

KNIGHT FEVER TOWARDS AN ECONOMICS OF AWARDS

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Abstract

Awards in the form of orders, medals, decorations and titles are ubiquitous in monarchies and republics, private organizations, not-for-profit and profit-oriented firms. Nevertheless, economists have disregarded this kind of non-material extrinsic incentive.

The demand for awards relies on an individual's desire for distinction, and the supply of awards on the provision of incentives. Relative price and income effects are shown to be identifiable and strong. A number of empirically testable propositions are formulated. As awards are (at least so far) impossible to measure adequately, empirical tests are carried out using the technique of analytic narratives.

JEL Code: D23, D73, J22, J33, L22, Z13.

Keywords: incentives, motivation, awards, orders, distinction, principal-agent.

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I. Introduction

If an alien were to look at the social life of people here on earth, it would be stunned by the enormous number of awards in the form of orders, medals, decorations, prizes, titles and other honours. It would be hard pressed to find any area of society in which awards are not used. Awards are equally ubiquitous in monarchies as in staunch republics¹. In the French Republic, for instance, the *légion d'honneur* plays an important role, and that nation actually confers 3,000 awards annually, which is four times higher than Britain (House of Commons 2004). In the United States, the president and Congress bestow medals, while at the same time *purple hearts*, *bronze* and *silver stars* are handed out quite liberally, and at an increasing rate in the military service (Cowen 2000: 93). It is well known that a flood of orders, medals and titles (such as “*Hero of the Soviet Union*” or “*Hero of Socialist Labour*”) was handed out in communist countries, such as the Soviet Union or the German Democratic Republic, and that it is typical for both right- and left-wing dictatorships (see the *Appendix*).

Awards exist not only at the national level. Both the civil and military public sectors are familiar with a large number of awards of all kinds. It is well known that in countries all around the world², the officers are highly decorated; sometimes their entire chests are covered with orders and decorations. In the arts, culture and the media, awards are also of central importance. A few prominent examples are the Academy Awards (*Oscars*), or the prizes handed out by the film festivals at Cannes, Venice or Berlin, the *Emmy* award for outstanding achievement in television in the United States, the *Grammy* award for artistic significance in the field of recording, the *Queen Elisabeth International Piano Competition* in Brussels, the *Booker Prize* and the *prix Goncourt* in literature³, or the *Pulitzer Prize*⁴. Arts institutions, such as museums, award their supporters titles, such as benefactor or patron⁵. In sports, awards play a major role; there are regular competitions where the winner gets the title *Olympic* or *World champion*. In chess, there are *International Masters* (IM) and *Great Masters* (GM).

¹ The *Appendix* provides a (probably incomplete) list of “Orders, Decorations and Medals” for selected countries documenting the widespread use of such awards. A more complete list is also given in the article “List of Prizes, Medals, and Awards” in wikipedia (<http://en.wikipedia.org>).

² The only exception seems to be Switzerland, where the (central and cantonal) governments hand out no awards whatsoever in the form of orders, medals or decorations. This applies to the military branch too (but the military managed to be allowed to wear foreign decorations). The Irish do not hand out civil honours, but there are a small number of medals for the personnel of military and emergency services (Phillips 2004: 59).

³ There are at least 10 other major prizes in British literature, and 5 in French literature, such as the *Prix Fémina*, *Prix Médicis* or the *Grand Prix du Roman de l'Académie Française*.

⁴ It is awarded in the nine categories Novel, History, Fiction, Poetry, Non-Fiction, Criticism, Telegraphic Reporting, Breaking News Photography and Reporting.

⁵ See, for example, Levy (1987), Holden (1993), Nelson (2001), Ginsburgh and van Ours (2003).

Athletes get the honour of being appointed “*Sportspersonality of the Year*” (the BBC has no less than seven categories), and by being admitted into one of the many Halls of Fame. In September 2004, the International Football Association gave Pelé (Edson Arantes do Nascimento) and Franz Beckenbauer the “*FIFA Centennial Order of Merit*”, thus establishing that they were the best footballers of the 20th century. In religious organisations, awards are also very important. Take the Catholic Church. It hands out the title *monsignore* or *canon*. Furthermore, the Vatican confers many different awards⁶. Canonisation of saints can also be considered as a post mortem award.

It might be thought that academia, as a place of rational interaction, would be an exception. The opposite is true: academia has an elaborate and extensive system of awards. Consider the universities handing out the titles honorary doctor or senator, or professional associations awarding an enormous number of medals, the most important one probably being the *Fields Medal* in mathematics⁷. And then, of course, there are the *Nobel Prizes*. Many prestigious fellowships exist in academies of science (e.g. Fellow of the *Royal Society FRS*, founded in 1660; Fellow of the *American Academy of Arts and Sciences*, founded in 1780; Fellow of the *Royal Society of Edinburgh FRSE*, founded, among others, by Adam Smith in 1783; or *Fellow of the Academy of Social Sciences in Australia FASSA*). Moreover, there is a very complicated system of titles (not always connected to functions), such as that of lecturer, reader, assistant professor, associate professor with or without tenure, full professor, named professor, university professor, distinguished professor etc. An alien looking at earth might well find that academia is (next to the military) one of the places with most awards.

Perhaps even more surprising is the widespread use of awards in the corporate sector of a market economy. Titles are very important and are not always closely related to functions. What manager is not at the very least a vice-president, or even better, a senior vice-president, or first senior vice-president? Awards have recently become very popular in the corporate sector⁸. Firms also commend their own employees for being “*Salesman of the Month*” or “*Employee of the Week*”; there seems no limit to the ingenuity to invent ever new awards. The media support this activity by regularly choosing a “*Manager of the Month*”, “*Manager of*

⁶ Examples are the *Orders of Christ, of the Golden Spur, of Pius, of St. Gregory the Great, of St. Sylvester, of the Holy Sepulchre of Jerusalem* etc. (see the Appendix).

⁷ But there are at least 15 other important prizes in mathematics (http://en.wikipedia.org/wiki/List_of_prizes%2C_medals%2C_and_awards).

⁸ For instance, the Swiss weekly newspaper *Cash* presented an (incomplete) list of 59 awards handed out by corporations in Switzerland in one year (2005: 10-11).

the Year” or even “*Manager of the Century*”. Organisations, such as the World Economic Forum, appoint people to the position of “*Global Leader of Tomorrow*” (1200 persons), and “*Young Global Leaders*” (1111 persons below 40 years of age). It would be a mistake to attribute this trend simply to “Americanism”. In Britain, for instance, the leaders of many large corporations are decorated with orders and titles⁹.

The awards so far mentioned have, of course, many different properties. For some purposes it is necessary to carefully distinguish between, for instance, a (British) Lord from a Knight as the former brings legislative power (he or she becomes a member of the House of Lords) while the latter is purely honorific. There may also be other aspects important to take into account. For instance, prizes that rank books, plays, films and even persons may serve to lower search costs making it easier to know what to watch and read.

Despite the importance of awards in society, economists have largely disregarded them¹⁰. There are related areas, in particular the economics of reputation and esteem, but the researchers do not focus on the mechanisms through which this utility is achieved, but analyse their consequences. There may be various reasons why economists have not analysed awards. Firstly, awards may be considered to be less efficient as an incentive device, because they are not fungible and difficult to apply marginally. Monetary compensation is in these respects a superior instrument to induce effort. Secondly, awards may just be a reflection of success and high monetary income. An example would be Richard Branson, the founder of Virgin airlines, who was knighted. Thirdly, economists assume that awards as such are of no interest to recipients. After all, they cannot be consumed. The only things of value to individuals are taken to be the ancillary income and the increase in future income induced¹¹. There is certainly some truth in this. It has been empirically shown, for instance, that the recipients of *Oscars* enjoy a huge increase in subsequent income (Nelson et al. 2001). But recipients of the *Nobel Prize* certainly value the Prize over and above the accompanying or subsequent monetary reward. Conversely, some prizes, medals and awards that are accompanied by huge

⁹ One example must suffice. The CEO of BP is a Lord (John Browne of Madingley) and he is supported on the board by the knights Sir Ian (Prosser) and Sir Tom (Killop), by Anne Julius, who has a CBE (Commander of the British Empire), and by Michael Miles who has an OBE (Officer of the British Empire) (NZZ 2004: 63).

¹⁰ A search on EconLit, for example, does not give one single reference to orders, medals or decorations.

¹¹ Another benefit from receiving awards may be that they improve the health of the recipients. It has been calculated that, on average, the actor receiving an *Oscar* lives four years longer than actors not getting one, see Redelmeier and Singh (2001).

sums of money are nevertheless relatively unknown and have no prestige even within the relevant community, say academia¹².

This paper argues that there are major differences between awards and monetary compensation, making it worthwhile for some purposes to analyse awards separately. Suffice it at this point in time to mention the following differences:

- The material costs of awards may be very low, or even nil, for the donor, but the value to the recipient may be very high. In this respect (that is without considering the non-material costs of the donor and the costs expended by the recipient), the cost-benefit-balance is therefore unlike that of gifts¹³;
- Accepting an award entails a special relationship, in which the recipient owes (some measure of) loyalty to the donor. The respective contract is, however, tacit, incomplete, and difficult, or impossible, to enforce by the donor;
- Awards are a better incentive instrument than a monetary payment when the recipient's performance can only be vaguely determined;
- Awards are less likely to crowd out the intrinsic motivation of the recipients than monetary compensation;
- Awards are not taxed, while monetary income is.

Economists tend to be rather snobbish about awards. "The Economist" writes about orders as "A ridiculous, outdated system that cannot be improved upon" (2004: 31). But revealed preferences do not seem to support this view. Awards are indeed widespread in our profession. Recipients of Nobel Prizes are (rightly) proud of this honour and do not try to hide it; lobbying activities to get the Nobel Prize are not unheard of (see Nasar (1998) and, more generally, Lindbeck (1985)). Younger American economists crave getting the *John Bates Clark Medal* of the American Economic Association. The more recently founded European Economic Association hands out a *Hicks Medal*, and appoints better-known economists to the

¹² A pertinent example is a prize awarded to eminent scholars since 1961 by the Italian and Swiss presidents. It goes with 1 Million Swiss Francs (US\$ 770,000), but few persons know about it, and attribute any prestige to it. It is called the Balzan Prize. For a list of other such prizes, see http://en.wikipedia.org/wiki/List_of_prizes%2C_medals%2C_and_awards.

¹³ As Waldfogel (1993) shows empirically, the recipients of (Christmas)gifts value them much less than the costs to the donor. In the case of awards, the value to the recipient is in general much higher than the costs to the donor.

position of “*Fellows*”. CESifo, one of the leading research institutions in Europe, each year appoints a “*Distinguished Fellow*”. A list of awards given by the national economics associations all over the world would be extremely long. The same applies to the large number of *Best Paper Prizes* awarded by economics journals (see Coupé (2005)). Many of the most respected economists in Britain have been offered, and accepted, knighthoods, such as Sir John (Hicks), Sir John (Vickers), Sir James (Mirrlees), Sir Partha (Dasgupta), Sir Tony (Atkinson) or Sir Alan (Peacock). Others have achieved an even higher rank of nobility, such as Lord John Maynard Keynes, Lord Lionel Robbins, or Lord Richard Layard.

The whole area of awards is very vague. The semantic is unclear and the various types of awards are not well defined¹⁴. There is, for example, no clear distinction between orders, decorations or medals, and they can go with or without titles and money. It will be argued in this paper that these unclear distinctions are no accident, but an important feature of awards. The suppliers of awards have an incentive to differentiate awards at many different levels¹⁵ and to continually create new awards. This makes an analysis difficult because the quality aspect is essential. It is useless to just count the number of orders given because they differ hugely in many respects, most importantly in the appreciation accorded to them. Thus, there is a world of difference between whether a person receives the *Most Noble Order of the Garter* created in 1348 or an MBE (*Member of the Order of the British Empire*) created in 1917. At the present state of research, it is therefore not possible to evaluate the extent of awards by a single measure. Moreover, there are serious data limitations. To my knowledge, there is no comprehensive list of awards spanning the different types and levels of awards in the various spheres of society (government, the arts, culture, media, sports, religion, academia, not-for profits and for-profit enterprises), countries and time periods. Only partial, spotty and inconsistent evidence is available from scattered sources. This applies in particular to the many awards given by private institutions, such as non-profit organisations, clubs and firms. Orders given by monarchs or governments are somewhat better documented¹⁶.

¹⁴ This is already reflected in the fact that the word “order” has several different meanings: a mathematical sequence, a command, a religious community or an award. The last two meanings are historically connected. Knights with orders of chivalry (such as the Order of the Holy Sepulchre, founded in 1099, the Templars, founded in 1118, the Order of St. John, 1118, and the Teutonic Order, 1170) wore insignia. Over time, such insignia gained a life of their own, independent of membership to an organisation.

¹⁵ The *Order of the British Empire*, for instance, has five levels: Knight/Dame Grand Cross, Knight/Dame Commander, Commander, an Officer and a Member; and the German Order of Merit even differentiates between eight different levels, ranging from the Grand Cross Special Class to the simple Medal.

¹⁶ Thus, for example, Phillips (2004) and the House of Commons (2004) give a very useful survey of (part of) the orders in Britain, as well as some limited information about other countries according to conditions at

In view of the bad data situation prohibiting the employment of econometric techniques an alternative technique, *analytic narratives* (Bates et al. 1998) is applied¹⁷. This approach allows the researcher to integrate knowledge of different quality, stemming from many different sources. In contrast to econometric approaches requiring consistent data, analytic narratives allow the researcher to combine scattered and inconstant data, and to choose what sources and evidence are useful in supporting or rejecting the proposition being tested.

Analytical narratives are not ideal and have major disadvantages, such as the difficulty of simultaneously accounting for various determinants. While analytic narratives are certainly no substitute for serious econometric analysis, the critique should not be one-sided. In the absence of reasonable data on awards, it seems preferable to resort to many different sources of information rather than to forego empirical work altogether.

The goal of this paper is to identify the determinants of awards in a comparative perspective. Rational choice theory is used to analyse what determines the *demand* for awards by utility maximising citizens wishing to achieve distinction, in addition to income. The *supply* of awards is undertaken by utility maximising principals, seeking to induce the actual and prospective recipients of awards (as agents) to act in their interests by using incentives. The relationship between the individuals bestowing and receiving awards is characterised by a tacit and far from perfect contract. The comparative static analysis allows us to derive a number of empirically testable propositions, based on income and relative price effects. It is, for instance, argued that the *demand for awards* is all the greater, the more homogeneous (the less fractionalized) a society is; the higher the income is; the greater the quality of the award is perceived to be; the less important the market is, and the more equal the market distribution produced between the persons. The *supply of awards* is proposed to be all the greater, the more reputation can be gained by handing them out; the more responsive potential recipients are; the more the donor is income constrained; the less effective self-binding mechanisms are; the shorter the donor's time horizon, the less recipients can renege on the implicit contract; and the less effective is monetary compensation. These general theoretical propositions, put in a more detailed form, are subjected to the analytic narrative analysis. It is shown that they are consistent with existing evidence, but that some puzzles remain.

present. But most treatises are restricted to particular orders, and refer on the whole to history (e.g. Galloway 2002).

¹⁷ Frey and Buhofer (1988) use a similar approach to analyse the widely different ways in which prisoners of war have been treated in history.

Overall, the analysis helps us to better understand the important role awards play in society. The economic analysis of awards was traditionally restricted to material, in most cases monetary rewards (see Jeffrey 2004), and has only recently been extended to intrinsic rewards (see e.g. Frey 1997). The present paper considers *extrinsic*, but *non-material rewards*.

Section II of the paper presents a short overview of the literature. The subsequent section derives the demand for awards driven by an individual's quest for distinction, and subjects the theoretical propositions obtained to an analytic narratives analysis. Section IV analyses the supply of awards in a principal agent setting with incomplete contracts. The theoretical propositions are again subjected to an empirical analysis. Section V concludes.

II. Survey of the Literature

The science of phaleristics (the Greek and Roman word for award) has produced a huge literature on *specific* awards, in particular on orders, decorations and medals. It is historically oriented and is mainly devoted to presenting the legal rules and regulations, and facts. Examples are Risk (1972) on the *Most Honourable Order of the Bath*, or Galloway (2002) on the *Order of St Michael and St George*. Most useful discussions (including some data) on the present state of orders, focusing on Britain, are provided in Phillips (2004) and the House of Commons (2004). Fewer works cover orders across several countries, for instance Klietmann (1984), Honig (1986), and Mericka and Marco (1990).

Awards have been discussed in a considerable literature in sociology. Examples are Bourdieu (1979), Elster (1983), Braudy (1986), Walzer (1983) or Baurmann (2002). With few exceptions, these works address awards and distinctions in general, but do not analyse particular types of awards. The literature fails to provide a theoretical analysis in a comparative perspective, and does not offer any empirically testable propositions, let alone testing the propositions empirically.

In economics, particular aspects of awards have been analysed in the context of the arts and culture¹⁸. Ginsburgh and van Ours (2003) and Ginsburgh (2003, 2005) discuss Academy Awards (*Oscars*) in films, the *Brooker Prize* in literature, and the *Eurovision Song Contest*.

¹⁸ See, in general the pathbreaking book by Baumol and Bowen (1966), or Peacock and Weir (1975), Blaug (1976), Throsby and Withers (1979), Frey and Pommerehne (1989), Towse (1993; 2003), Frey (2000). Wijnberg (2003) provides a short survey on awards in the arts.

Glejser, and Heyndels (2003) analyse one of the most important piano competitions, the *International Queen Elisabeth Prize*. To my knowledge, no general study of awards has so far been undertaken in economics. An exception is Besley's (2005) unpublished "Notes on Honours", where he analyses why individuals show so much interest in awards that are, after all, often just pieces of ribbon.

Of course, many topics in economics have a bearing on the issue of awards. Particularly important are the economics of esteem (Brennan and Pettit (2004a; 2004b)), reputation (e.g. Akerlof (1976), Krebs, Milgrom and Roberts (1982), Besley and Kandori (1992), Tirole (1996)), identity (Akerlof and Kranton 2003), conventions (e.g. Young (1993)), status (e.g. Congleton (1989), Corneo and Jeanne (1997), Greene and Nelson (2002)), invaluable goods (Arrow 1997), superstars and positional goods (Scitovsky (1976), Rosen (1981), Frank (1985), Frank and Cook (1995)), signalling (Spence 1974), fame (Cowen 2000), relative utility, social comparisons, and reference groups (e.g. Fehr and Schmidt (1999), Miron (1995), Stutzer (2004)), the giving of gifts (e.g. Waldfogel (1993), Camerer (1988), Carmichael and MacLeod (1997), Prendergast and Stole (2001)), and the literature on incentives, in particular non-monetary incentives (e.g. Ward and Sloane (2000), Jeffrey (2004)) and symbolic incentives (e.g. Goodin (1980)) and intrinsic (e.g. Frey (1997), Bénabou and Tirole (2004)) incentives.

III The Demand for Awards

Individuals have an *innate desire to distinguish themselves from other individuals*. People have a strong urge to be better than others. The quest for social distinction is taken to be a hard-wired trait of human nature¹⁹. The standard utility function, including the level of consumption C , is amended by distinction D :

$$(1) \quad U = U(D, C).$$

Both arguments produce utility, but at a decreasing marginal rate: $U_D > 0$, $U_{DD} < 0$; $U_C > 0$, $U_{CC} < 0$.

C is a constant proportion (c) of income Y

¹⁹ This assumption is in line with the socio-biological and evolutionary literature; see e.g. Henrich and Gil-White (2001).

$$(2) \quad C = cY.$$

Distinction can be produced by awards A or by income

$$(3) \quad D = D(A, Y).$$

Thus, people are able to gain social distinction by having an award, like an order, but also by having a higher income than other persons, as suggested in the economic literature on social comparisons and reference groups. An individual's relative position is enhanced both by receiving awards and having a higher income (see e.g. Stutzer (2004)). The possibility to produce distinction is in both cases subject to diminishing returns: $D_A > 0$, $D_{AA} < 0$; $D_Y > 0$, $D_{YY} < 0$. Awards can be gained by investing effort e into activities pleasing the persons handing out the awards. This may consist of productive activities but may also constitute directly unproductive rent-seeking activities

$$(4) \quad A = A(e).$$

Effort devoted to gaining awards is subject to diminishing marginal returns: $A_e > 0$, $A_{ee} < 0$.

Market income is produced by investing effort k :

$$(5) \quad Y = Y(k),$$

which is also subject to diminishing marginal returns: $Y_k > 0$, $Y_{kk} < 0$.

For simplicity, total effort is normalized to one. The analysis focuses on the choice between devoting time to award-seeking activities or to market activities:

$$(6) \quad e + k = 1.$$

Individuals maximise their utility with respect to the (amount of) time devoted to award seeking. The optimal amount of effort e^* is implicitly given by

$$(7) \quad \frac{\partial U}{\partial D} \cdot \frac{\partial D}{\partial A} \cdot \frac{dA}{de} = \left[\frac{\partial U}{\partial D} \cdot \frac{\partial D}{\partial Y} + \frac{\partial U}{\partial C} \cdot \frac{\partial C}{\partial Y} \right] \frac{dY}{dk}$$

The left-hand side shows the benefits received by gaining distinction and therewith utility from awards; the right-hand side shows the marginal costs by reducing the (share of) time devoted to market activities k accordingly. It consists of the decrease in distinction due to a lower income and a direct decrease in consumption C .

In order to derive an explicit solution, the utility and production relationships are formulated as Cobb-Douglas functions.

$$(1a) \quad U = D^\delta C^\varepsilon$$

$$(3a) \quad D = A^\alpha Y^\beta$$

$$(4a) \quad A = e^\mu$$

$$(5a) \quad Y = k^\rho$$

where all parameter values are positive. The parameters $P = \{\alpha, \beta, \delta, \varepsilon, \mu, \rho\}$ are exogenous to the demanders but subject to interventions (via the policy instruments X) by the suppliers of awards (see section IV). The equilibrium condition (7) determines the demand for awards

$$(7a) \quad e^* = \frac{\mu\alpha\delta}{\mu\alpha\delta + \rho(\beta\delta + \varepsilon)}$$

$$\text{with } \frac{\partial e^*}{\partial \delta} > 0, \frac{\partial e^*}{\partial \varepsilon} < 0, \frac{\partial e^*}{\partial \alpha} > 0, \frac{\partial e^*}{\partial \beta} < 0, \frac{\partial e^*}{\partial \mu} > 0, \frac{\partial e^*}{\partial \rho} < 0.$$

This formula allows us to derive testable hypotheses based on comparative statistics. They relate to (a) the productivity of work, (b) the production of distinction, and (c) the preference structure.

a. Productivity of work

Individuals devote all the more time and effort to seeking awards, the more productive this activity is compared to market work (in terms of eq. 7a, μ is low compared to ρ).

Proposition 1. In countries in which *rent-seeking activities* are important in social and political life, individuals (cet. par.) invest considerable effort and time in award-winning activities, as their productivity (μ) is increased.

Rent-seeking societies (see Tullock (1967), Krueger (1974), Bhagwati (1982), and for surveys Tollison (1982) and Tollison and Congleton (1995)) are characterised by the dominance of bureaucratic, political and bargaining elements in decision-making. This applies to dictatorships and authoritarian countries, as well as to fossilised countries with strong interest groups (Olson 1982). Invariably, such countries subdue the market and compensate

individuals for effort by handing out awards. As a result, individuals devote a considerable amount of effort to directly unproductive rent-seeking in order to achieve awards²⁰.

b. *Production of distinction*

Individuals choose whether to gain distinction by receiving awards or by achieving a higher market income. The more distinction produced by awards relative to income (α is large compared to β), the more effort devoted to activities designed to gain awards.

Proposition 2. The higher the *quality of awards* (the higher α), the more awards are in demand.

The quality of an award is the higher, the more it is held in esteem by the individual's reference groups and the population at large. Such recognition is *cet. par.* the higher, the less other people receive the award, the more highly esteemed the former recipients are, and the more distinguished the award's tradition is.

The more objective and fair the distribution of awards is, the more they contribute to the recipient's distinction, and the greater is the demand for them. Conversely, if awards can be bought, i.e. if there is corruption, they contribute little or nothing to a recipient's distinction (α is low) but they may still serve as a signal for the recipient's income and wealth.

In some societies, outside intervention may make it impossible for the market to produce distinction (low β).

Proposition 3. The more the market is prevented from providing distinction, the more awards are in demand.

In socialist and planned economies, the market is to some extent blocked (see Walzer 1983). Market activity is subdued and unable to produce the differences in income which individuals seek to attain distinction.

The market sector can be supposed to be all the more important as a producer of distinction, the larger it is. When the market plays a minor role in a society/economy, the distinction gained through income may appear of little relevance to a population used to other forms of distinction.

²⁰ The choice of individuals to devote their efforts to productive vs. rent-seeking activities has been analysed in the context of entrepreneurship by Baumol (1990) and Murphy, Shleifer and Vishny (1991).

Proposition 4. The more important the market sector of an economy is, the smaller the demand for awards handed out by the government or monarch.

The size of the market can be measured by the size of the corporate sector, and approximated by the capitalised value of traded shares. Alternatively, it can be measured by the absence of regulations and suppression of market activities. According to this definition, the classical market economies are the United States and Canada. The afore-mentioned lack of importance of orders bestowed by the government suggests that this proposition is consistent with empirical observations. However, *within* the corporate sector, awards seem to play a substantial role, especially in the United States. Such corporate awards are not inconsistent with the above proposition, which relates to awards handed out by political actors.

In contrast, in countries with relatively small or suppressed market sectors, awards are in greater demand. This was especially true in Britain before the Thatcher revolution. The market has since gained prominence. Correspondingly, proposition 5 predicts that the demand for (governmental) awards falls. In recent years, the British honours system has indeed come under attack. This has been reflected in two official reports (Phillips (2004), House of Commons (2004)) that suggest major reductions in the number of orders and types of orders granted by the government. The House of Commons Report (2004) makes the recommendation that no new appointments are made to the *Order of the British Empire*, the *Order of the Bath* and the *Order of St Michael and St George*, and that they are substituted by one single new order (*Order of British Excellence*). This would mean the end of the *Sir/Dame* title associated with some of these orders.

The income distribution produced by the market may in some societies (for traditional reasons) not contribute to distinction (low β).

The more equal the distribution of income and wealth is, the more individuals seek distinction in the form of awards. Individuals are unable to find social reputation by having a higher income than others (low β). They therefore turn to awards in order to distinguish themselves.

Proposition 5. The greater equality there is with respect to *market income* and *wealth*, the more awards are in demand.

The communist countries of the former Soviet empire strongly equalised the distribution of income and wealth. People more or less earned the same income, irrespective of their

position²¹ or work efforts. Individuals were therefore eager to establish social distinction by gaining awards. Communist countries had indeed an elaborate system of honours, the best-known being the “*Hero of Work*”, but there were hundreds of such awards for all kinds of activities and efforts. About one in every 1,000 Russians (men, women and children) received a state award (Phillips 2004: 56); probably a far higher amount than in most comparable countries.

Proposition 5 is also consistent with the observation that the Scandinavian countries, which put so much emphasis on equality of income, have not done away with orders and medals. All of them use state awards to honour people²².

The less distinction is produced outside the awards system, the more individuals are motivated to seek distinction in the form of awards (low β compared to α). When existing conditions contribute to clearly observable social distinctions, awards become less important.

Proposition 6. The more *fractionalised* or *isolated* the setting in which an individual lives, the lower is the demand for distinctions and for awards.

In a country with extensive fractionalisation²³, i.e. where people are geographically separated into small groups, and where mobility is low, social distinction has to a large extent been established by history: each person is more or less aware of his or her position (e.g. son of the mayor). With a racially, culturally, linguistically and religiously diverse population, social distinctions are well established and there is little demand for further differentiation via awards. In contrast, if the population is more or less homogenous, individuals seek social distinction in the form of awards.

The effects of isolation and low mobility extend also to the social and political spheres. The less marked the *socio-economic* differences are (with respect to race, culture, language and religion), the greater is the demand for awards.

²¹ This only holds for monetary income, but not for economic opportunities. Members of the Communist party, especially members of the Politbureau, had significant economic privileges, such as being able to get otherwise unavailable goods in special shops, datchas etc. But the ruling class (the *Nomenclatura*) made a great effort to maintain the illusion of economic equality.

²² Sweden officially discontinued its honours system for nationals in 1975, but there are nevertheless a number of medals available, most importantly the *King's Medal* (with various grades, see the *Appendix*). The government also bestows a number of awards. In addition, Royal Academies and other Royal societies present medals (Phillips 2004: 57).

²³ This concept has been used to great advantage by Alesina and Ferrara (2000), and by Alesina et al (2003).

Political centralisation imposes uniformity on the population of a country. In order to establish the sought-after social differentiation, people seek to distinguish themselves by whatever means possible, be it through income differences or through awards.

Proposition 6 can be empirically illustrated in the case of Switzerland (e.g. Steinberg 1996), a country that is strongly fractionalised in all three respects. Its geography is characterised by high mountains and deep valleys, as well as by many rivers and lakes. It has four native languages (German, French, Italian and Romanch), with virtually hundreds of dialects in common usage. Accordingly, culture also differs markedly over a small area. Switzerland has two major religions, Catholicism and Protestantism, the latter being divided into Calvinists and Zwinglians. With a population of only 7.5 million, Switzerland nevertheless has 26 cantons and more than 3,000 communes (all with substantial decision-making powers). It is one of the most federalist countries in existence. This heterogeneity is, according to the three propositions, consistent with the observation that *no* Swiss government hands out any orders or decorations, not even in the armed forces²⁴ There are only a very small number of medals awarded by communal governments, mostly for cultural achievements.

Another country with considerable socio-economic and political diversity is the United States. Slavery and immigration have made it racially and linguistically heterogeneous, although English remains the single official language. The US is perhaps the most religiously diverse country in the whole world. The country is divided into 50 States and a large number of communes, all with considerable independence. Based on these three observations, we would expect the US to have few government awards. This definitely holds for the civil sector. The central government hands out only three (civilian) awards: The *Congressional Gold Medal*, created in 1776, and the *Presidential Medal of Freedom* (1945), and the *Presidential Citizens Medal* (1969).

Switzerland and the United States can be contrasted with France²⁵, whose geography and population is far more homogenous. The various parts of the country, while historically very different from each other, have been homogenised by the last kings (Louis XIV and Louis XV), revolutionaries (they opposed all fractionalisation) and the Napoleonic Empires. Most of the country's citizens are (at least nominally) Catholic, and all have to speak French.

²⁴ The Swiss Army is composed of more or less all male Swiss citizens, and there are only very few professional officers. The Army is therefore seen to be a reflection of the civilians.

²⁵ This applies to the 20th century. Recently, racial, cultural and religious and political distinctions have become more diverse.

Politically, France is one of the most centralised nations in existence, the regions and communes possessing little decision-making power. According to these three propositions, France is expected to be a country with many awards handed out by the government. This is indeed the case. Compared to Great Britain, France is centralised to a much greater degree and produces “four times as many awards as Britain in any one year” (House of Commons 2004: 2). The well-known “*légion d’honneur*” has been awarded to 4,000 persons since 1967 (Phillips 2004: Annex 2)²⁶. In addition, there are several other orders and medals bestowed by the government, such as the *National Order of Merit*, or the “*palmes academiques*”.

Italy is another country homogenised by the political unification process (Risorgimento). Until recently, the central government in Rome dominated politics, leaving little power in the administrative regions. Therefore, we would expect Italy to have a well-developed system of orders and decorations. Again, this is the case. Orders play a significant role in Italy. The titles “*Cavaliere*” and “*Commendatore*” are commonly used. The *Order of Merit of Work* has no fewer than 850,000 living members (House of Commons 2004: 2).

Awards as such are not taxed (what could be taxed are the possible income transfers accompanying them). The tax burden of a person awarded, for instance, the title “manager of the year” or a knighthood, does not increase. In contrast, if social distinction is achieved by income, the respective income is subject to taxation (in terms of eq. 7a, ρ is low compared to μ). Due to this relative price effect, awards are a more attractive way of achieving social distinction than is higher income. This effect is the stronger, the higher the tax progression is.

Proposition 7. The higher the marginal tax rates on income, the larger the demand for awards.

Individuals in Britain before Maggie Thatcher’s time, as well as individuals in Scandinavian and numerous other European countries, were burdened by high marginal taxes. In the United States and, by way of exception among European countries, in Switzerland, individuals’ tax burden was lower. This helps to explain why, in the former countries, awards played a greater role in social life than in the US and in Switzerland. Since the end of the last century, the situation in some of the European countries has changed and the top tax rates on income and

²⁶ Another source (the wikipedia article on the *legion d’honneur*) indicates a much higher number. The award is reported to have 113,780 bearers.

wealth have been lowered, which holds especially for Britain²⁷. This means that, in *relative* terms, lower income persons are now expected to exert a greater demand for awards than do higher income earners. This can indeed be observed. More awards are now bestowed on persons with lower income rather than with higher income. The amount of state honours accorded to groups with below average income has risen markedly. From 1965 to 2004, the percentage of orders²⁸ granted to women has increased from about 16 to 35 percent, and the percentage of orders going to black and minority ethnic groups has increased from 2 to 6 percent (Phillips 2004: 73-4).

c. Preference structure

The more highly a society esteems awards compared to material success (high α compared to β), the more effort individuals devote to gaining awards.

Proposition 8. The *stronger the market ideology*, i.e. the more socially recognised is the distinction produced by the market, the smaller the demand for awards.

Capitalist societies tend to measure success according to income. A pertinent example is the United States where, in general, state awards are considered less important than private wealth. This is consistent with the observation that, in comparison to other countries, the US has few (only three) state awards.

At the beginning of the Federal Republic of Germany, market ideology was considered a central value. Accordingly, persons who were successful in the market had a high standing and did not need to bolster their reputation by seeking awards. This may help to explain why there is only one order, the “*Bundesverdienstorden*” (Order of Merit). In recent decades, the market ideology has waned which, according to proposition 4b, should have been accompanied by an increase in the demand for orders. However, the number of such awards has in fact dropped from 5,257 in 1991 to 3,316 in 2000 (Phillips 2004: Annex 2). Yet the former German president Rau recently stated that a new additional goal of awarding the *Bundesverdienstkreuz* is to direct public attention to achievements contributing to improved job opportunities and the creation of new jobs. Similarly, outstanding entrepreneurial and

²⁷ More than 20 years ago, Maggie Thatcher and Ronald Reagan triggered a world-wide revolution by dramatically slashing marginal income tax rates. Top tax rates in developed nations – on average – are nearly 20 points lower today than they were in the 1970s (<http://executivecaliber.ws/sys-tmpl/taxineurope/>).

²⁸ Covering the *Order of the Bath*, the *Order of St Michael and St George*, the *Order of the British Empire*, the *Companion of Honour*, as well as *Knights Bachelors*.

scientific achievements with an innovative character will be used as a criterion for selecting recipients of the honour in the future. Thus, the German Order of Merit will be used as a substitute for the kind of recognition formerly achieved by economic success (Corrosion People 2002). In Russia, the market has achieved considerable reputation, particularly in the faster growing areas of the country. At the same time, the excessive amount of awards during the Communist era seems to have subsided and the distinction acquired by market income has become more important.

Individuals are influenced in their evaluation of awards by the history of their society. In countries in which awards have existed for a long time and have played an important part in establishing the social hierarchy, individuals value awards more highly than in countries in which no such tradition exists (α higher than β).

Proposition 9. In societies characterised by an *aristocratic tradition*, individuals exert a higher demand for awards than in societies characterised by republican traditions.

Examples are the United Kingdom, Belgium and The Netherlands, where orders and decorations are held in high esteem in society and are used extensively. In Austria, despite having introduced a republic after WWI, the government still confers titles, such as “Hofrat” (i.e. Court Advisor), which explicitly refers to the monarchy. Accordingly, individuals in these countries make a huge effort to achieve the distinction of an award. In contrast, in Switzerland (which never had a monarchy), or in the United States (which claimed its independence from Britain and therefore chose democracy in preference to a monarchy), state awards, like orders and titles, are used sparingly (as in the US) or not at all (as in Switzerland).

In a society with a more marked inequality aversion with regard to the inequality of *income* or *wealth*, rather than with regard to the inequality of *awards* (β is small compared to α), individuals turn to awards in order to acquire a reputation for themselves.

Proposition 10. The more *economic* inequality violates a socio-political norm, the larger are an individual’s demand for awards.

The inequality aversion existing in a particular society can be captured by appropriate surveys. It can also be indirectly measured by an outcome, namely the amount of left-wing parties in parliament or government. According to this statistic, the Scandinavian countries

have a higher inequality aversion with regard to income differences²⁹ and are therefore expected to have a high demand for awards. This is consistent with the substantial importance of awards in these societies.

In contrast, in the United States, there is little aversion against *economic* inequality, the major reason being that Americans assume that there is a high upward mobility in their country. Research on happiness (Alesina et al. 2004) has indeed shown that the well-being of Americans is not diminished by rising income inequality, because they think it is likely that they can profit from income inequality by getting into a high-income class in the future. According to proposition 15, there should be a low demand for (civilian) awards compared to Europe, where people suffer a loss of well-being from income inequality.

In rich countries, the marginal utility of consumption is low ($U_C > 0$, $U_{CC} < 0$) compared to poorer countries. The same applies to individuals with high income; they seek utility by gaining distinction through awards.

Proposition 11. The richer a country or particular individual, the larger is the demand for awards.

High income is consistent with an abundant use of awards, examples of which are the rich countries Denmark, Holland and Belgium. The Danish *Orders of the Elephant* and *of the Danneborg* belong to the oldest and still most prestigious awards in existence (they were created in 1462, and in 1219, respectively), and the Dutch and Belgian governments and monarchs hand out orders and titles liberally (as shown in the *Appendix*).

Higher income does not prohibit the introduction of orders. Canada, for example, has for lengthy periods of time (1917-32, 1935-40, 1946-67) foregone honours, but since Canadian income has risen, the central government has introduced three orders, the *Order of Canada*, *Meritorious Service Decorations* and the *Caring Canadian Award*. Similarly, China did not use to have a national honour system as such, but now plans to introduce a more comprehensive system (Phillips 2004, Annex 2).

Rich individuals derive little additional benefit from higher income, a feature empirically documented by the economic research on happiness (see e.g. Layard (2005), Diener and

²⁹ In Sweden, for example, the Social Democrats have been dominating Swedish politics for almost half a century. Their dominance has now weakened somewhat but they are still the single largest party. They vehemently reject differences leading to social ranking and social divisions in power and influence.

Seligman (2004), Frey and Stutzer (2002a), (2002b), Easterlin (1974)). As a result, individuals seek further distinction through awards that cannot be bought on the market. Cultural institutions, such as opera houses and museums, took advantage of this wish by giving their sponsors titles that sound good (such as “*Benefactor*”). The Secretary General of the United Nations does the same by honouring rich and important people with a “*Special Ambassador*” title and by bestowing a substantial number of awards (see the *Appendix*). The American president, once elected, also often appoints people to ambassadors who contributed large sums of money to his campaign and are rich, though not necessarily well versed in diplomacy. These are indications that (very) high-income individuals value awards greatly.

IV SUPPLY

The institution (or person) bestowing an award can be taken to be a principal who maximises his utility by inducing the agents, as the recipients of the awards, to behave in his interests. The principal-agent relationship between the donor and recipient of awards involves a *tacit and incomplete contract*. The terms of the *award contract* are not precisely specified, and are often deliberately left vague. The tacit contract between the donor and recipient of an award differs significantly from a trade contract on a market in which an agent is promised payment for a well-defined performance (for instance for delivering a good). If the principal accepts the performance as satisfactory, the agent receives the payment and is then free of any further obligation. In particular, such an exchange does not establish any special bond; the agent is perfectly free to offer the goods to any other prospective buyer. An employment contract also differs from an award contract. The performance is often explicitly and precisely specified, and the monetary compensation is again paid after the service has been rendered. Once the employment contract is ended, the employer is free to offer the services elsewhere. But such contracts apply mainly to simple tasks. Employment contracts for more qualified tasks share some of the features of award contracts. The tasks to be performed are incompletely specified, and can be only partially monitored and enforced by the principal. In that case, the agent is expected to exhibit loyalty towards the principal. But in contrast to award contracts, once the employment relationship has ended, no further loyalty is owed³⁰. Managers can therefore be observed to freely switch from one firm to another, or soccer players (with the approval of

³⁰ An exception is when the employee has acquired firm-specific secrets.

their present clubs) to transfer to an archrival. While a person may receive awards from other donors (e.g. an order from a monarch of another country) this in no way ends the obligation to maintain loyalty to the previous donor.

The principal's utility W is the higher, the more support S he receives from the agent, and the lower the cost K of providing the awards:

$$(8) \quad W = W(S, K)$$

The utility function is characterised by diminishing marginal returns: $W_S > 0$, $W_{SS} < 0$; $W_K > 0$, $W_{KK} < 0$.

The support received by the principal due to handing out awards is determined by the efforts e^* given by equations (7) and (7a)

$$(9) \quad S = S(e^*), \text{ with } S_e > 0, S_{ee} < 0.$$

The amount of effort provided by the potential recipients of awards can be influenced by various policies

$$(10) \quad e^* = e(X).$$

These policies are denoted in general by X . They change the value of the parameters $P = \{\alpha, \beta, \delta, \varepsilon, \mu, \rho\}$ which are exogenous to the recipients of awards.

As there are many different policies which the principal can use to influence the potential recipients' behaviour, the effect of X on e^* cannot be determined in general, but depends on the specific policy undertaken.

The policies undertaken are subject to increasing marginal costs:

$$(11) \quad K = K(X),$$

with $K_X > 0$, $K_{XX} > 0$.

The optimal supply of policy intervention by the principal X is defined by:

$$(12) \quad \frac{\partial W}{\partial S} \cdot \frac{\partial S}{\partial e^*} \cdot \frac{\partial e^*}{\partial P} \cdot \frac{dP}{dX} = - \frac{\partial W}{\partial K} \cdot \frac{dK}{dX}.$$

This formula allows us to formulate testable hypotheses on the determinants of the award giver's policies. Subsection (a) discusses policies influencing the effectiveness of awards

($\partial D/\partial A$); subsection (b) considers policies influencing the effectiveness of the award-winning efforts; (c) deals with how award-winning efforts affect the support received by the principal; (d) analyses how support affects the award giver's utility; and (e) shows the effects of changes in the costs of providing the policies on the award giver's utility.

a. Raising the capacity of awards to provide distinction

The principal can profitably increase the effect an award has on achieving distinction to the recipients in various ways. In all cases, X raises α and thus $\partial D/\partial A$, which, according to eq. (11), increases the recipient's marginal benefit of obtaining an award.

The principal must ensure that the sheer number of awards is kept within bounds. The *quality of an award* depends on its rarity. This has been clearly expressed by Winston Churchill in a speech in the House of Commons, 22 August 1944: "... a distinction is something which everybody does not possess. If all have it, it is of less value" (Cabinet Office 2004:1). The award-giving institution therefore has an interest in restricting the number of awards and guarding against a decline in quality due to an oversupply. For this reason, the institution must be able to credibly bind itself. Institutions with a long history and high stability find it easier to establish and observe such self-constraints.

Proposition 12. The more effective the *self-imposed institutional restrictions to control the number* of awards given, the more effective awards are as incentive instruments.

The British monarchy has been successful in stringent self-imposed restrictions on the number of titles conferred in some of the orders. One of the reasons the *Most Noble Order of the Garter* and the *Most Ancient and Noble Order of the Thistle* (which is bestowed personally by the Sovereign) are held in such high esteem is that the number of *Knights/Ladies* is restricted to 25 and 16, respectively (Phillips 2004). The highest British order, the *Victorian Cross*, has only been bestowed 1,354 times since 1856. New Zealand also restricts the number of members in the *Order of New Zealand*, the *New Zealand Order of Merit* and the *Queen's Service Order* to 20, 30 and 140 per year, respectively.

In contrast, the Italian Republic, with a similar population to the UK, hands out state awards very liberally. The *Order of Work* has no fewer than 850,000 living members, and each year

20,000 more are added. The French Republic has maximum limits on the 5 ranks of her *légion d'honneur*, but in actual fact greatly exceeds the limits³¹.

These observations are consistent with the above proposition. The British monarchy goes way back in history and is very stable, whereas the Italian and French governments have been among the most unstable governments in Europe. Consistent with our analysis, orders and titles in Britain have been able to retain much of their esteem (see Phillips 2004), while in Italy and France this is clearly less so.

The perennial problem of reducing the effectiveness of awards, or aggrandising awards, can be counter-balanced by creating new awards, or new classes of awards. Due to the reactions of the prospective recipients, there are of course limits to this possibility.

Proposition 13. The more *institutional flexibility* the principal has to *differentiate between awards*, the better the quality can be maintained when the overall number of awards increases.

Most institutions have considerable flexibility when it comes to creating new awards. Most government leaders, who send their troops to war, invent a corresponding decoration in order to please the soldiers and officers involved. But democratic governments have at least some restrictions because they have to observe certain rules and conventions. Dictators are, in this respect, almost totally unconstrained. As a consequence, one can observe that dictators create an abundance of orders, medals and decorations. This not only applies to some autocratic rulers in Africa, but also in Europe. For example, in 1938, Hitler reinstated the *Iron Cross* and, over the course of the War, more and more classes were added to the traditional four classes. There was an “*Eisernes Kreuz*” *Second* and *First Class*, the *Knight’s Cross*, and the *Knights Cross with Oak Leaves, with Oak Leaves and Swords, with Diamonds, with Golden Diamonds* and *A Grand Cross* (awarded to Reichsmarschall Goering). The Japanese Emperors, who in this respect seem rather unconstrained, have exhibited considerable inventiveness by creating many classes amongst their orders. Examples are the *Order of the Rising Sun* with nine classes, and the *Order of the Precious Crown* and the *Order of the Sacred Treasure* with eight classes each (Phillips 2004: 53).

Private institutions also have considerable leeway to create new awards. Examples are the honours awarded by the media to managers. At the beginning, a “*Manager of the Year*” was

³¹ For instance, the number of Commanders is restricted to 1250, but there are actually 3626; the respective numbers for Officers are 10,000 and 22,401 (<http://de.wikipedia.org/wiki/Ehrenlegion>).

appointed. Today, there is a “*Manager of the Month*”, and this award is subdivided according to economic sectors. The same happened with Beauty Queens, such as “*Miss World*”, “*Miss Universe*” etc. In each of these cases, the quality of the award suffers to some extent, but certainly less than if there wasn’t any differentiation at all.

The quality of an award suffers when the donor bestows it, but it is not accepted. As a result, the award becomes less effective as an incentive instrument. The damage to the award’s reputation is the greater, the more widely known the refusal is³². The damage to the donor’s and award’s reputation is greater still if recipients turn out to be unworthy.

Proposition 14. The quality of an award is the better maintained, the lower the probability that the award is publicly refused.

Institutions handing out rewards can be seen to make great efforts to ensure that the persons chosen will accept the awards. This is demonstrated by the British system of bestowing orders. After having been chosen by carefully selected committees, and after having been scrutinised by the Ceremonial Secretariat of the Cabinet Office, the prospective recipients are asked whether they will accept the honour. Only if they formally agree is the list put forward to The Queen and then officially published in the London Gazette (House of Commons 2004). 98 percent of those offered awards accept them, and the majority of the 2 percent who decline do so for private reasons (Phillips 2004: 5). This procedure ensures that a refusal is not made public, except when a leak occurs. In Britain, the orders and medals enjoy high prestige and respect and receive solid public support (House of Commons 2004:3). This is consistent with the care that is taken to avoid refusals (Phillips 2004: 5).

The *Nobel Prize* Committee is more restricted in this respect. As the conferral is kept secret, the prospective recipients cannot be asked whether they will accept. The Committee must make its own inquiries, and carefully deliberate the risk of refusal. Nevertheless, it sometimes happens, the best known example being Jean Paul Sartre’s refusal of the *Nobel Prize in Literature*. This particular *Nobel Prize* is indeed more controversial, and is generally less valued, than the *Nobel Prizes in the Sciences* where few, if any, refusals are known. These observations are consistent with proposition 14.

³² This happened in Britain in December 2003 when a confidential document, containing the names of over 300 such persons, was leaked to the *Sunday Times*. Some well-known persons on the list were Francis Bacon, Isaiah Berlin, David Bowie, Roald Dahl, Bernie Ecclestone, Graham Greene, Alfred Hitchcock, David Hockney, Aldous Huxley, John Le Carré, John Lennon, Doris Lessing, Harold Pinter, J.B. Priestley, Vanessa Redgrave, Keith Richards, Evelyn Waugh.

Proposition 15. The award's quality and usefulness as an incentive device is higher, the better the principal can *ensure that the recipients prove to be worthy* of it.

The Catholic Church has an elaborate system to ensure that only those persons are beatified and sanctified who deserve it according to their carefully formulated standards. It has used an ingenious institution for that purpose, the *advocatus diaboli*. This person is officially given the task of finding potentially harmful aspects in the life of people proposed as *beati* or *sancti*. Accordingly, one rightly speaks of a “process”, in which both the positive and the negative sides are represented. The Church is well aware that its reputation would suffer badly if a (recently appointed) saint would turn out to be unworthy. But, due to its long-standing experience and history, it has managed admirably and saints are still venerated by a huge number of church-members and non-church members alike. Mother Teresa being canonised is a good example³³.

The *Nobel Prize* Committee also makes huge efforts to ensure that the recipient of a Prize deserves it. It resorts to extensive consultations within the scientific community. It even checks out whether a scholar can be expected to behave in the appropriate way at the award ceremony, where the Swedish King bestows the *Prize*³⁴.

A relatively safe way to avoid giving honours to unworthy persons is to give them only after they have proved to be loyal to the donor. For that reason it can be observed that orders – where the issue of loyalty is most important – are predominantly given at an advanced age (for Britain, see the extensive documentation in the House of Commons (2004), Phillips (2004)). Where loyalty is of lesser importance, and present work effort matters more, awards are given to younger people. Examples are the American *John Bates Clark Medal* or the German *Leibnizpreis*. These observations are consistent with proposition 16.

Giving awards not only has a positive incentive effect on the persons receiving or hoping to receive them, but may also have a *negative external effect* on the persons who are disappointed or angry at *not* having received them. This aspect was clearly seen by Winston Churchill in a House of Commons speech (22 August 1944): “A medal glitters, but it also casts a shadow. The task of drawing up regulations for such awards is one which does not

³³ Pope John Paul II recently changed the rules. There is no longer an *advocatus diaboli*, but the task is given to a commission. This can be expected to greatly affect the procedure, and may well harm the Church's reputation by leading to more errors.

³⁴ A well-known documented case refers to John Nash (Nasar 1998).

admit of a perfect solution. It is not possible to satisfy everybody without running the risk of satisfying nobody. All that is possible is to give the greatest satisfaction to the greatest number and to hurt the feelings of the fewest”.

The more an award is conceived as a pure positional good (Frank (1985), Frank and Cook (1995), de Botton (2004), Marmot (2004)), the higher is the utility to the recipient but the more strongly it is counterbalanced by the utility loss of those not receiving it. In the aggregate, the incentive effect may even be counterproductive.

Proposition 16 The more an award is seen as pure *positional good*, the less productive it is in the aggregate as incentive instrument.

Award givers are aware of this effect and react to it. One possibility to mitigate the negative external effects on non-recipients is to introduce marginal changes in the system. When people have the possibility to slowly climb up a social ladder of classes for an award, or if the recipient must have a minimum age, outsiders are less inclined to perceive the award in terms of a positional good and suffer a smaller negative external effect. The *Order of Merit* of the Italian Republic does this by requiring a minimum age of 35 years and by not allowing people to jump grades; recipients must work their way up from *Cavaliere*, *Ufficiale*, *Commendatore*, *Grande Ufficiale*, *Cavaliere di Gran Croce* to *Cavaliere di Gran Croce decorato di Gran Cordone*.

There is another external effect award givers have to take into account. The recipients themselves may underperform after getting an award due to a “distraction” and “extraction” effect. An empirical study (Malmendier and Tate 2005) of US CEOs with “superstar” status, i.e. those who were appointed “*Best Managers*” by Business Week, indicates that there is a decline in performance following the receipt of the CEO award. Stock market performance and accounting profits of the corporations of the respective managers tend to fall. One reason is that the CEOs start to write books and sit on more boards of other firms. Another is that they extract much higher rents from their company and more strongly manage earnings.

b. Raising the effectiveness of award-seeking activities

The principal handing out awards must ensure that the prospective recipients are not demotivated when it comes to other pursuits, such as gaining income by market activities. Rather, they should feel that their effort to gain awards is duly taken into account. This means

that the intervention X raises μ (compared to ρ , or, more generally, dA/de compared to dY/dk), which in turn raises e^* since $de^*/d\mu > 0$.

Recent research on incentive systems and corporate governance (see the surveys by Daily, Dalton and Canella (2003), Bolton, Becht, and Roëll (2002), Prendergast (1999), Gibbons (1998)) suggests that monetary compensation does not always work well (see e.g. Bénabou and Tirole (2002), Frey and Osterloh (2001), Frey (1997))³⁵. This holds, in particular, when the task to be performed is difficult or impossible to specify *ex ante*, and to monitor *ex post*. In that case, it is hard to make a monetary payment considered fair by the recipients. “Soft” incentives (e.g. Holmstrom and Milgrom (1991),(1994)), which endeavour to take a broader view of the agent’s efforts, are then more useful. Awards are well suited to that purpose. With a few exceptions in the military branch³⁶, orders, decorations and prizes are given to honour more general efforts.

Proposition 17. The more difficult it is to formulate specific contracts *ex ante*, and to monitor *ex post*, the more efficiently awards function as incentives compared to monetary compensation.

According to Nobel’s testament, his Prize should be given to the scientists who made the most important contribution to science in the previous year. The fact that the Nobel Prize is, in the overwhelming majority of cases, given instead based on a scholar’s overall life performance, suggests that prizes serve that purpose more efficiently. On the other hand, one rarely observes a person being given a sum of money for his or her life achievement. If it were done, the question would immediately arise why the sum is not higher or lower. An evaluation in dollars and cents of what one has achieved, and how one has performed in life, is difficult, to say the least, and many would consider it offensive to have their life evaluated in these terms. The same question also arises with respect to awards, but it is less harmful exactly because the value of awards is *purposely* left vague. But precisely this property helps awards to efficiently compensate people for outstanding achievements.

There are parts of society where specific tasks are difficult, or impossible, to define *ex ante*, and to monitor *ex post*, and where an overall evaluation of effort is more efficient. Providing

³⁵ Extensive empirical laboratory and field evidence is collected in Frey and Jegen (2001).

³⁶ Some orders, such as the *Victoria Cross*, are given for specific acts of valour but most military decorations are not. The United States, by 1969, had given awards of valour, such as the *Purple Heart*, to 56 generals who did service in Vietnam, though only one general died from enemy fire at that time (Cowen 2000: 93).

suitable data are available in the future, the importance of awards can be evaluated by looking at the lower monetary compensation in sectors and occupations with more awards compared to those with fewer awards (compensating variation).

Decorations are both extremely important and abundant in the *military*³⁷, because exactly what tasks have to be performed, especially in combat, are largely unpredictable and cannot be contracted *ex ante*. The United States, for instance, knows only three civilian state awards³⁸, but has about 170 military decorations (of which over 60 are currently in use), such as the *Medal of Honor*, the *Distinguished Service Cross*, the *Distinguished Service Medal*, *Silver and Bronze Star*, the *Legion of Merit*, *Distinguished Flying Cross*, *Soldier's Medal*, *Meritorious Service Medal*, *Air Medal*, *Army Commendation*, *Purple Heart* (Robertson 2005).

In the *public sector*, more awards are supplied because it is more difficult to assess the *ex-ante* contract than in the market sector. The report of the House of Commons (2004: 3) refers to “the special generosity to state servants stemming from the relative modesty of public sector salaries when compared to the private sector”. In recent years, salary levels have improved substantially, and at the same time “the long term trend was clearly away from the state sector”. Yet, civil servants still receive “favourable treatment” (House of Commons 2004: 3-4). Fifty years ago, roughly 40 percent of all British state awards went to public servants, while today's percentage is below 14 percent.

Monetary compensation has been shown to crowd-out intrinsic motivation under specific circumstances, i.e. when the agents are perceived to be controlling (e.g Frey (1997), Osterloh and Frey (2000), Gneezy and Rustichini (2000a),(2000b), Bénabou and Tirole (2004)). This motivation crowding effect may overcompensate the relative price effect of the monetary incentive. This perverse effect of monetary compensation is the greater, the more important intrinsic motivation is for a task or sector. When an award is received, most persons take it as a gesture of support rather than of control, and it is therefore likely to have a positive, rather than a negative, effect on performance.

Proposition 18. In sectors and activities where *intrinsic motivation is important*, and is likely to be crowded-out by monetary compensation, awards are relatively more efficient.

³⁷ The fact that the Swiss army is the only exception can be attributed to the fact that it is almost only composed of conscripted citizens, and has not been involved in war for two hundred years.

³⁸ But there are several civilian awards, such as the “Arms Control and Disarmament Agency: Superior Honor Award” or the “Defence Contract Audit Agency Distinguished Service Award”, as well as hundreds of other awards handed out by US States (Robertson 2005).

Intrinsic motivation is of particular importance in the volunteering and humanitarian sectors, academia, the arts, the military, and parts of the public services (Frey 1997). The *Appendix* reveals that awards do indeed play a major role as an incentive instrument in these sectors.

c. Raising the award-giver's utility from support

An award giving institution can raise both the quality of its awards and its own recognition by conferring them on individuals who already have a high reputation. The transfer of the recipient's reputation to the giver raises the latter's level of general support. Due to the high media attention given today to a particular individual, the esteem of the award-granting institution is linked even more closely than before to one of the recipients. If the institution is able to induce famous persons, or celebrities, to accept one of their awards, their own utility is increased. This policy is of greater importance to institutions of low, rather than high, renown (since $W_S > 0$, and $W_{SS} < 0$).

Proposition 19. The less well-known an institution is, and the less esteem it is held in, the stronger is its incentive to gain reputation by handing out awards to *celebrities*.

Many organisations give famous sportspersons awards in the hope that they will attend the award-giving ceremony and therewith raise their prominence. Examples are the dominant formula 1 pilot Michael Schumacher, who has repeatedly been appointed "*German Sportsman of the Year*", or the present top-ranked tennis player, Roger Federer, who was twice appointed "*Swiss Sportsman of the Year*". While both accepted these honours, neither attended the actual ceremony. This reflects the fact that the award handed out is, in this case, of little value to the recipients, but rather to the award giving institution. But even governments and monarchies, which seem to be well established, try to gain added recognition (and, in the case of the government, votes) by bestowing orders and titles on famous persons. A case in point is the UK government and the British Queen who awarded an MBE to the Beatles, and most recently to a celebrity footballer, David Beckham³⁹. Scholars who achieve fame by getting the Nobel Prize are knighted almost as a matter of course (in economics, for instance Hicks and Mirrlees⁴⁰).

A principal can also raise the utility gained from handing out awards by targeting them at individuals who are expected to respond, and to benefit the principal to a large extent.

³⁹ Other football heroes have been knighted, for instance Sir Stanley (Matthews).

⁴⁰ Another Nobel Prize winner, James Meade, refused this award on principle.

Individuals in a pivotal position meet this criterion more than individuals who support the principal anyway, or who will never support him.

d. Lower costs for the principal's policy

A principal finds conferring awards the more suitable as an incentive instrument, the cheaper are the marginal costs of doing so (low $K'(X)$).

Institutions short of income have to turn to awards in order to provide incentives to the agents. Awards are extremely cheap in monetary terms. Sometimes they just consist of a piece of ribbon. In many cases, the recipients must buy the insignia of the order they are bestowed with. The only material cost involved is the ceremony in which the award is given. But again, these costs are in general quite low.

Proposition 20. The more an institution is *restrained by a lack of income*, the more it turns to awards to provide incentives.

The role of the income constraint on the supply of awards applies in particular to three institutions. *Monarchies* were strongly income restrained in the past, and today often have no independent source of income. They therefore tend to resort more to awards than do republics. The more income-constrained *dictatorships in poor countries* are, the more they use awards as incentive instruments. *Not-for-profit firms* are often very income constrained and therefore resort more frequently to awards than for profit firms.

The shorter the time horizon of the principals, the more they rely on awards, because the costs, in the form of award inflation, will only occur in the future.

Proposition 21. The *lower the probability of continuing in power* (in a democracy, the lower the re-election probability), the larger the number of awards supplied.

Before his resignation in 1976, the British Prime Minister Harold Wilson did great harm to the honours system by handing out far too many awards to Labour supporters (which was heavily criticised, see De-la-Noy (1985: 141)). When a regime fears for its survival, the time horizon is short and there is a great incentive to try to forestall this fate by using awards as incentives to supporters. Examples are the German *Iron Cross*, established in 1813, and highly esteemed up until the 20th century. But it lost much of its lustre when it was given out to 5,400,000 soldiers in WWI, in which 13.2 million German soldiers were engaged, i.e. on

average, 40 percent of all soldiers received one. As some soldiers received *Iron Crosses* of several classes, historians estimate that about 20 percent of the German soldiers were decorated in this way. Similarly, in WWII, 5,000,000 *Iron Crosses* were awarded by the *Wehrmacht* (Kellerhoff 2004). In both Wars, the Germans were on the losing side. The war leaders were, quite early on, aware of the fact that their chance of winning the war was small and diminishing⁴¹.

The same policy can be observed when the principal has a short-term time horizon due to bad health. Pope John Paul II, who had been in bad health for a number of years, and whose imminent death was often an issue, greatly increased the number of canonisations. He beatified and sanctified many more people than all the other popes of this century combined (Cowen 2000:94). Over the 26 years of his pontificate (1978-2005), John Paul II recognized 488 saints and beatified 1,338 persons, putting them on the path to sainthood. The press commented "... as with everything, inflation produces devaluation" (Hennerberger 2002).

When several institutions are able to hand out similar awards, a typical public good situation arises. A particular principal only takes into account his own costs of providing the awards, but not the costs of diminishing the quality of the awards falling upon all principals handing them out. But he is also burdened by the costs imposed from other principals handing out awards. Each prefers to act as a free-rider, in the sense that there is too low an incentive to keep the number of awards down and therewith keep their quality up. A principal faced with only a few, or no competing, award givers therefore has lower costs than one who has to act in a system with many award givers.

Proposition 22. The fewer other principals are able to independently supply similar awards, the better awards serve as incentive instruments.

The hundreds of principalities existing in Germany before the foundation of the German Reich distributed a great number of orders. The same holds for Italy before the Resorgimento. The resulting inflation of orders reduced their value.

Military decorations are also handed out more liberally when there is no strong central command, but the various branches of the military are in competition with each other and can

⁴¹ This statement is empirically supported by an analysis (Frey and Kucher 2000, 2001) of the change in value of government bonds during the course of WWII. The bond prices increased for the Allied powers, while they fell for the members of the Axis.

to some extent act on their own. In tandem with this expansion of different types of awards, the number bestowed also increases greatly. This is particularly visible in the United States. In the Revolutionary War, there was essentially one Military Force under General Washington's command. The *Purple Heart* was only awarded three times. In contrast, during WWII in one battle alone, at Iwo Jima, there were 28,686 casualties (of which 6,821 died), and each one received a *Purple Heart* (Cowen 2000: 93). Today, the American forces are composed of the Army, the Navy and the Air Force, and more recently of the Marines and the Coast Guard, each one having its own command, with a good measure of independence. The highest award of the US military, the *Medal of Honor*, was originally issued to members of the US Army. In 1947, the US Air Force began issuing its own version of the *Medal of Honor*, followed later by the US Navy and the Marines. There is also a US Coast Guard version.

Proposition 22 is consistent with the explosion in the number of awards given by not-for-profit institutions and by private enterprises. A case in point are the awards given to people in sports. Each year, the BBC bestows the following awards: “*Sports Personality of the Year Team*”, “*Overseas Personality*”, “*Coach*”, “*Lifetime Achievement*”, “*Young Personality*” and “*Unsung Hero*”. It seems that each sports organisation appoints its own “*sports man*”, “*sports woman*” and “*sports team*” of the year, and increasingly also of the decade or even century⁴².

Proposition 22 suggests that political decentralisation increases the *supply* of awards while proposition 6 suggests that political decentralisation lowers the *demand* for awards. It follows that the value (price) of awards is lower than in a centralised polity.

V. *Summary and Conclusion*

Awards form an important part of the incentive system in a society. They deviate systematically in many respects from extrinsic incentives in monetary or material form, as well as from intrinsic incentives. Awards constitute a type of *non-material extrinsic reward* extensively used in all spheres of society, including the economy.

The paper shows that, based on the assumption that individuals have a hard-wired desire for social distinction, the determinants of the *demand for awards* can be analysed. A number of

⁴² The Swiss Ski Association, for example, recently elected a male and a female “*Skier of the Century*” (Pirmin Zurbriggen and Vreni Schneider won this prize).

propositions are derived, which are consistent with how individuals seek awards. The demand for awards is the higher

- the lower economic productivity is;
- the more important rent-seeking activities are;
- the less important the market sector is;
- the more equal the distribution of market income and wealth is;
- the less fractionalised a country is with respect to geographical, socio-economic and political aspects;
- the higher the marginal tax rates on income are; and
- the richer the country and in particular individuals are.

The *supply side* has been analysed in the context of a principal-agent relationship between the donor and the recipient of awards involving a tacit and incomplete contract. The terms of the *award contract* are not precisely defined, and are often left vague. Awards turn out to be efficient instruments to elicit the work effort and support desired by the donor of awards.

The propositions are, on the whole, consistent with the way awards are handed out. Awards are proposed to be the more efficient incentive instruments

- the more effective self-imposed restrictions to control the number of awards are;
- the more the donor is able to differentiate between awards;
- the lower the probability is that an award is publicly refused;
- the less possible it is to formulate specific ex ante contracts, and to monitor them ex post;
- the more important intrinsic motivation is; and
- the fewer other principals are able to independently supply similar awards.

An institution bestows the more awards

- the more restrained it is by a lack of monetary income; and

- the lower the probability of continuing in office.

The unavailability of reliable and consistent data on awards prohibits employing econometric techniques to test these propositions. An alternative technique, analytic narratives, is applied. It enables the integration of knowledge stemming from many different sources and being of different qualities, but it is far from ideal. Nevertheless, as long as no reasonable data on awards is available, it seems to be better to resort to this technique than to forego empirical work altogether. At least it provides interesting insights from which to proceed further.

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