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CEO Pay and the Argument from Peer Comparison

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Abstract

Chief executive officers (CEOs) are typically paid great amounts of money in wages and bonuses by commercial companies. This is sometimes defended with an argument from peer comparison; roughly that "our" CEO has to be paid in accordance with what other CEOs at comparable companies get. At first glance this seems like a poor excuse for morally outrageous pay schemes and, consequently, the argument has been ignored in the previous philosophical literature. In contrast, however, this article provides a partial defence of the argument from peer comparison. Moreover, it is demonstrated how a serious consideration of this argument sheds further light on both incentive- and desert-based theories of just pay.

Keywords CEO compensation · Incentives · Desert

Introduction

Commercial companies typically pay their highest-ranking officers and executives, especially their chief executive officer (CEO), vast amounts of money in wages and bonuses. This has been the topic of much public outcry and scholarly debate for at least a few decades, although the issue seems to have become increasingly topical in recent years. Part of the reason for the interest is that income differentials now have reached seemingly extreme levels (although they have come down somewhat since the dotcom bubble of the early 2000s, see Kolb 2012). According to a recent report, the CEOs of the largest 350 companies in the US received, on average, \$15.6 million in total compensation for 2016. This is equal to as many as 271 times the wages of average workers, which is up from 123 times in 1995, and 59 times in 1989 (Mishel and Schieder 2017). The equivalent numbers for Europe are lower, but seemingly growing at a rapid pace: an average CEO compensation of €5.3 million in 2015, equal to 96 times that of average employees (Kotnik et al. 2017).

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This article concerns whether there is any principled, ethical justification for the current very high levels of CEO pay. More specifically, the article is an exploration of an argument commonly advanced in defence of the current levels; what we call the 'argument from peer comparison'. This argument roughly seeks justification for giving a high pay to a specific CEO with reference to what other CEOs are paid. Board members who support this argument can say: "We pay our CEO this much because that's what CEOs in comparable companies are paid", "This is a typical remuneration level in the industry", or "We keep close track of what our competitors are paying their CEOs and aim to give a competitive offer" (see, e.g. Kay and Van Putten 2007). As demonstrated by this last formulation, the argument is often connected to an idea about competition and market survival, but this is not a necessary connection.

The argument from peer comparison has largely been ignored in the previous philosophical literature on CEO pay. And perhaps there are natural reasons for this. At first glance the argument may seem downright ludicrous: it is obviously not justified to perform a wrongful action just because "everyone else is doing it"—since two wrongs do not make a right. Furthermore, one could say that the primary focus in the philosophical debate has been on the collective rather than the individual level—that is, the debate has concerned the general pay differences between CEOs, as a group, and ordinary workers, as a group (for an overview, see Kolb 2006). However, what is interesting about the argument from peer comparison is that it requires us to ask a different question, namely: "How much should this particular company (say, company X) pay its CEO, given that many other companies pay their CEOs vast amounts of money?" This question is more realistic in the sense that it starts from the actual, and perhaps non-ideal, situation and the actual behaviour of others.¹ It is also more practical since it concerns the decisions of individual companies (or their board members), which indeed is where pay levels usually are set. Both of these are good reasons to take the argument from peer comparison more seriously.

Now, in order to proceed, we will assume that—even though it is their own money they are using, and there are no legal obligations either way—these pay decisions of individual companies can and ought to be evaluated from the standpoint of familiar theories of just pay. While this assumption does not seem controversial in the debate, it is important to acknowledge it at this early stage—and we will return to reflect on it at the very end of the article. As we will see throughout our discussion, giving serious attention to the argument from peer comparison actually sheds further philosophical light on both incentive- and desert-based theories of just pay.

Most previous commentators have argued that the current very high levels of CEO pay are unjustified from an ethical perspective. In contrast, we will argue that there are at least some things to say in favour of such levels based on the relevance of peer comparisons. Thus, the article provides a partial but modest defence of the argument from peer comparison. That the argument favours a conclusion that seems unpalatable to many (including the authors of this paper) is not a good reason to ignore it; instead it becomes all the more interesting from a philosophical perspective because of this.

The article proceeds as follows. We first introduce the two main theories in the context which focus on incentives and deserts, respectively. The article then splits into two parts in which we put some further flesh on each theory and particularly discuss the relevance of peer comparisons for justifications of CEO pay. We conclude with a brief summary of the main conclusions as well as a comment on their more general implications.

Theories of Just Pay

There are in general two kinds of theories of just pay. These are procedural and substantive theories, of which only the latter type will concern us here. A familiar procedural theory, which we may call the market-based view, holds that pay arrangements are just to the extent that they are the outcome of unbiased negotiations on a free market (cf. Boatright 2010, Wilhelm 1993). Previous authors have debated whether this view should be taken to support or oppose the current very high levels of CEO pay. For example, an important criticism holds that many boards are too dependent on, or friendly with, high-ranking managers to be sufficiently unbiased in negotiations (Bebchuk and Fried 2004; Correa and Lel 2016). While this debate forms an interesting background to our present inquiry (and is important in its own right), it has no direct bearing on the argument from peer comparison as such. This is since the latter argument (at least how we understand it) is substantive rather than procedural; that is, it is an argument about the content rather than cause of pay arrangements. We therefore leave the market-based view to the side here.²

There are two main substantive theories of the proper basis for, or function of, workers' pay. On incentive-based views, the main function of pay should be to incentivise work. That is, wages and bonuses are seen as instruments that can be used to get workers to do or generate something, which typically is understood as either effort (physical or other sorts of input) or contribution (valuable outputs or economic effects). The ultimate aim here is the creation of value, either for the firm or for society, and pay arrangements should thus be calibrated to create as much value as possible. Incentive-based views are essentially forward-looking and are typically rooted in utilitarian ethics or neoclassical economic theory (cf. Annis and Annis 1986; Heath 2018; McCall 2004). They tend to be popular among empirical economists who work from the assumption that most problems can be solved by "getting the incentives right" (Kolb 2012, p. 45).

On *desert-based* views, in contrast, the main function of pay should be to compensate or reward past effort or contribution. That is, paying wages or bonuses is a way of giving workers their due, or of treating them with respect in relation to their job performances. And as such they should be paid in proportion to what is owed or deserved, rather than according to what creates as much value as possible. Desertbased views are essentially backward-looking and are typically based on Kantian or deontological ethics (cf. McLeod 1996; Miller 1999; Olsaretti 2004; Sher 1987).

¹ 'Non-ideal' here means a situation in which at least some other people are acting wrongly, which the agent has to factor into his or her decisions.

² One could add a more contentious line of argument, namely that procedural theories often invoke or boil down to considerations of a more substantive nature. For example, what does it mean to say that a certain procedure or offer is *unbiased*? On one understanding, this means that it only rests on considerations that are relevant in a substantive sense—that is, it is not based on idiosyncratic or irrelevant considerations but only those that actually matter. However, we will not press this argument here.

It may be noted that the three views above sometimes overlap in practice and therefore give similar recommendations. For instance, bonuses probably work best as incentives if they are paid in retrospect-after the effort has been exerted or the contribution made-and also in direct proportion to that effort or contribution. Therefore there is an overlap between recommendations based on incentives and deserts. Moreover, one could argue that market wages, at least under perfect conditions, will be determined exactly by considerations of effort (which influences the supply of workers) and contribution (which influences the demand for workers). So the perfect procedure may favour considerations that are very similar to one or both of the substantive theories. But these practical overlaps are far from necessary and, in any case, they should not distract from the theoretical differences between the three justificatory principles (see also Moriarty 2020).

Our aim in this paper is not to evaluate these views in order to find the most plausible theory of just pay. Instead, we will only be concerned with the question of whether or not they can give credence to the argument from peer comparison. In order to do that, we will now put some more flesh on the two substantive views.

An Incentive-Based View

In his influential article on CEO pay, Moriarty (2005) outlines a rather simple incentive-based view which he calls 'the utility view'. This view holds that "a just wage is one that maximizes firm wealth by attracting talented workers, retaining them in the face of competing offers, and motivating them to do their best" (Moriarty 2005, pp. 267–268). The view is simple, or even simplistic, from an ethical point of view since it fails to explain why maximising firm wealth is an important normative goal. Perhaps what Moriarty had in mind, but did not spell out, is the more comprehensive view that a competitive market system is a good (or the best) way of generating an efficient allocation of resources, which in turn generates an obligation on the part of firms to be maximally competitive (Heath 2018). This view may also include a caveat to the effect that some profit-maximising strategies, such as those that give rise to social or environmental externalities, are morally impermissible (Heath 2014). But in any case, the simpler view will do just fine for the purposes of our present discussion on the relationship between incentives and peer comparisons.

The basic idea of the utility view is that firms should maximise firm wealth by compensating their employees in a way that incentivizes them to perform. It should be noted that this view typically recommends setting wages as low as possible (to minimise the firm's costs). However, a higher pay can be justified if it is required for attracting or motivating a particularly high-performing employee (who contributes a lot to the company's profits) (cf. Moriarty 2005; Perel 2003; Shaw 2006). Implicit in the view is that current and prospective employees base their career decisions on equally rational calculations. That is, current and prospective employees will only be sufficiently attracted and motivated if the benefits of the pay outweigh the effort required for the job and there are no other jobs with a better ratio of benefits over effort. We should stress that 'effort' in this context is a placeholder for the "costs" that are relevant to employees, which can be understood in different ways. On a narrow understanding, effort simply means the physical and/or psychological energy expended in the job, which is the main "cost" to employees here and now. On a broader understanding, employees may also care about other costs such as the amount of skills and training required for the job (which is a past or sunk cost) or the level of responsibility and risk involved (which is a future cost or present risk). In any case, an incentive pay is only rationally attractive if it is able to outweigh the job-related efforts or costs as they are perceived by current and prospective employees.³

Translated into the case of CEOs, we get the following statements. Firms are supposed to maximise firm wealth by weighing current and prospective CEOs' pay claims against how much they are expected to contribute to the company (what they can get out of each CEO). Moreover, current and prospective CEO candidates are supposed to maximise their personal utility by weighing, for each firm that is available, the pay that they are offered against the relevant effort associated with that particular CEO job.

The standard position in the literature is that the utility view cannot be used to justify today's very high levels of CEO pay. We may note two main arguments in this context. First, it is often argued that the effort involved in being a CEO is overestimated (cf. McCall 2004; Moriarty 2005; Nichols and Subramaniam 2001; Shaw 2006). While there certainly are sacrifices involved in directing and fronting a commercial enterprise, especially on a multinational level, it seems unlikely that they are of such extreme gravity to justify a pay of \$15.6 million per year. That is, it seems (at least theoretically) improbable that most prospective CEOs would find the job so gruesome or arduous to require this kind of extreme incentive. This point is nicely illustrated with inter-occupational comparisons: University presidents and U.S. military generals, for example, also have jobs that are very demanding and stressful, involve a high level of

³ According to modern microeconomics, perfectly competitive markets will limit the possibility of gains—that is, both the value added by employing employees and the personal gain derived via employment will tend towards zero. It is an interesting empirical question whether markets are (sufficiently) competitive in this way. However, we will not say more about this issue here.

responsibility, and require vast amounts of skills and training. But plenty of talented and high-performing people take those jobs, despite the fact that the pay is only a fraction of what CEOs make (cf. Moriarty 2005). Furthermore, it seems that many people find it intrinsically rewarding to have a job that is serious and involves a high level of responsibility. This indicates that such factors are not only costs but also part of the gain that you get from the CEO job (cf. Shaw 2006).⁴

Second, it is typically argued that the contribution of CEOs tends to be overestimated as well (cf. Bebchuk and Fried 2004; Harris 2008; Khurana 2002; Perel 2003). Against the first point above, one could argue that while a seriously reduced pay may be enough to attract and motivate a good deal of prospective CEOs, only a much higher pay may suffice to attract the very highest talents. And going after this kind of talents may be worth it because of what they contribute in terms of profits (cf. Moriarty 2005; Shaw 2006). But there are few empirical studies that can confirm a substantial effect of CEOs' talents on firm wealth. In fact, an increasing number of studies indicate the absence of such an effect. Summarising some recent research, Khurana (2002) says that the "overall evidence [points] to at best a contingent and relatively minor cause-and-effect relationship between CEOs and firm performance" (p. 23). This is so because "a variety of internal and external constraints inhibit CEOs' abilities to affect firm performance; these constraints include internal politics, previous investments in fixed assets and particular markets, organizational norms, and external forces such as competitive pressures and barriers to exit and entry" (p. 22). In sum, this research indicates that the contribution of CEOs is likely to be low, even for talented CEOs, which undermines the need for substantial incentives on the utility view.

Incentives and Comparison Effects

We may now analyse how the argument from peer comparison fares with regards to the utility view. As we stated above, this argument requires our asking a somewhat different—but perhaps more realistic—question, namely "How should company X reward its CEO, given that many other companies in fact pay their CEOs vast amounts of money?" When pondering this sort of question, we suggest that there are a number of what we can call 'comparison effects' which have not been thoroughly understood in the previous debate. It should be noted that none of these effects may constitute a full dismissal of the standard position, but they at least speak in favour of very high levels of CEO pay in some individual cases.

Let us first take for granted the framework for rational decision making inherent in the utility view. There are at least three comparison effects that complicate the relevant utility functions here in more real-life scenarios. The first and most obvious one is the opportunity cost for CEO candidates; that is, the forgone gain from job offerings from other companies (for either similar or dissimilar jobs). As noted above, one of the main aims of an incentive pay is to "retain [workers] in the face of competing offers". It seems quite natural in this context to take regard of the current levels of pay on the CEO market, even if they may be viewed as unjustified under more ideal circumstances. If we assume that there are at least *some* differences between the talents of different CEOs-which does not seem unreasonable in the present context, if only for the sake of argument-then our company X will have a reason to compete for CEOs with favourable talents. But if its competitors are paying their CEOs very high salaries, it seems that company X can only compete by either paying a similar (or preferably higher) salary or by making the job more attractive in other ways, perhaps by reducing the working hours or removing tedious tasks.⁵ This is so since current and prospective CEOs will not only require that the benefits of the pay outweigh the effort required for the job, but also-as we have said-that there are no other jobs with a better ratio of benefits over effort.

Curiously, Moriarty (2005) is quick to reject this line of reasoning from the opportunity cost of CEOs. He writes:

It might be said [...] that I am missing the point. The fact is that the going rate *now* for CEOs is \$8 million per year. In this market, it is necessary for any one firm to offer \$8 million per year to get a talented person to become its CEO [...]. This argument defies free market economic sense. It says, in effect, that the market cannot correct itself. This is pessimistic. (Moriarty 2005, p. 270)

We take Moriarty's argument here to be that the CEO market will correct itself, at least over the long run, so that the level of CEO pay is likely to come down. If many prospective CEOs are ready to take the job at a seriously

⁴ A different argument in this context could be that CEOs themselves have moral reasons not to require, or even accept, outrageous pay packages (cf. Moriarty 2009). However, we take it that incentivebased views must focus on the actual, rather than ideal, motivations of people and therefore this argument has no bearing. It is generally an interesting topic what level of pay CEOs can permissibly accept, but since it falls outside of our scope we will not address it further here.

⁵ It is assumed here that the job market for most CEOs is likely to be rather open, but this will of course vary with the CEO's talents as well as other circumstances.

reduced pay, then over time the pay will mainly reflect the effort required for the job. But we fail to see how this argument makes the opportunity cost irrelevant to our present discussion. First, the actual CEO market shows little tendency of correcting itself along the lines that Moriarty expects-instead, as we noted at the outset of the article, the income differentials between CEOs and average workers only continue to grow. Second, the future direction of the CEO market is of little concern for our company X and its prospective CEOs. If competitors are paying their CEOs very high salaries here and now, this is still likely to dissuade at least some prospective CEOs from taking a lower paid job at company X. It is difficult to assess the strength of this factor, but one could imagine that it will at least affect the number of candidates with demonstrated talents or previous experience (assuming, for now, that there are at least some such candidates). Thus, on the utility view, the opportunity cost for CEOs seems to speak in favour of very high levels of CEO pay in at least some cases.

A second and perhaps more interesting comparison effect concerns so-called social comparisons of income. It is well known in the field of social psychology that people not only value the absolute worth of the bundle of goods they hold, but also its relation to the bundles of goods of others. So, for example, a salary of \$5 million may seem very palatable in isolation, but much less so when compared to someone else's salary of \$8 million (cf. Ferrer-i-Carbonell 2005; Sweeney and McFarlin 2004; Senik 2009). There are several ways of understanding this effect theoretically. One interpretation is that people's evaluative operation as such contains an element of comparison-that is, we never value something in isolation but always in relation to something else. Our personal gain derived from a job, then, not only depends on the pay in absolute terms but also on how it compares with other people's pay (cf. Clark et al. 2008). An alternative interpretation is that we simply care about our place in the social hierarchy and therefore we care about what social status is inferred upon us by a given level of pay (cf. Boyce et al. 2010). Having a lower pay than others may be taken to signal social inferiority, while having a relatively higher pay signals social superiority.⁶

Much like with the opportunity cost, this factor is also likely to reduce the number of candidates willing to become the CEO of company X with seriously reduced pay. While it once again is difficult to assess the strength of the factor, one could hypothesise that it will have the most influence on candidates that perceive themselves to have relatively high talents (irrespective of whether the assessment is correct or not). One could also speculate that social comparisons are more important for CEOs than for university presidents and military generals, which were the points of reference above. Indeed, several empirical studies have been able to confirm the influence of social comparisons on CEO pay levels (cf. Ang et al. 2009, Kovacevic 2005, O'Reilly et al. 1988). For example, one recent study found that CEO pay tends to increase with the size of a CEO's "social circle", that is, the number of comparable CEOs with which he interacts-and the effect is also augmented by readily available information on the pay levels of his peers (Ang et al. 2009). Given the prevalence of the social comparison literature above, it is somewhat remarkable that these ideas have not made it into the current ethical debates on CEO pay.

A third comparison effect is similar to the second but pertains to the market status of the company involved. The idea here is that the relative level of CEO pay may have significant indirect effects on the firm's wealth through what it signals to the market. The underlying theory is what economists call 'signalling theory', which holds that market participants will seek to overcome information asymmetries by using observable factors, such as certificates or prices, as proxies for unobservable factors, such as talents or performance (Connelly et al. 2011; Spence 2002). For example, external agents such as investors, loan officers and potential business partners are not privy to the same kind of information about the talent or performance of a given CEO as are internal agents such as board members and the CEO himself. In such a situation, a factor such as the CEO's pay will be an important signal to the market and is likely to be compared to the pay at similar firms. A hypothesis in the literature is that a relatively high CEO pay is likely to be taken as a signal of high levels of talent and performance, whereas a relatively low pay signals a weaker belief in the CEO's abilities (cf. Iacobucci 1998; Miller and Wiseman 2001; Zajac and Westphal 1995). It follows from this that there is an incentive on the part of firms to set a relatively high CEO pay in order to secure better terms with investors, loan officers and potential business partners.

Several empirical studies have confirmed that there are signalling effects associated with the executive pay practices used by firms, although there is insufficient evidence in the literature with regard to CEO pay levels as such (cf. Kent et al. 2018; Lund 2012; van Veen and Wittek 2016). Without further research in this regard, it is once again difficult to assess the strength and reliability of this factor. We should admit to the possibility that an evaluation of market signals could recommend a lower CEO pay in some cases if, for example, loan officers and future business partners are concerned with allegations of excessive CEO pay (cf. Miller and Wiseman 2001). However, this hypothesis seems

⁶ One could argue that this status-evaluation factor stems from people's pity, envy or jealousy and that it seems unfitting to let such morally problematic attitudes determine what pay schemes are just. However, we once again take it that incentive-based views are interested in the real-life effects of incentives and therefore have to factor in such attitudes, irrespective of how unfounded they are.

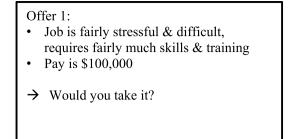


Fig. 1 Two job offers

less plausible given the historical development of CEO pay levels.

In sum, then, the market signalling effect is a further reason, beyond the opportunity cost and the social status effect for CEO candidates, for our company X to offer its CEO a very high level of pay in the current CEO market. Interestingly, one may note that it is not the actual talent of the CEO that matters here (which may indeed be overrated), but rather the perception of talent among other market participants. Moreover, it should be noted that neither the social status nor the market signalling effect are likely to be "corrected" by the free market in the long run, since they stem from external factors such as human nature and the existence of information asymmetries, respectively.

Our Attraction to Comparison Simplification

The arguments above indicate several comparison effects that complicate the picture, even if we grant the framework for rational decision making inherent in the utility view. But as a final complication, we may also question this framework. There seems to be grounds for doing so in some recent results from behavioural economics which confirm an irrational "framing effect" stemming from simplified comparisons (cf. Simonsson and Tversky 1992; Trueblood et al. 2013).

A nice illustration of the relevant effect can be taken from Ariely's (2008) popularisation of this research. In two experimental settings, people are shown differently formulated advertisements for subscriptions to articles from *The Economist*. In the first experiment, the ad contains just two options: of either buying a web-only subscription for \$59, or a print *and* web subscription for \$125. In the second experiment, the ad also contains a third or middle option: of buying a print-only subscription for \$125. On a rational view of economic decision making, the addition of this middle option should make no difference to the outcome of people's choices; because they should be based solely on people's

Offer 2:

- Job is fairly stressful & difficult, requires fairly much skills & training
- Pay is \$100,000
- Many others are paid \$500,000 for this kind of job
- \rightarrow Would you take it?

assessment of the value of the subscriptions vis-à-vis their cost. But it turns out that the addition of the middle option makes an enormous difference. Whereas only 32% opt for the print *and* web subscription in the first experiment, as many as 84% choose it in the second.

Ariely interprets this result as an effect of our irrational attraction to 'comparison simplification'. In the first experiment, we are given the fairly complicated task of weighing the different subscriptions' monetary costs against their non-monetary values to us. A similar task is prompted in the second experiment, but here we are also confronted with a much simpler comparison—that between a print-only subscription and a print *and* web subscription for the same price. As the results indicate, people are irrationally inclined to let the simpler comparison be decisive. That is, they choose the print *and* web subscription because it is so obviously better than the print-only one, even though this means actively refraining from weighing all values (monetary and non-monetary) inherent in all three options.

The implications of this for the case of CEO pay seem interesting. It is a rather complicated task to compare the monetary gains with the non-monetary efforts and hardships involved in an executive position to make a rational career choice. However, it is much easier to compare a given pay offer with a competing offer from another firm, or with the pay levels of (prospective) peers. This suggests that very few prospective CEOs would be interested in a position at company X if it paid much less than comparative firms, irrespective of whether the money made it "worth the effort" in a rational sense-that is, irrespective of whether the pay level outweighed the personal costs involved in being a CEO. The point is further illustrated by Fig. 1, where the offer on the right is assumed to be the more realistic one. The reader may consult his or her own preferences here: Do you react differently to the two offers?

While our main concern here is with justification, let us make a brief side note about explanation. We suggest that the existence of a comparison simplification effect actually is a central part of the explanation of why CEO pay levels have spiralled out of control in recent decades. New CEOs pay little regard to the efforts involved but simply want more money than their peers. Therefore, they are not particularly persuaded by the standard argument that the job would be "worth the effort" for them even with a seriously reduced pay. And, of course, incentive-based theories of just pay make such attitudes relevant also for the issue of justification.

In summary, we have argued that the argument from peer comparison, in connection with incentive-based justifications of CEO pay, provides at least a partial defence of the current very high levels in some cases. Drastically reducing the level of CEO pay in a competitive environment is likely to make it more difficult to attract a CEO with a higher real or perceived talent, since it is only rational for him or her to take into account opportunity costs and the social status signalled by the job's pay. It becomes even more difficult if we factor in people's irrational attraction to comparison simplification. Finally, there is also a market signalling effect which is likely to disfavour companies with a relatively lower CEO pay.

But perhaps it is worth it? We should acknowledge again that this cannot be ruled out, and therefore the defence is only partial. Most importantly, we wish to reiterate the countervailing argument in the previous literature that there actually is rather little variation in the performance of CEOs; that is, that companies stand to lose relatively little by not being able to attract CEOs of supposedly high talent. If this is indeed true, then it seems possible for at least some companies to be able to make money by being brave enough to disregard the popular perceptions of "high talent" among competitors, investors and CEO candidates alike. It remains to be seen whether such a move would lead to a more general correction in the CEO market in the future. Furthermore, we cannot rule out that there are other kinds of negative side effects of paying the CEO vast amounts of money (cf. Harris 2008, McCall 2004). Thus, one needs to consider a wider range of parameters before determining the final recommendations of incentive-based views.

Desert-Based Views

In contrast with incentive-based views, the central tenet of desert-based views is that paying wages or bonuses is a way of giving workers their due or of treating them with respect. And as such, they should be paid in proportion to what is owed or deserved. We may now put some more flesh on this idea.

Judging from the literature, there are two main variations of the idea (for overviews see Olsaretti 2004; Slote 1999). On what we may call the *reward view*, workers' pay is seen as a reward for their positive contribution to a collective enterprise. That is, the pay should be proportionate to workers' production of goods and services or to the income they generate for the firm. This view has a long history and is sometimes connected to Karl Marx, although its more recent defenders are predominantly pro-capitalist thinkers (cf. Galston 1980; Kershnar 2005; Miller 1999; Sternberg 2000). The view is said to reflect the intuitive idea that one's desert of benefits must stem from one's participation in bringing those benefits about (Miller 1999, see also Olsaretti 2004). Alternatively, it can be grounded in the so-called expressive theory of valuation, according to which wages have expressive power. This means that wages express to the worker how valuable his or her labour is (Dobos 2018). Once again, the relevant benefits or utility need not be confined to corporate profits but can also be social utility in a broader sense.

In contrast, the compensation view sees wages and bonuses as compensation for workers' negative efforts and hardships. That is, the pay should be proportionate to what workers have (had) to endure in or for the job which can be seen as a form of sacrifice (cf. Feinberg 1970; Sadurski 1985; Soltan 1987). Once again, the term 'effort' can be understood in different ways here. On a narrow understanding, effort simply means the physical and/or psychological energy expended in the job, which is the main sacrifice to employees here and now. On a broader understanding, one could argue that employees should be compensated for further sacrifices such as the amount of skills and training required for the job or the level of responsibility and risk involved. Those who favour this view over the reward view typically emphasise its more direct link to personal control and responsibility: Whereas you can control the input you make-that is, what effort and sacrifice you endure in a job-you seldom have as much control over the output-that is, your contribution to the company's profits (which often depends on external contingencies such as market supply and demand, currency fluctuation, and so on). But it seems strange that workers' deserts should depend on things which are beyond their control (Sadurski 1985, see also Lamont 1994, Sher 1987).

There may of course be further theoretical possibilities in the context. For example, some writers argue for a *mixed view* which combines elements of the reward and compensation views, sometimes by giving different weights to contribution and effort (cf. McLeod 1996, Wolff 2003).

The standard position in the literature is that neither the reward view nor the compensation view can be used to justify today's very high levels of CEO pay. Interestingly, the main arguments here are basically the same as in connection with the utility view. First, the suggestion that the hardships involved in an executive position typically are exaggerated has obvious implications for what the compensation view recommends. If the job of being a CEO—while obviously serious, complicated and stressful—is not much more so than being a university president or a military general, then CEOs cannot deserve the considerably higher pay that they currently enjoy in comparison to these groups (cf. Moriarty 2005; Nichols and Subramaniam 2001; Ramsay 2005). To the contrary, CEOs may have subordinates who deserve a higher pay than them; for example the scientists in the lab (that typically have a longer education) or the airplane pilots in the air (that have more direct responsibility over passengers' lives).

Second, the suggestion that the contribution of CEOs often is exaggerated has similar implications on the reward view. Moriarty (2005) concedes that it is difficult to say how much CEOs deserve absolutely; indeed it cannot be ruled out that they deserve the vast amounts of money they currently are getting. But it is less difficult to see that the current income differentials between CEOs and ordinary workers are unjustified (see also Bebchuk and Fried 2004; Ramsay 2005). "There is mounting evidence that CEOs are not as important as they were once thought to be, and average employees are far from useless. These considerations license a tentative conclusion that the average CEO's contribution is less than 301 times as valuable as the average employee's contribution, and hence that [on the reward view] the CEO deserves to be paid less than 301 times what the average employee is paid" (Moriarty 2005, p. 265).

Deserts and Comparisons

We may now analyse how the argument from peer comparison fares with regards to desert-based views. We will once again present a partial defence of current levels of CEO pay based on the relevance of peer comparisons, although the reasoning here is decidedly more speculative than before. We start by briefly presenting our argument in this section, and then we discuss some possible objections in the following section.

Step one of our argument is to submit that economic desert is an essentially comparative phenomenon. As we just saw, Moriarty (2005) finds it difficult to say what CEOs deserve absolutely, but more straightforward to say what they deserve in relative terms. Indeed we may note that both of the main desert-based arguments against the current pay levels stem from considerations of comparative deserts. This is no coincidence. Perhaps unlike some other forms of desert, economic desert has no "anchor"-that is, it is not possible to determine directly from a given level of effort or contribution which pay level is deserved (cf. Hurka 2003; Miller 2003). Just think of it: Exactly how much does a worker deserve to get paid for 10 h of hard labour? Is it \$100? Is it \$500? \$550? It is hard to know how to even begin answering this question without resorting to comparisons with the pay levels of others.

The suggestion is thus that there simply is no answer to exactly how much a worker deserves to be paid for a given effort or contribution in isolation. But it seems unwarranted to therefore throw all desert considerations out the window, since they occupy such a central place in our moral intuitions about pay. Instead we may say that economic desert is about getting the relevant comparisons right: A highly devoted and productive worker should not be paid less than a lazy and unproductive one, and two workers that produce roughly the same with the same effort also deserve a similar wage (cf. Hurka 2003; Miller 2003; Moriarty 2016). But which comparisons are then most important?

Step two of our argument is to suggest that intra-occupational comparisons (that is, comparisons between roughly similar jobs or tasks) stand out as especially salient. If there is such a thing as a fixed point in our intuitions about economic desert, we suggest that it is this: that two people who perform roughly the same job (at comparable effort and with comparable success) deserve a roughly similar pay. We may call this 'intra-occupational parity'. A number of things can be said in defence of this intuition. One thing is that economic desert at bottom stems from what we *do*; that we perform certain jobs or tasks in the economy. It would thus seem straightforward that equal tasks should come with equal pay, at least as long as the efforts or contributions are not greatly unequal.

Another argument is that inter-occupational comparisons (that is, comparisons between dissimilar jobs or tasks) seem more elusive and contrived. Some writers have used this to question the very idea of economic desert: For example, in what way can we meaningfully compare the effort involved in being a CEO with, say, the efforts and hardships of a nurse or a truck driver (cf. Nichols and Subramaniam 2001)? And does it really make sense to compare the contribution of a CEO with, say, the contribution of a nurse or a supermodel (cf. Ramsay 2005)? While we do not think that these comparisons are meaningless, it seems clear that they are at an epistemic disadvantage, at the very least. We can be most confident in our assessments of the rough parity of effort and contribution when we are comparing roughly similar jobs or tasks. We will note further problems with appealing to inter-occupational comparisons below.

The conclusion we are after here is that it is a central part of economic desert to get the intra-occupational comparisons right. Such comparisons stand out as the most salient on both epistemic and moral grounds. But in our case of company X and its CEO, this turns out to be another argument for a very high pay level. As long as the CEOs of comparable companies are paid vast amounts of money, it seems that the CEO of company X deserves to be paid vast amounts as well. That is, also desert-based views can give credence to the argument from peer comparison.

Possible Objections

In order to shed further light on the argument above, let us discuss three possible objections to it. A first objection concerns step one of the argument, the contention that economic desert is essentially comparative. Critics may submit a number of reasons for why this is mistaken. A common idea in the context, for example, is that there must be an absolute floor to workers' economic deserts: All workers (or at least those that put in a "good day's work") deserve a 'living wage', that is, a pay on which they can survive and meet their basic needs (cf. Arnold and Bowie 2003; Sher 1987). A related and more relevant idea, for our purposes, is that there also must be an absolute ceiling to economic desert: Perhaps no one can deserve more money than they can spend (in a given month, or in their lifetime?). Both of these ideas seemingly determine deserved pay levels in a non-comparative fashion.⁷

Critics may further argue that the idea of non-comparative economic desert makes more sense on the reward view than on the compensation view. Whereas it seems impossible to say how much money you deserve for 10 h of hard labour, a more promising formula could be based on your monetary contribution to the firm. For example, an employee's pay could be calculated as her contribution to the firm (that is, the part of the company's income that stems from this particular employee's performance) minus certain salient costs—such as some fraction of the overhead or administrative expenses (to pay for management, marketing, purchasing, and so on) and perhaps a small profit-margin (to pay dividends to investors). This is obviously a simplistic calculation, but it may serve as an example here.

We need not evaluate these particular suggestions but instead note that, even if we grant the existence of noncomparative economic desert, considerations of comparative economic desert are still morally salient. To see this, consider cases such as the following (inspired by Kagan 2012, Ch. 7): Your best calculations show that Abel deserves \$50,000 while Beth only deserves \$25,000. However, Beth gets a raise to \$100,000 and you cannot change that. Should Abel also get a raise? Kagan (2012) notes that many people answer 'yes' to this question, even though they know that Abel does not deserve more in a non-comparative sense. The case is of course crude, but it should be enough for our present purposes. The elicited reaction namely indicates that people care more about comparative than non-comparative desert, at least under certain circumstances.

Critics may argue that our intuitions change under more extreme circumstances, which are relevant to the case of CEOs. Say, for example, that Celia and David are equally deserving and they both deserve \$50,000. However, Celia gets a raise to \$50 million and you cannot change that. Should David also get such an outrageous sum? If it is more difficult to say 'yes' here, it seems that our care for comparative desert decreases when other moral considerations (such as those of non-comparative desert) are very strong and pull in a different direction. However, this need not mean that comparative desert ceases to be morally relevant. In our view, there is at least some moral reason to give David a raise in this second example; that is, there is a pro tanto reason to get the comparative levels right. And in the real world, of course, we will seldom have a credible calculation of what people "really" deserve since, as we have argued, economic desert actually has no "anchor" beyond the comparisons.

The remaining objections concern step two of our argument, the suggestion that intra-occupational desert comparisons are especially salient. According to a second objection, the most important comparisons must rather be between the members of a certain firm, or perhaps within a national economy. The reasoning here is that, in the absence of noncomparatively deserved pay levels, the goal should reasonably be to get all comparative deserts right-that is, to get the comparisons right for all possible pairs of workers. A seemingly promising procedure for this is to think in terms of an 'income budget' that should be distributed to workers in proportion to their comparative deserts. If we take the budget to be a country's gross domestic product (GDP), for example, this procedure is seemingly the closest one can get to non-comparatively deserved pay levels (for a sketch of this idea, see Miller 2003). A related idea is that firms can be seen as joint economic ventures that reap rewards which should be distributed to the participating members in proportion to their comparative deserts. On this view, the relevant budget is that of a firm rather than the whole economy. In any case, the point is that the procedure above is compatible with people performing similar jobs getting a quite different pay, and so there is nothing salient about intra-occupational comparisons. Another way to put this point is to say that there is no *occupational* income budget; that is, people performing similar jobs at different places in the economy do not form a joint economic venture in the relevant sense.

These suggestions are both interesting and promising, and thus we have no principled objection to them. We shall simply note that there are both practical and theoretical hurdles that they need to overcome. The practical hurdle is that it seems very difficult (if not impossible) to determine what pay a given worker deserves. First, as noted above, a basic

⁷ But one can plausibly question whether they are best conceptualised as considerations of desert. The idea of a living wage has closer affinities to needs- or rights-based moral thinking, whereas the ceiling idea seems to stem from egalitarian concerns about the illegitimacy of inequality as such, or utilitarian concerns about avoiding economic wastefulness.

difficulty concerns how to find or establish a common scale on which to compare the efforts or contributions of very different jobs. For example, how do we compare the effort or contribution of the CEO to the effort or contribution of the plumber or salesperson? While it may be exaggerated to say that such comparisons are meaningless, it seems clear that they are difficult and at an epistemic disadvantage compared to intra-occupational comparisons.

Second, it seems a daunting task indeed to try to get all comparative deserts right—that is, to get the comparisons right for all possible pairs of workers in the economy. But note that this is a crucial requirement for the present idea to work. For example, it is irrelevant that the pay level of CEOs seems outrageous in comparison with the *current* pay of average workers, since the correct comparison should be with the *ideal* pay of average workers—that is, what they would get if the whole income budget was distributed proportionally to everyone's deserts (cf. Miller 2003). The relevant calculations may seem easier when limited to individual firms rather than to whole economies, but nevertheless they are likely to be prohibitively difficult.

The theoretical hurdle concerns how to determine the relevant budget: Interestingly, it seems that while a narrowly conceived budget (the budget of a firm) makes more sense as a real budget, it cannot guarantee intra-occupational parity which we said is a fixed point in our intuitions about economic desert. This is so because the result may well be that the plumbers or salespeople of different companies come to deserve drastically different wages. Correspondingly, a more broadly conceived budget, perhaps a global one-that is, the idea that the entire global economy should be distributed to workers in proportion to their deserts-guarantees intraoccupational parity and thus seems more plausible in this regard. However, it is only a 'budget' in a rather contrived sense. It may also be noted that, in real life, the size of the budget or economy partly depends on how pay levels are set, as highlighted by incentive-based views. So there is also a chicken-and-egg type problem for determining the size of the budget (cf. Nichols and Subramaniam 2001).

These considerations do not make it *impossible* to conceive of more idealised desert comparisons but, as we have argued, there are important hurdles to overcome for this idea. It has been suggested to us that some critics would be ready to bite this bullet and, furthermore, to point out that our own suggestion is not without its complications. That is, some critics may feel that it remains an open question whether intra-occupational or intra-budget comparisons stand out as the most salient. There is a risk that we have simply reached an impasse of clashing intuitions at this point. But as we have said, we have no principled objections and therefore welcome further philosophical work in this area.

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According to a *third objection*, finally, we may have been too hasty in our comments on the difficulties of inter-occupational desert comparisons. While it certainly is easier to compare very similar jobs or tasks (intra-occupationally), there are at least pockets of meaningful and important inter-occupational comparisons. For example, it seems entirely possible—and also ethically important to compare the effort of CEOs with the effort of middle managers and conclude that the CEOs are vastly overpaid. A comparison between the contribution of CEOs and the contribution of middle managers also seems possible and may yield a similar result. While such comparisons necessarily are rough, critics may say, they are enough to figure in sound criticisms of today's levels of CEO pay.

We do not wish to completely deny the possibility and relevance of inter-occupational comparisons here. The suggestion is simply that the obvious follow-up question is which such comparisons are most important. Because it seems very likely that it will be impossible to get all comparisons right, if you are to compare with the actual pay levels of different groups of workers. For example, perhaps the effort exerted by CEOs is not much greater than the effort exerted by middle managers, but it is definitely greater than the average effort exerted by basketballers. However, the latter group typically has outrageous salaries. So which comparison is most important-should the pay level of CEOs go up or down? The philosophically most stringent solution may be to appeal to ideal desert comparisons once again-that is, what different groups would get if the whole income budget was distributed proportionally to deserts-but, as we have seen, that road leads to problems of its own. The solution is therefore to focus on intra-occupational comparisons, which seem to be the most salient and practicable comparisons in the context.

Summarising our comments above, we have argued that also desert-based views can give credence to the argument from peer comparison and therefore provide a partial defence of current levels of CEO pay in some cases. Economic desert is an essentially comparative phenomenon and, in this regard, intra-occupational comparisons stand out as especially salient. When the CEOs of comparable companies are paid vast amounts of money, then, there is at least some justification for the idea that the CEO of company X deserves to be paid similar vast amounts. While this may not be the theoretically ideal level of pay, it seems a daunting task to say what the ideal level would be or what alternative comparisons are most relevant.

This is not to claim, however, that it is altogether impossible. We suggest that more work needs to be done on desert-based theories of just pay, both philosophically and empirically. As a final caveat, it is also interesting to return to the empirical findings concerning our irrational psychological attraction to comparison simplification. Could it be that we are under the sway of this irrational attraction also in our intuitions about economic desert, and that we therefore should take them with a grain of salt? More specifically, could this be the root of our insistence on intra-occupational parity?

Concluding Remarks

This article has been a philosophical exploration of the argument from peer comparison as a defence of the current very high levels of CEO pay in individual cases. While this argument typically is ignored in the philosophical literature on the subject, we hope to have shown that it should be taken more seriously in future debates about just pay. A consideration of this argument may give us greater understanding of the psychological and economic causes of the current trend towards greater income disparity between CEOs and ordinary workers. More importantly, we have seen how a discussion of this argument sheds further light on popular philosophical theories of just pay: Existing incentive-based views need to be supplemented with considerations of comparison effects, and existing desertbased views need to be supplemented with considerations of comparative deserts.

The modest conclusion in the matter at hand is that there are at least some things to say for the relevance of peer comparisons when setting the pay level of individual CEOs. Given that most existing CEOs are paid vast amounts of money, then, it seems that it may not be as wrong as previously thought to give similar vast amounts to the next CEO. Indeed, we have seen that board members may have positive ethical reasons to pay the next CEO these vast amounts of money, because the opposite may involve squandering the company's money (as made salient by incentive-based views) or not treating the CEO in question with sufficient respect (as made salient by desertbased views).

We wish to close by returning to the assumption made at the outset of the article, namely that it is both possible and fruitful to discuss the issue of just pay with regards to the decisions of individual companies in a non-ideal setting. It now seems obvious that this assumption has played a crucial role in our treatment of the topic. Interestingly, the conclusions above seem perfectly consistent with the view that the current levels of CEO pay are unjustified on the *collective* level—that is, that the *general* income disparity between CEOs and ordinary workers cannot be upheld. This invites the follow-up question of how the issue of just pay is most fruitfully formulated or addressed; especially on what level of agency it should be located. We take it that the implicit agent in debates about general income differentials is the community or the state, since only political measures will be able to influence such collective structures. The choice can therefore be thought of as one between focusing on political philosophy or individual (business) ethics.

Some readers may regard our treatment as a reductio ad absurdum of the focus on individual corporate decisions. While we cannot agree with this strong view, we can agree with something closely related: For those heavily engaged with the rising income disparities of contemporary society, it indeed seems more fruitful to focus on the collective rather than the individual level-or, if you will, to engage with political philosophy rather than individual ethics. This is so because, as we have argued, the board members of individual companies are doing little wrong in setting their CEO's pay at an extreme level. Rather than pointing fingers at them, our efforts and attention should be directed at the errors of the economic system and the political regime for upholding and worsening extreme income inequalities. Hopefully this article has at least contributed with some further clarity on this important topic.

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Compliance with ethical standards

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Ethical Approval This article does not contain any studies with human participants or animals performed by any of the authors.

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References

- Ang, J., Nagel, G., & Yang, J. (2009). Is there a social circle premium in CEO pay? In *Presentation at Financial management association European Meeting, June 2009*. Prague, Czech Republic.
- Annis, D. B., & Annis, L. F. (1986). Merit pay, utilitarianism, and desert. International Journal of Applied Philosophy, 3(1), 33–41.
- Ariely, D. (2008). Predictably irrational: The hidden forces that shape our decisions. New York: HarperCollins.
- Arnold, D. G., & Bowie, N. E. (2003). Sweatshops and respect for persons. Business Ethics Quarterly, 13(2), 221–242.
- Bebchuk, L., & Fried, J. (2004). Pay without performance: The unfulfilled promise of executive compensation. Cambridge, MA: Harvard University Press.
- Boatright, J. R. (2010). Executive compensation: Unjust or just right? In G. Brenkert & T. L. Beauchamp (Eds.), Oxford handbook of business ethics (pp. 161–201). Oxford: Oxford University Press.
- Boyce, C. J., Brown, G. D. A., & Moore, S. C. (2010). Money and happiness: Rank of income, not income, affects life satisfaction. *Psychological Science*, 21, 471–475.
- Clark, A. E., Frijters, P., & Shields, M. A. (2008). Relative income, happiness, and utility: An explanation for the Easterlin paradox and other puzzles. *Journal of Economic Literature*, 46(1), 95–144.
- Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37(1), 39–67.
- Correa, R., & Lel, U. (2016). Say on pay laws, executive compensation, pay slice, and firm valuation around the world. *Journal of Financial Economics*, 122(3), 500–520.
- Dobos, N. (2018). Exploitation, working poverty, and the expressive power of wages. *Journal of Applied Philosophy*. https://doi. org/10.1111/japp.12314.
- Feinberg, J. (1970). Justice and personal desert. In *Doing and deserving*, Princeton, NJ: Princeton University Press, pp. 55–94
- Ferrer-i-Carbonell, A. (2005). Income and well-being: An empirical analysis of the comparison income effect. *Journal of Public Economics*, 89(5–6), 997–1019.
- Galston, W. (1980). Justice and the human good. Chicago: University of Chicago Press.
- Harris, J. (2006). How much is too much? A theoretical analysis of executive compensation from the standpoint of distributive justice. In R. W. Kolb (Ed.), *The ethics of executive compensation* (pp. 67–86). Malden: Blackwell Publishing.
- Harris, J. (2008). What's wrong with executive compensation? *Journal* of Business Ethics, 85, 147–156.
- Heath, J. (2014). Morality, competition, and the firm. The market failures approach to business ethics. New York: Oxford University Press.
- Heath, J. (2018). On the very idea of a just wage. *Erasmus Journal for Philosophy and Economics*, 11(2), 1–33.
- Hurka, T. (2003). Desert: Individualistic and holistic. In S. Olsaretti (Ed.), Desert and justice (pp. 45–68). New York: Oxford University Press.
- Iacobucci, E. M. (1998). The effects of disclosure on executive compensation. University of Toronto Law Journal, 48(4), 489–520.
- Kagan, S. (2012). The geometry of desert. New York: Oxford University Press.
- Kay, I. T., & Van Putten, S. (2007). Myths and realities of executive pay. New York: Cambridge University Press.
- Kent, P., Kercher, K., & Routledge, J. (2018). Remuneration committees, shareholder dissent on CEO pay and the CEO pay–performance link. *Accounting & Finance*, 58(2), 445–475.
- Kershnar, S. (2005). Giving capitalists their due. *Economics and Philosophy*, 21(1), 65–87.
- Khurana, R. (2002). Searching for a corporate savior: The Irrational quest for charismatic CEOs. Princeton, NJ: Princeton University Press.

- Kolb, R. W. (Ed.). (2006). The ethics of executive compensation. Malden, MA: Blackwell Publishing.
- Kolb, R. W. (2012). Too much is not enough: Incentives in executive compensation. New York: Oxford University Press.
- Kotnic, P., Sakinc, M. E., Slavec, A. & Guduras, D. (2017). Executive compensation in Europe: Realized gains from stock-based pay, Working Paper.
- Kovacevic, S. (2005). A social comparison perspective of executive remuneration committees in Australian Companies. In Proceedings of the 19th Annual Conference of the Australian and New Zealand Academy of Management, December 2005, Canberra.
- Lamont, J. (1994). The concept of desert in distributive justice. *The Philosophical Quarterly*, 44(174), 45–64.
- Lund, A. C. (2012). Compensation as signaling. Florida Law Review, 64(3), 591–638.
- McCall, J. J. (2004). Assessing American executive compensation: A cautionary tale for Europeans. *Business Ethics: A European Review*, 13(4), 243–254.
- McLeod, O. (1996). Desert and Wages. Utilitas, 8(2), 205-221.
- Miller, D. (1999). *Principles of social justice*. Cambridge, MA: Harvard University Press.
- Miller, D. (2003). Comparative and noncomparative desert. In S. Olsaretti (Ed.), *Desert and justice* (pp. 25–44). New York: Oxford University Press.
- Miller, J., & Wiseman, R. (2001). Perceptions of executive pay: Does pay enhance a leader's aura? *Journal of Organizational Behavior*, 22(6), 703–711.
- Mishel, L., & Schieder, J. (2017). CEO pay remains high relative to the pay of typical workers and high-wage earners (Report). Washington, DC: Economic Policy Institute.
- Moriarty, J. (2005). Do CEOs get paid too much? Business Ethics Quarterly, 15(2), 257–281.
- Moriarty, J. (2009). How much compensation can CEOs permissibly accept? Business Ethics Quarterly, 19(2), 235–250.
- Moriarty, J. (2016). Is 'Equal Pay for Equal Work' merely a principle of nondiscrimination? *Economics and Philosophy*, 32, 435–461.
- Moriarty, J. (2020). What's in a wage? A new approach to the justification of pay. *Business Ethics Quarterly*, 30(1), 119–137.
- Nichols, D., & Subramaniam, C. (2001). Executive compensation: Excessive or equitable? *Journal of Business Ethics*, 29, 339–351.
- O'Reilly III, C. A., Main, B. G., & Crystal, G. S., (1988). CEO compensation as tournament and social comparison: A tale of two theories. *Administrative Science Quarterly*, 33, 257–274.
- Olsaretti, S. (2004). Liberty, desert and the market. Cambridge: Cambridge University Press.
- Perel, M. (2003). An ethical perspective on CEO compensation. *Journal of Business Ethics*, 48, 381–391.
- Potts, M. (2006). CEO compensation and virtue ethics. In R. W. Kolb (Ed.), *The ethics of executive compensation* (pp. 101–115). Malden, MA: Blackwell Publishing.
- Ramsay, M. (2005). A modest proposal: The case for a maximum wage. Contemporary Politics, 11(4), 201–216.
- Sadurski, W. (1985). *Giving desert its due*. Dordrecht: D. Reidel Publishing.
- Senik, C. (2009). Direct evidence on income comparisons and their welfare effects. *Journal of Economic Behavior & Organization*, 72(1), 408–424.
- Shaw, W. (2006). Justice, incentives, and executive compensation. In R. W. Kolb (Ed.), *The ethics of executive compensation* (pp. 87–100). Malden, MA: Blackwell Publishing.
- Sher, G. (1987). Desert. Princeton, NJ: Princeton University Press.
- Simonson, I., & Tversky, A. (1992). Choice in context: Tradeoff contrast and extremeness aversion. *Journal of Marketing Research*, 29(3), 281–295.

- Slote, M. A. (1999). Desert, consent and justice. In L. P. Pojman & O. McLeod (Eds.), What do we deserve? (pp. 210–223). New York: Oxford University Press.
- Soltan, K. E. (1987). *The causal theory of justice*. Berkeley: University of California Press.
- Spence, M. (2002). Signaling in retrospect and the informational structure of markets. *The American Economic Review*, 92(3), 434–459.
- Sternberg, E. (2000). Just business: Business ethics in action (2nd ed.). New York: Oxford University Press.
- Sweeney, P. D., & McFarlin, D. B. (2004). Social comparisons and income satisfaction: A cross-national examination. *Journal of Occupational and Organizational Psychology*, 77, 149–154.
- Trueblood, J. S., Brown, S. D., Heathcote, A., & Busemeyer, J. R. (2013). Not just for consumers: Context effects are fundamental to decision making. *Psychological Science*, 24(6), 901–908.
- van Veen, K., & Wittek, R. (2016). Relational signalling and the rise of CEO compensation: "...It is Not Just About Money, It is About What the Money Says...". Long Range Planning, 49(4), 477–490.

- Wilhelm, P. G. (1993). Application of distributive justice theory to the CEO pay problem: Recommendations for reform. *Journal of Busi*ness Ethics, 12, 469–482.
- Wolff, J. (2003). The dilemma of desert. In S. Olsaretti (Ed.), *Desert and justice* (pp. 219–232). New York: Oxford University Press.
- Zajac, E. J., & Westphal, J. D. (1995). Accounting for the explanations of CEO compensation: Substance and symbolism. *Administrative Science Quarterly*, 40(2), 283–308.

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