are Besley and Ghatak, 2008, and Malmendier and Tate, 2009). Signaling theory serves an important function to help explain such "seemingly irrational" practices (Gambetta, 2009) as award bestowals. We employ the theory in order to make sense of the existence, and especially the pervasiveness, of awards.

Over the past four decades, signaling theory has become part of game theory. It now spans various disciplines, extending from sociology to economics, management, political science, anthropology, and biology; Gambetta (2009) provides an excellent survey of the different strands of the literature. Connelly *et al.* (2011) review the management literature in which signaling theory occupies an important position, including strategic management, entrepreneurship, and human resource management. We adopt a problem-oriented approach and apply signaling theory so as to make sense of the widespread and longstanding use of awards.

Awards transmit signals that transform the content and interpretation of information emitted by actors. They are non-material and derive their value from their symbolic nature. The value to the recipient usually exceeds the costs that the giver incurs. This asymmetry in

costs and benefits is a great advantage of awards over other signals, such as wage increases (on the latter, see notably Sliwka, 2007). Awards and monetary compensation have significantly different informational and behavioral implications. The signal strength and effects differ according to the specific circumstances. We aim at identifying under which conditions either awards or monetary rewards are superior and when they can, and should be, combined in order to reach a particular outcome in terms of the behavior induced.

In a principal-agent setting, the principal (a person, a committee, or a community) transmits a particular signal by offering awards instead of money for certain types of outstanding performance. The agent also emits specific signals by accepting and displaying, or rejecting, the award. Moreover, there are signals emitted relating to the non-recipients of awards and to the public at large. The flow of signals connected to awards impacts the information available about the principal and the agent, and therein, the behavioral incentives the actors face. Where signaling failures are likely to arise, other rewards such as monetary payments are superior.

AWARDS AS SIGNALS

Observational evidence suggests that two types of awards need to be differentiated because they vastly differ in their role and strength as a signal (see Figure 1). The distinction will allow us to set boundary conditions for the ensuing analysis.

Confirmatory awards. On the one hand, there are company award schemes with clearly defined performance criteria upon which receipt of the award is made conditional. They leave little leeway for the principal to emit signals. Awards of this type are bestowed at regular intervals and are highly automated since the award is always given to whoever was the previous period's best performer—we will therefore call them confirmatory awards. These awards are an addendum to the regular incentives (e.g., bonuses), and employees compete for them. By adding an award to the monetary incentives, high performers are made

more visible and their status is elevated. However, since the award will be 'up for grabs' in the following period, winners will have to compete again in order to uphold their status.

Discretionary awards. On the other hand, there are awards where the principal may decide when and upon whom they are bestowed. They can be given, for instance, for unexpected services of an agent (such as helping colleagues), which would not be honored in the standard incentive and compensation scheme. These awards tend to be given ex post to the behavior observed, often to the surprise of the winner. They do not state explicitly any expectations or requirements to be fulfilled by the agent in the future. By adding a monetary prize to the award, the principal can signal the seriousness of the award and establish it among competing awards.

Insert Figure 1 here

Given the high degree of discretion involved in their bestowal, discretionary awards can be an important means for the principal to emit signals about his or her intent and quality. Firstly, they give more leeway to the principal and therefore transmit information that signal receivers can directly attribute to the principal. Secondly, the higher discretion enjoyed also raises the *signal costs*, which are central to signaling theory (Bliege Bird and Smith, 2005; Camerer, 1988; Gambetta, 2009; Riley, 2001) since they often help separate true signalers from mimics who only pretend to possess the quality associated with the signal (see also the "handicap principle" introduced by Zahavi, 1975). Honest signals, as they are frequently called in management studies, denote those signals that "would be difficult and uneconomical for someone to fake if they did not possess a high level of quality in the area in question" (Durcikova and Gray, 2009: 84). Besides the monetary prize sometimes added to awards,

three main sources of costs can be identified, which all tend to be higher for discretionary awards than for confirmatory awards.

First, the more time and effort the principal is seen to spend on the selection and celebration of the award recipients, the more costly the award and, *ceteris paribus*, the stronger the signal sent to the award recipients and to third parties. Confirmatory awards are automated and merely reflect the information (i.e., the ranking of employees) already contained in the bonus scheme. Discretionary awards, by contrast, require the principal to invest more time in the selection of candidates and winners. The second source of costs is potential in nature and consists in the risk of a signaling failure (e.g., the award being given to an undeserving agent or being publicly rejected), the discussion of which will round up the paper. Since discretionary awards involve a higher degree of leeway in the selection of candidates, any failure will be attributed to the principal and deteriorate the latter's reputation. The importance that reputation can have in organizational contexts is shown, for example, in the review by Weigelt and Camerer (1988), or in the studies done by Deephouse (2000), and Fombrun and Shanley (1990). The higher the risk of a signaling failure and the resulting reputational damage, the more time and effort the principal will invest in selecting winners, and hence, the higher the signal costs of discretionary awards will be.

Lastly, the lying costs a dishonest signaler (a principal instrumentalizing the award for purposes other than honoring the agent) will incur tend to be higher in the case of discretionary awards, where it is up to the principal to decide whether and upon whom to bestow an award. Erat and Gneezy (2012), for instance, show that many persons are even averse to telling Pareto white lies, which would help not only themselves but also others, i.e., the agent in our framework. Confirmatory awards are merely executed by the principal who, therefore, does not need to truly hold the winner in esteem, and thus incurs lower lying costs.

PROPOSITION 1. *The higher the discretion the principal enjoys with respect to the timing and selection of recipients of an award, the*

higher the award's value as a signal of the principal's intent and quality.

Practical implication. Managers should consider instituting *discretionary awards* with vague criteria, which they may employ to signal their own qualities and intents, and to recognize behavior not reflected in the standard performance criteria, such as helpfulness. By contenting themselves with *confirmatory award schemes*, they risk foregoing important advantages of awards.

The remainder of the analysis will focus on *discretionary awards*.

SIGNALS EMITTED BY THE PRINCIPAL

In the following section, three channels through which awards can be used as signals by the principal are analyzed. All three of them contribute to our understanding of why principals bestow awards, i.e., what the award's strategic signaling effect is (Connelly *et al.*, 2011). In a corporate context, one can imagine the manager emitting signals towards employees and other (potential) stakeholders. Various studies that focus on signals emitted by managers have been done, including Carter (2006), Goranova *et al.* (2007), Higgins and Gulati (2006), Ross (1977), and Zhang and Wiersema (2009). As opposed to our analysis, these studies look at signals sent to parties other than the inner circle of employees, such as potential investors and shareholders. Fombrun and Shanley (1990), however, provide a detailed analysis of hypotheses which they test empirically. Their study looks at signals emitted by managers, but it also goes further in that it widens the scope of signal receivers, including employees, consumers, investors, and the public at large. For purposes of clarity and succinctness, we decided to primarily focus on the dyad manager-employee, or principal-agent, respectively. However, we will also include brief digressions to consider further signal receivers (i.e., other candidates and the general public) where particularly relevant. The different signaling channels discussed below are not mutually exclusive, but rather are complementary.

Signals of quality

Information problems may arise either with respect to the quality or the intent of an agent (Stiglitz, 2000, 2001). In the case where a principal bestows awards upon agents, the awards transmit signals that will cause recipients, non-recipients, and the public at large to draw inferences about both the principal's quality and his or her intentions. Thus, whereas most studies either deal with one or the other (most often they deal with quality in the case of management research, see Connelly *et al.*, 2011), the study of awards allows us to integrate signals that concurrently confer information about both quality and intent. If the signal is perceived as credible—as we assume here (signaling failures will be discussed in the last section)—it will influence beliefs and may thus also alter the signal receiver's behavior towards the principal, as well as the organization as a whole.

Looking at job applicants, Rynes (1989) shows how, in the absence of perfect information about organizations—or in our framework, of managers or principals—applicants (or agents, more generally) can interpret certain behavior or attributes as signals or cues about the organization or the principal. With respect to awards, we can distinguish two major mechanisms via which the principal emits signals about his or her quality. Firstly, by bestowing awards to honor outstanding behavior that is often not recognized by incentive schemes, the principal signals his or her high interpersonal skills to the award recipient and to third parties. These skills consist of an ability and willingness to assess the effort and performance of agents (i.e., attentiveness), and to adequately recognize them (i.e., appreciativeness). The principal can further reinforce this quality signal by the type of behavior that he or she chooses to award. Giving awards for pro-social behavior, such as helping colleagues, signals the principal's attentiveness to interpersonal relations. A manager who is identified as being attentive, appreciative, and supportive of a positive interpersonal work environment is more likely able to incite employees' compassion. As the recent work by Atkins and Parker (2012) emphasizes, compassion can be considered vital for organizations.

In a study modeling manager-employee relationships, Dur (2009) shows that managers who offer low wages to signal that they instead devote attention towards employees can better induce the employees to stay at the firm and work hard than managers who pay high wages.

Secondly, by presenting and inducing the agent to accept an award, the principal signals his or her standing as an established authority in the organizational hierarchy. The principal is in a position to distribute prestige (Anand and Watson, 2004). In contrast to gift giving (a frequent topic of signaling studies, see e.g., Gneezy and List, 2006), awards are based on an existing hierarchy, which they reinforce. As will be discussed below, the award recipient cannot reciprocate the signal by offering an award to the principal (which would be possible in gift giving).

The two signals of quality (interpersonal skills and authoritativeness) are very different from one another. Either one, when emitted on its own, may be detrimental to the principal (e.g., a manager perceived as a friend without authority or an authoritative despot without compassion). However, when combined, they may be of strategic importance. Monetary rewards could, in principle, be used to signal authoritativeness, albeit not of a moral sort. They are much less suitable for signaling the possession of interpersonal skills and might in fact even signal the opposite, for instance, when used to pay someone for having helped a colleague.

PROPOSITION 2. By bestowing awards, the principal emits two main signals about his or her quality that monetary rewards cannot transmit: Firstly, the principal signals a high degree of interpersonal skills (e.g., attentiveness); secondly, the award can serve as a signal of the principal's authority within the organizational hierarchy.

Practical implication. By using awards, managers may send signals about their own qualities, thus influencing the perception of employees and the wider public (e.g., potential

future employees and customers). Managers may thus induce compassion on the part of their employees, and concurrently reaffirm their authority within the organizational hierarchy.

Signals of intent

An important reason why managers sacrifice their time on the bestowal of awards is that they can therein signal their own intent (Stiglitz, 2000)—namely, their willingness to enter a mutual bond of loyalty with the recipient of the award.

Signals about intent can also be encountered in other organizational contexts, for instance, when entrepreneurs accept to incur costs by approaching a business angel, and with that signal their willingness to exert effort and build up a viable firm (Elitzur and Gavious, 2003). An analysis directly combining signaling theory with bonding has been provided by Arthurs *et al.* (2009), however, their focus lies on the length of the lockup period in a firm's initial public offering venture. Somewhat closer to our analysis, Suazo, Martínez, and Sandoval (2009) use signaling theory to analyze the impact of human resource practices, such as performance appraisal or compensation, on the employee's psychological contract. In particular, and conforming to our analysis of awards, they show that "positive [performance] feedback from supervisors may signal the creation of a psychological contract with a belief in long-term employment (e.g., a relational psychological contract)" (2009: 161). This, in turn, can shift the focus on an emotional—rather than purely economic—level, which benefits the organization since it promotes such vital feelings as compassion and interconnectedness in the employees (Atkins and Parker, 2012).

Extending this line of reasoning, we argue that presenting an award to an agent signals the principal's willingness to enter a special bond of loyalty with the recipient. Two conditions are important for the award to be perceived as an authentic signal: First, the number of awards the principal bestows has to be limited since the quantity of awards is negatively correlated with the principal's perceived intent of commitment. A mimic wanting

to fake the signal of loyalty would rather bestow more awards in an effort to bond with multiple agents, without caring about a particular one. Second, the bestowal has to be consistent with the other signals the principal emits (e.g., the award should not accompany a cut in salary). Upon acceptance by the award recipient, the award signals to the general public that the two actors share similar goals and are loyal to each other. Again drawing a comparison to monetary rewards, it seems that the latter are not suited to emit a signal of loyalty between the giver and the recipient. Firstly, in the context of firms, bonuses may often not be talked about with other employees. This opaqueness is reinforced by social norms, which widely inhibit talking about one's monetary achievements. Secondly, it is not considered to be immoral to work for somebody with different preferences. What matters is that one receives sufficient money to perform the task.

The following main proposition provides the core of the above reasoning:

PROPOSITION 3: *The smaller the number of awards bestowed, the stronger (cet. par.) the signal of loyalty emitted by the principal.*

Practical implication. Managers may use awards so as to establish ties of loyalty with valuable employees. They may thus shift the relationship from a purely business-oriented interaction to a social one, based on shared values and goals.

Signaling valued behavior

Considering awards as motivators, we draw on insights from psychological research (e.g., cognitive evaluation theory, Deci, 1975; and equity theory, Adams, 1965). However, we aim to maintain the study's focus on awards as signals, and therefore do not enter into a general discussion of the various motivation theories.

Principals generally find it difficult to specify the tasks an agent is supposed to do in the unknown future with a satisfying level of accuracy. Awards are well suited to give a general indication of what matters to the principal and in what way an agent should act. Two

distinguishing features of awards are relevant in this respect. Firstly, an award can be given *ex post* to the observed behavior. The criteria do not necessarily need to be determined *ex ante*. The signal is emitted when the principal bestows an award on an agent and emphasizes the merits that will thus be honored. The incentivizing effect therefore operates on third parties in that the award shows which work behaviors the giver values. The signal emitted towards the award recipient is one of support and recognition, containing an implicit incentive component for future behavior.

Secondly, awards allow the principal to leave the targeted performance sufficiently vague. With this, awards are advantageous when dealing with tasks that cannot be clearly defined and measured—the award can, for instance, be given for helpfulness with no need to exactly define, measure, and enumerate the employee's single deeds. Thus, the less easily performance criteria and tasks can be defined *ex ante* and observed *ex post*, the more prevalent are awards. Under opaque conditions, awards still allow the principal to steer by signaling what behavior is cherished. In contrast, monetary rewards, particularly in their more stringent form of pay-for-performance, require precisely-defined measures of performance. Once introduced and made explicit, they risk inviting strategic behavior by employees, which may harm aggregate firm performance. By using awards, the principal circumvents important limitations posed by monetary rewards: even in situations where the desired tasks are vague and cannot be contracted, the principal maintains the ability to influence the behavior of the recipient and, most importantly, of future candidates and the wider audience. Moreover, the principal reduces the risk of motivation crowding out when using awards instead of monetary rewards.

Using signals rather than explicit performance contracts allows the principal to signal his or her intent to avoid direct control where it is not necessary. The principal therein signals support for intrinsic motivation for which such freedom from control is crucial (Frey, 1997). At the same time, this adds to the award's signaling cost by exposing the principal to the risk

that agents take advantage of their freedom. Awards also strengthen intrinsic motivation because, by bonding his or her name to the recipient's, the principal signals trust and confidence in the latter's future performance. This implicit backing can even provoke a crowding-in effect (other reasons why awards may strengthen intrinsic motivation, e.g., because they usually come as a surprise, are not discussed since they are not related to signaling theory).

The intrinsic motivation that is thus supported with awards is a crucial prerequisite for creativity (Amabile, 1996; Ederer and Manso, 2013), which is important in many fields. Since monetary rewards are tied to performance criteria, which have to be observed and measured, they risk crowding-out intrinsic motivation. There are still other channels via which a crowding-out effect can be caused by monetary rewards. Deci, Koestner, and Ryan (1999), and Frey and Jegen (2001) provide extensive surveys of the studies on the topic.

PROPOSITION 4. The less precisely the desired behavior of agents can be determined ex ante and measured ex post, and the more important the agents' intrinsic motivation is, the more the principal may benefit from using awards (rather than monetary payments).

Practical implication. Awards can be used to highlight behavior and work attitudes desired by management, without requiring a clear-cut definition and measurement of performance. This freedom from control is essential for intrinsic motivation. Managers can use awards where intrinsic motivation is important and risks being crowded-out by extrinsic rewards.

SIGNALS EMITTED BY THE AGENT

Awards also involve signals that are being sent by the recipients, usually when they accept and display the awards. These signals are directed towards the principal whose offer to enter

a special relationship is reciprocated. They also have an effect on non-recipients and the public at large.

Signals of quality

There are two ways in which awards can send signals about the agent's quality. First, awards emit a signal that conveys information about the award recipient's intrinsic qualities, for example, devotion to duty. Second, they can identify the recipient as a member of a group of other agents who have previously been honored with the same award. In this case, the signal of quality is indirect—it operates via inferences about the single recipient, which are drawn by observing the quality of the group of previous recipients.

Signaling latent qualities. When an agent receives an award, this indicates that the principal values his or her latent qualities, such as work attitude or behavior. This signal can have two further implications. First, it increases the outside options for the agent. A firm issuing an award to one of its employees for "exceptional service" raises the probability that competing firms make a good offer to that employee. The latter might accept the offer or use it to argue for a wage increase. This is a potentially counterproductive effect for the principal. Yet, the same effect can result from the use of monetary rewards. If the latter are raised, this signals to outsiders that the agent is particularly productive and that it may be worthwhile to advance an offer. In the case of awards, there are possibilities to mitigate the risk, for instance by basing the award on criteria that are not very transparent or communicable. In the most extreme cases, the award becomes a currency that can only be used within the organization. Money, in contrast, is understood everywhere without ambiguity and, therefore, allows for comparisons of employees' performances across firms.

The second implication of an award that signals latent qualities is a reduction of transaction costs in an environment marked by asymmetric information (Spence, 1973).

Where relevant personal characteristics, such as ability, team spirit, and motivation are unobservable, awards assume an important signaling function (Frey and Neckermann, 2010). They can thus, for instance, facilitate the formation of efficient and well-aligned teams within an organization. Similarly, in the case of companies displaying their reception of an award, the latter signals the firm's quality (Podolny and Lynn, 2009).

PROPOSITION 5. The less job-relevant personal characteristics are observable, the more important the signaling function of awards as a means to reduce transaction costs is.

Practical implication. By bestowing awards on motivated individuals, managers may facilitate coordination and team formation among employees. Award criteria should be kept vague in order to prevent competitors from enticing away the awarded employees. Managers should also consider alternatives to adding a monetary prize to the award since this provides outsiders with a well interpretable number of how valuable the respective employee is for the organization. The award's seriousness may instead be communicated by means of a proper internal celebration of the recipients.

Signaling group membership. By accepting and displaying an award, agents also signal their membership of a group. This has implications for their social status. Nahapiet and Ghoshal (1998), summing up previous analyses (e.g., Burt, 1992, D'Aveni and Kesner, 1993), argue that "membership in specific networks, particularly those in which such membership is relatively restricted," allows individuals to derive "significant social capital in the form of social status or reputation" (1998: 2). It is also likely to provoke emotions, such as pride and joy. Entry into a group is frequently celebrated with lavish ceremonies, where the award and other insignia are bestowed and rituals are performed. These rituals can have differentially strong cooperative effects (Sosis and Bressler, 2003).

Even when an award does not involve entry into a club, the utility of the award's past recipients is directly affected by the new members, and vice versa. The higher the new members' reputations, the more the award will be seen as a signal of valor, and the more it will be worth to its beholders.

Where awards are linked to group membership, the principal-agent structure sometimes does not hold. This is the case if the members of the group are the ones to decide who is allowed to join their circle. Often though, it is still a principal (e.g., the manager) who makes the decision.

PROPOSITION 6. The more exclusive the circle of past award recipients and the higher its members' reputations, the greater the award's value as a signal of valor and prestige for the award recipient is.

Practical implication. An award's reputation crucially depends on its past winners. Managers should therefore select winners with care. They may also distribute different and unique awards on a case-by-case basis. This reduces the dependency of the respective award's reputation on the former award recipients' behavior and reputation.

Signals of intent

As pointed out previously, acceptance of an award establishes a mutual bond of loyalty between the giver and the recipient. The latter enters this bond by accepting to receive the honor. A number of management scholars refer to the feedback that the receiver of the original signal sends to the signaler to inform the latter about the effectiveness of the signal as "countersignals" (Connelly *et al.*, 2011). However, since the term has a different meaning in other strands of the signaling literature (Feltovich, Harbaugh, and To, 2002), we will refrain from using it.

Acceptance of an award signals the recipient's future intentions since the recipient commits to align with the giver. If the agent does not want such a bond to be established, the award must be rejected. Acceptance of the award leads to a "signaling equilibrium," where the principal signals honestly and the agent trusts in this signal and acts upon it. The award can thus reduce transaction costs and become a mutual signal of commitment and trust. Thus, as in many signaling models (Camerer, 1988), both sides—the principal and the agent—invest in the signal. In this respect, awards are markedly different from monetary rewards and also from gifts (Gneezy and List, 2006), which constitute the object of research of many signaling studies. As argued by Camerer (1988), "accepting a gift implies a solemn obligation of repayment" (1988: S181). In the case of awards, however, the recipient cannot repay the favor in the same currency. The possibilities for reciprocation are channeled in that the award recipient has to resort to showing loyalty and respect.

Agents accepting an award also emit a signal of intent towards third parties, namely that they will support the goals of the giver. The bonding signal may have wider positive implications for the award recipient, especially if the principal is a respected senior person. As Ramaswami *et al.* (2010) remind us, such affiliations with superiors can signal the agent's worthiness. Likewise, the principal can benefit from eliciting a public signal of support from agents who are well established in the group of agents. Kilduff and Krackhardt (1994) show that just the perception of a person being befriended by prominent others favorably increases said person's reputation as a good performer; actual friendship has no effect in their study. This emphasizes the importance of individuals' perceptions, which can be significantly influenced by signals.

PROPOSITION 7. In comparison to accepting a gift or monetary payment, the recipient's possibilities for reciprocation are considerably more limited upon acceptance of an award. They

mainly consist in publicly signaling loyalty to, and respect for, the principal.

Practical implication. By bestowing awards on specific employees, managers can elicit a signal of support on the part of these employees and benefit from their reputation among the group of employees.

SIGNALING FAILURES

As pointed out, for example by (Gambetta, 2009), there are instances when signaling fails.

The signals emitted by the principal when presenting awards do not always lead to the desired results. This can be the case because the signal strength is insufficient or because the signal has adverse effects.

Insufficient signal strength

Too many awards. When the principal issues an increasingly large number of awards, the latter start losing their functions. Grade inflation or "inflation of titles" (Finer, 1997: 639) are well-known phenomena. Such inflationary use has the consequence of the recipients valuing the affected awards less. Rewards, generally, can suffer such a loss in value for two reasons: either there are too many similar rewards in circulation in a particular community (e.g., a firm, an organization or a country), or a single agent has already received too many rewards and thus values additional ones less and less. The first reason is relevant with respect to both awards and money. However, as awards are more visible than, for instance, bonus payments, awards tend to be affected more strongly by decreasing marginal utility at the organizational level. The second reason, i.e., the decreasing marginal utility for the agent, is more likely to hold in the case of monetary rewards, but not so much with respect to awards. In effect, there seems to be almost no limit to the number of awards an individual values and the marginal utility gained by additional awards seems to decrease less than in the case of money. There

are many different awards, bestowed by a multitude of organizations, each carrying a different symbolic value. Thus, honorary doctorates by universities, the order of Companion of Honour (UK), as well as the Nobel Memorial Prize in Economic Sciences, all emit different signals, each one being of distinct value to the beholder.

In a similar manner, the principal can counteract award inflation within the organization. New awards can be established, which the recipients still cherish. Such a strategy works if the new awards gain their reputation by the legitimacy that the giver enjoys. To counteract an inflation of bonuses and other monetary rewards is more difficult—a major reason being that money is, by definition, one dimensional. It is easier for the recipients to perceive the inflation, which reduces or even destroys the incentive function of monetary rewards. The marginal value of money for a single person decreases the richer he or she is. Once a bonus is given for activities that are part of the regular tasks of an agent, the activities will no longer be performed if the bonus is not forthcoming. More effort can be induced by increases in the bonus (Gneezy and Rustichini, 2000), but even this might not lead to superior performance (Ariely *et al.*, 2009; Bracha and Fershtman, 2013). The decreasing marginal utility of monetary rewards and their adverse effects on behavior have been shown to be particularly relevant in the field of business (Osterloh and Frey, 2000).

PROPOSITION 8. *The marginal utility of additional awards tends to decrease less than that of additional monetary compensation.*

Practical implication. Managers should prevent awards from losing value by limiting the number of similar awards bestowed.

Signal inconsistency. The signaling effect of the award can be disturbed by other signals that the principal emits (Connelly *et al.*, 2011). An instance of such signal inconsistency (Gao *et al.*, 2008) can arise if the principal behaves contrary to the values upheld by the award, thus sending contradictory signals. If the principal is, for instance, generally disregarding of others

but bestows an award for helpfulness, the signal is likely to be ineffective. The prize money attached to some awards can also send confounding signals. The amount may be perceived as both too high, thus overriding the honorific signal of the award, or too low, thereby challenging the seriousness of the award. Not attaching any money to the award prevents putting an exact value on it and making the award comparable to other rewards, but it may also be perceived as stinginess. This is more likely the case when an award is introduced while some other change disadvantageous to the agent is being made (e.g., wage cuts). It is also more likely to affect principals in organizations with high profits and liquidity who will have to accompany an award with more money than principals of income-constrained organizations.

Monetary rewards are subject to similar risks. If they are relatively high, they may send counterproductive signals, e.g., causing the agent to infer that the task must be uninteresting (instead of signaling appreciation). Relatively low monetary pay, on the other hand, more or less unambiguously signals the principal's low appreciation for the task being executed.

The principal has to make use of awards in a diligent manner in order to convey the signal as intended (and not, for instance, signal his or her greed). The consistency of signals concerns the principal's own behavior, as well as the relationship between the award and other rewards. By placing relatively high demands on the principal, the signal emitted by an award is made more difficult for mimics to fake.

Adverse signaling effects

Awarding undeserving agents. A further instance of signaling failure arises when the award is given to undeserving agents. Two cases need to be distinguished in this respect: the principal can award somebody being *aware* that the award recipient is actually undeserving of this honor (e.g., for strategic reasons), or the principal can *unknowingly* award an

undeserving person. This can either happen because he or she later behaves in an undesirable manner or because that person mimics the desirable behavior, "cheating" by producing desirable signals of quality just so that the principal will select him or her for the award (Johnstone and Grafen, 1993).

When an award goes to a person or organization known to be disloyal to the principal or to be pursuing incompatible activities, the giver's prestige is hampered. The award bestowed then sends a counterproductive signal. Erroneously honoring someone who turns out to be undeserving is less grave for the value of the award, but it still challenges the credibility of the award and the principal issuing it. In such a case, no signaling equilibrium will be reached since the expectations about what the signal means will not be fulfilled by behavior (Camerer, 1988: S182). A sorting equilibrium induced by the award would imply that the award serves honest agents to signal their true quality, helping to distinguish them from mimics. However, most signals are in fact only semi sorting. As stated by Gambetta (2009), fully mimic-proof signals are rarely encountered. Thus, presenting awards involves some risk.

Money has the potential advantage that it is usually given in a continuous way. When it is revealed that the behavior of the recipient is undesirable, future payments can be stopped. The previous transfers of money have established no bond between the principal and the agent.

PROPOSITION 9. The more uncertain the principal is about the agent's quality and future behavior, the more effective money as a means to compensate for and incite performance is, and the less effective awards are.

Practical implication. When information about employees' quality and intent is severely restricted, managers should consider using other means of showing recognition, which are less public and can be discontinued more readily (e.g., personal praise).

Award rejections. When an award is offered to someone who publicly refuses to receive it, this also sends a strong signal that is unfavorable to the principal. It reduces the value of the award since it questions its desirability. The more widely-known the refusal of an award is, the greater the damage to the reputation of the award, its giver (the principal), and past recipients. However, this holds only if it was the agent's decision to reject the award. When it is a third body forbidding acceptance of the award (e.g., the Russian authorities making Boris Pasternak decline the 1958 Nobel Prize in Literature), the effect on the award's reputation may also be favorable because its importance is underlined and the attention it receives is heightened.

In an effort to prevent potential refusals by the agents, many principals ask future recipients whether they would be willing to accept the honor. Where it is not possible to previously assure acceptance of the award, the principal will more likely resort to more gradual and less official signals of appreciation, such as personal praise.

PROPOSITION 10. The more uncertain the principal is about the potential winner's personal inclination to accept the award, the less likely he or she is to bestow the award on that particular agent, and the more he or she will resort to more gradual, private signals of appreciation (e.g., personal praise).

Practical implication. If an employee's attitude toward management and the organization as a whole cannot be estimated with a sufficient degree of certainty and a rejection of the award seems likely, managers should use alternative rewards.

Negative effects on non-recipients. By bestowing awards on only a select group of agents, the principal runs the risk of affronting those who are not awarded. The importance of social comparisons has been illustrated for instance by Blanes i Vidal and Nossol (2011). The

danger of negative effects on third parties is particularly high in small, clearly-delineated, and homogenous groups of agents. Where the reference group is established and interpersonal comparisons are thus induced, non-recipients can perceive the award as a signal of them not being meritorious or as a signal of favoritism. Negative emotions, such as jealousy, and destructive behavior, for instance sabotage, may result.

However, such negative effects on third parties can be counteracted. The principal can highlight the representative character of the award recipient, for instance when awarding someone for exceptional social engagement. This contributes to the establishment of role models. The principal can also point out the possibility of future awards and thus try to incite others to emulate the award recipient. Integrating many agents in the selection of the awardees is another means of reducing the risk of negative externalities on non-recipients.

Since there are countermeasures preventing the above-mentioned signaling failures from arising, awards generally retain their positive effects. This may explain why they are so widely used.

PROPOSITION 11. *The more clearly delineated and the smaller the group of agents is, the more likely it is that negative externalities arise.*

Practical implication. Managers of small groups with well-defined membership boundaries should be particularly aware of the risk that other group members might perceive the award as a signal of them not being meritorious or as a signal of favoritism. Several possibilities to alleviate this risk exist, for instance tying awards to tenure and celebrating jubilees. Renouncing the use of prize money further reduces the risk of a signaling failure. Alternatively, managers may consider intensifying the use of personal praise.

CONCLUSION

In our analysis, we develop testable propositions derived from a multidisciplinary approach. Reliable data on award bestowals is not yet available and will require much work in the future. We hope to incite researchers to move into this direction. To that end, the analysis advances specific propositions that seek to help make sense of the widespread practice of award bestowals and incite other researchers to dive deeper into the subject matter. We build up the theoretical analysis in a signaling framework, which considers the signals emitted by two classes of actors: the principal and the agent. Other groups affected by the signaling process are the non-recipients and the public at large.

The signals emitted by awards are very special and often substantially different from those linked to monetary rewards. The relative advantages we identify should be exploited. Awards send a signal about the quality and intentions of the principal who bestows them. They are particularly amenable to the establishment of mutual ties between the principal and the agent. By using awards, the principal circumvents important limitations posed by monetary rewards: even in situations where the desired tasks are vague and cannot be contracted *ex ante*, the principal maintains the ability to influence the behavior of the recipient and—most importantly—of future candidates and the general public. Moreover, while money tends to crowd-out intrinsic motivation, awards permit the principal to strengthen it while indicating which type of intrinsic motivation is most cherished. In comparison to money, awards can also have a more sustainable effect on behavior, particularly because their marginal utility decreases at a slower pace than does the marginal utility of monetary rewards. Yet, as outlined in our analysis, awards can also lead to signaling failures. We, therefore, distinguish situations where monetary and more private rewards (such as praise) are a less risky alternative.

Our analysis leaves open how the different parameters of awards (e.g., quantity, reputation) are contingent on each other, and how the principal can maintain the signaling

value of awards when handed out regularly (a point already made by Bentham, 1825, ch.16). Instead, it provides a broad assessment of the signaling episodes resulting from award bestowals, also drawing attention to potential pitfalls. With this article, we wish to stress the important role of awards in general and encourage more future work on the subject. A theory of awards supported by empirical research may help train managers in using awards more systematically and in exploiting their distinct signaling potential.

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Confirmatory awards (e.g., company award schemes)	Discretionary awards (e.g., distinction for commitment)
Explicit criteria	Open criteria
Regular intervals	Open intervals
Ex ante (announced)	Ex post (surprise)
By adding prize to money: increase visibility of high-performers	By adding money to prize: signal seriousness, establish prize among other prizes
→ Automatism	→ Personal evaluation
Low ←—— Signaling value for principal ——→ High	

FIGURE 1— Award types according to their signaling value