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## Three arguments for lotteries

**Abstract.** *Philosophers and social scientists have offered a variety of arguments for making certain types of decisions by lot. This paper examines three such arguments. These arguments identify indeterminacy, fairness and incentive effects as the major reasons for using lotteries to make decisions. These arguments are central to Jon Elster's study of lottery use, Solomonic judgments (1989), and so the paper focuses upon their treatment in this work. Upon closer examination, all three arguments have the same basic structure, in that they appeal to a single effect lotteries can have – a sanitizing effect. Lotteries have this effect because they make possible decision-making that makes no use of reasons, whether good or bad. All arguments for or against decision-making by lot must ultimately appeal to this effect.*

**Key words.** *Elster – Fairness – Incentives – Indeterminacy – Lottery*

**Résumé.** *Les philosophes tout comme les chercheurs en sciences sociales ont présenté toutes sortes d'arguments en faveur de certains types de prise de décisions par tirage au sort. Cet article passe en revue et examine trois de ces arguments en particulier, qui consistent à identifier l'incertitude, l'impartialité et les effets incitatifs comme raisons principales d'utiliser la loterie pour la prise de décision. Ces arguments sont au centre de l'ouvrage de Jon Elster sur le recours à la loterie, Solomonic judgments (1989), aussi l'article met-il l'accent sur leur étude dans le cadre de cet ouvrage. Un examen approfondi montre que ces trois arguments s'appuient sur la même structure de base en ce qu'ils font appel à un seul effet que peut avoir la loterie – un effet d'assainissement. La loterie a cet effet car elle rend possible une prise de décision qui ne prend en compte aucune raison, qu'elle soit bonne ou mauvaise. Tout argument en faveur de ou contre la prise de décision par tirage au sort doit au final tenir compte de cet effet.*

**Mots-clés.** *Elster – Impartialité – Incertitude – Incitation – Loterie*

Throughout history, many societies in many places have employed *lotteries* to make various kinds of decisions. Soldiers have been drafted, kidneys for transplant have been allocated, juries and other decision-making bodies have been filled, all in accordance with the drawing of lots or the toss of a coin. This history raises the question of when lotteries are appropriate as decision-making procedures, and why. A number of recent works in philosophy, political science, sociology and law have tackled this topic (e.g. Aubert, 1959; Kornhauser & Sager, 1988; Duxbury, 1999; Goodwin, 2005).

Most efforts to address this topic, however, have been content to lay out a variety of reasons for using lotteries, without attempting to relate these reasons together systematically. The effect generated by such treatment is a ‘laundry list’ of seemingly unrelated factors to consider when deciding whether or not to select by lot. Consider, for example, the following passage from Neil Duxbury’s detailed study, *Random justice*:

I have argued that it will sometimes be appropriate and beneficial to resort to a lottery for social decision-making purposes where an unavoidable risk or misfortune has to be allocated (especially where it seems unfair to place responsibility for that allocation on the shoulders of any particular person or group), where there is a requirement for a decision-making procedure which can be guaranteed to ignore the voices of claimants, where a cost-effective method of decision-making is required, where resort to randomization might generate welcome incentive effects, where decision-makers are looking to provide equality of opportunity, and – this last observation being one to which we shall return – where decision-makers struggle with indeterminacies. (Duxbury, 1999: 72)

Duxbury proceeds to consider numerous other advantages (and disadvantages) to decision-making via lottery. But while his treatment of the topic is thorough, it leaves the reader wondering why such a simple process as a coin toss should be serviceable in so many apparently disparate situations.

This paper considers three of the most prominent arguments for decision-making by lot in the existing literature – what I call the argument from *indeterminacy*, the argument from *fairness* (or justice), and the argument from *incentive effects*. These three arguments are central to one of the most theoretically advanced treatments of the topic of lottery use to date, Jon Elster’s *Solomonic judgments* (1989; all subsequent citations will be to this work unless otherwise indicated). For this reason, I focus my attention on Elster’s treatment of these arguments.

Elster does not attempt to relate the arguments together, leaving them as separate and freestanding factors to be considered when trying to decide whether to decide by lot. This paper takes up the task of relating these factors together, of generating a critical synthesis of Elster’s arguments. The key to this synthesis is the recognition of the *sanitizing effect* that lotteries can have

on decision-making. As decision-making processes, lotteries are unaffected by reasons. They are therefore useful decision-making tools whenever it is important to prevent a decision from being made for bad reasons. All three of Elster's arguments, properly understood, support this conclusion.

First, this article examines the argument from indeterminacy. It finds in that argument a weak case for the lottery; at best, this argument establishes the permissibility, not the desirability, of making some decisions by lot. Second, it reconstructs the argument from fairness. This argument receives only brief attention in *Solomonic judgments*, but it is implicit in much of what Elster says about allocative justice. It suggests that when indeterminacy arises specifically in contexts involving justice, impartiality demands (and not simply permits) resort to a lottery. It does so because of the need to prevent resort to bad reasons once good reasons for allocation have been exhausted. Finally, the paper tackles the argument from incentive effects. These effects can work for or against the case for a lottery. This paper accounts for this fact by pointing out that lotteries prevent action on the basis of good reasons, as well as bad ones.

Before proceeding, a few words about Elster's overall approach to the study of lotteries are in order. In *Solomonic judgments*, Elster asks two primary questions regarding lotteries. 'First,' he asks, 'under which conditions would they seem to be normatively allowed or prescribed, on grounds of individual rationality or social justice? Second, in which cases are lotteries actually used to make decisions and allocate tasks, resources and burdens?' Because the answers to these two questions may potentially diverge, Elster asks two further questions: 'why are lotteries used when they should not be, and why are lotteries not used when they should be?' (pp. 36–7). It is the first of these four questions that constitutes my focus here.

A final point requiring attention is the problem of defining a lottery. Elster, in accordance with ordinary usage, equates decision-making by lot with random selection. This of course raises the question of what randomness is. Elster devotes a section of *Solomonic judgments* to these problems, and draws a number of important distinctions – between random processes and random outcomes, between inherent randomness and epistemic randomness, and between natural and artificial lotteries (pp. 39–40). In the end, however, he recognizes that what characterizes decision-making by lot is its ability to make the final outcome random, in the sense of being unpredictable (p. 44). This is critical; if a lottery is truly unpredictable, then any agent employing it to make a decision cannot favor one possible option over any other. It is this characteristic of lotteries that does all the work in the case for using them, as we elucidate here.

## 1. Indeterminacy

‘Indeterminacy’, writes Elster, ‘is a fundamental reason for using lotteries.’ Indeterminacy arises when a decision-maker is unable to generate a unique choice. This may happen in three ways. The decision-maker might be able to reject some options, but still face two or more options that are ‘equally and maximally good’. This is the ‘simplest form of indifference’, and it is known as ‘equioptimality’. ‘A more complex form of indeterminacy’, Elster continues, ‘is equioptimality within the limit of what it pays to find out’ (p. 107). There may be differences to find between two equioptimal choices, but it may not be worth paying the cost to find them.<sup>1</sup> ‘A third kind of indeterminacy’, Elster continues, ‘is sometimes referred to as incommensurability’ (p. 108). In this case, the decision-maker cannot rank order two or more options. If two options cannot be compared to each other, then there can be no reasoned grounds for rejecting one in favor of the other.<sup>2</sup>

What all of these cases have in common – what makes them cases of indeterminacy – is a shortfall of *reasons*. In each case, a decision-maker faces a number of possible options, and must select one and only one of these options if she is to act. She attempts to do this by finding reasons for rejecting some options in favor of others. If all goes well, only a single option survives this process of filtration by reasons.<sup>3</sup> But sometimes the reasons run out before a unique option is determined. This is when indeterminacy arises. The problem, then, is identifying what to do when it takes place – to select one option among several without a reasoned basis for doing so.

Here, Elster sees a possible role for lotteries. ‘The point of lotteries, presumably, is to facilitate choice when the options cannot be ranked in strict preference order’ – when no reasons exist, in other words, for selecting one out of a set of options (p. 47). And yet when it comes to resolving indeterminacy, Elster’s endorsement of lotteries is a weak one. He does not believe that lotteries are *prescribed* when indeterminacy arises, merely *permissible*. He describes his historical survey as offering ‘a wide range of cases in which one *might as well* toss a coin to make up one’s mind’ (emphasis added; p. 13). Later, he repeats that ‘In the absence of reasons for choosing one alternative, one candidate, one recipient or one victim rather than another, we might as well select one at random’ (p. 38). Lotteries are permissible as a means of resolving indeterminacy, but so, according to Elster, is anything else. One cannot use reasons, of course, because no reasons (or, at least, no reasons worth finding) exist. But for Elster, anything else goes.

Here it is important to point out that when it comes to resolving indeterminacy, there are meaningful alternatives to selection by lot. One could, for example, resolve indeterminacy by simply ‘picking’ an option (Ullmann-Margalit

& Morgenbesser, 1977; Stone, 2008b). Like selection by lot, picking is a process that does not require reasons. But the latter, unlike the former, may be determined by reasons unacknowledged by the agent – either because the agent genuinely does not recognize them or because the agent would rather not admit to them. This cannot happen with a lottery; few people would suspect that when someone tosses a coin, she does so out of a secret desire to favor options associated with heads. Selection by lot can actively *prevent* decision-making on the basis of reasons, whereas picking can only *enable* such decision-making (Stone, 2008a). This point matters because one might suspect that all methods of resolving indeterminacy – methods which do not depend upon acknowledged reasons – are comparable. But picking and selection by lot represent distinct ways of responding to indeterminacy, different ways of making decisions when reasons are exhausted.<sup>4</sup>

To return to the argument from indeterminacy, Elster concludes that ‘decision by lot is never rationally prescribed, although sometimes rationally allowed’.<sup>5</sup> He further adds that the ‘habit of always using lotteries to resolve parametric decisions when they are rationally allowed may, however, be rationally prescribed as a means of economizing on costs of decision’ (p. 53). This latter claim is questionable. Selection by lot typically generates decision-making costs that are at least as high, if not higher, as those generated by picking. It could hardly be otherwise, given the fact that selection by lot is in fact parasitic on picking. An agent wishing to make a decision by lot must first associate the options she faces with the outcomes of a lottery. If the agent wishes to toss a coin in order to decide between options *A* and *B*, she must first decide whether *A* or *B* will win if the coin toss comes up heads. The agent can presumably have no reasoned basis upon which to make such a decision; in other words, this decision involves indeterminacy. And so she must either make this new, higher-order decision using a lottery (thereby shifting the problem back a step) or else pick (Ullmann-Margalit & Morgenbesser, 1977: 769–70). A lottery is thus typically a method of resolving indeterminacy which involves some measure of extra effort, at least so long as picking is an option.

Setting aside the difficulty raised by decision-making costs, is Elster’s general conclusion correct? Is decision-making by lot permissible but not required in cases of indeterminacy? Clearly, there are many problems of indeterminacy to which lotteries are permissible but not mandatory solutions. A shopper trying to decide which of several apparently identical cans of soup she should purchase from a store shelf could draw lots, but could simply pick as well. The same holds if the shopper tries to select one of several fast-food restaurants equally proximate to the grocery store for after-shopping dinner, or if she must select one of several equally convenient

routes for her drive home. But suppose that same shopper works in a hospital, and must decide which of several equally needy patients is to receive a life-saving organ transplant. Can she simply pick whoever she likes? Or is she obliged to use a lottery? Intuition strongly suggests the latter. Elster's analysis has difficulty with cases such as these.

Elster's argument from indeterminacy is a weak argument in the sense that it establishes only a permissible, and not a required, use for lotteries. It correctly suggests that lotteries are an acceptable way to resolve many cases of indeterminacy, even though other solutions (like picking) are equally acceptable and may take less effort. But it has difficulty accounting for cases of indeterminacy in which lotteries seem mandatory, not simply acceptable. To understand the most important class of such cases, one must turn to Elster's argument from fairness. Examining this argument will make it possible to identify the positive role that lotteries may serve.

## 2. Fairness

As noted before, Elster holds that 'In the absence of reasons for choosing one alternative, one candidate, one recipient or one victim rather than another, we might as well select one at random' (p. 38). This position sounds plausible when the alternatives in question are fast-food restaurants or cans of soup. But when the alternatives are 'recipients' of social benefits, or 'victims' of social burdens, it sounds less so. This is evident in the example given above of a hospital allocating organ transplants. When reasons run out, can one *really* allocate kidneys however one likes?

All of this suggests that decision-making works differently, normatively speaking, when *justice* or *fairness* is at stake. (I treat the two terms as synonymous here.) These values enter the picture whenever the decision to be made involves allocating some sort of good among a number of people with claims to it, or some sort of bad among a number of people with claims to avoid it.<sup>6</sup> Decisions involving fairness can generate indeterminacy just like other decisions. But the lotteries may be more desirable – perhaps even mandatory – in the former case but not the latter. This is the *argument from fairness*, and if valid, it would constitute a positive case for lotteries.

Elster acknowledges the argument from fairness when he notes that a 'frequently cited value of lotteries is that of promoting fairness'. His position on this argument, however, is ambiguous. He views fairness as a fundamentally vague concept, and for him, this fact renders an assessment of the argument difficult. The claim made by this argument, he writes, 'probably reduces to

the view that when there are no relevant differences among the candidates or applicants, one should use a lottery since the alternative (i.e. using irrelevant differences) would be unfair' (p. 113). Note that Elster uses 'should' and not 'may' to express the idea that lotteries may be mandatory, not simply permissible, when fairness is at stake. But in the end he makes no effort to evaluate this claim systematically. While he considers and rejects a number of alternatives to this claim, he never returns to give it proper consideration.<sup>7</sup>

Despite this fact, it is still possible to infer the contours of an argument from fairness from Elster's other remarks regarding allocative justice. In a section entitled 'Scarce goods and necessary burdens' Elster considers a variety of criteria that could be used to allocate scarce goods, including need, productivity, contribution and desert (pp. 73–7). Elster describes these criteria as 'rival' to lotteries, but also recognizes that they are potentially 'complementary to chance mechanisms' (p. 67).<sup>8</sup> By this he means that any criteria for allocating goods – whether they be need, merit, social utility or some complex combination of these and other factors – may prove indeterminate under certain conditions. They provide reasons for allocating goods one way rather than another, and yet like all reasons they sometimes run out before a final decision can be reached. A lottery can complement such criteria by resolving such cases of indeterminacy.<sup>9</sup>

The question remains, however, whether indeterminacy in decisions involving allocative justice is normatively the same as indeterminacy more generally. If so, then resolution of such indeterminacy by lot is acceptable (issues of convenience aside) but not required. The possibility that fairness might raise additional considerations arises in another passage in *Solomonic judgments*. Here Elster raises the possibility that lotteries might be optional even when the decision in question involves fairness.

To say that we might as well use a lottery is not to say, however, that a lottery is rationally or morally required. If there is no detectable, relevant difference among the candidates, all are equally worthy and hence it might appear that no wrong is done by using other methods of allocation. Thus it has been argued that one might as well select the most beautiful, the ugliest, the tallest (and presumably the shortest) people in the pool. (p. 109)

Elster's position here is questionable. Suppose that a hospital administrator acted as Elster describes. Suppose, in other words, that she allocated organ transplants in accordance with (say) need, and if two potential transplant recipients were equally needy, she awarded the transplant to the more attractive person. Would anyone describe such behavior as just? This would have to be the case if lotteries were indeed optional in such cases. Intuition suggests, however, not only that lotteries are appropriate in resolving indeterminacy while allocating organ transplants, but that they are *uniquely* appropriate.<sup>10</sup>

Why might this be the case? The prospect of an organ transplant going to a Miss America ahead of an ugly duckling suggests a reason. Physical attractiveness provides a reason for favoring one person over another in medical decisions, but it is a *bad* reason. It is the sort of reason that fair-minded people do not allow to influence their decisions. The exclusion of bad reasons of this sort from decisions involving fairness is implied by the idea of impartiality, which is integral to fairness. Justice, after all, is supposed to be blind. By this is meant not that justice recognizes *no* distinctions at all, but that it recognizes *no bad* distinctions. Decision-making is fair when it takes into account relevant reasons for favoring some individuals over others, *and only* such reasons (Stone, 2007). Elster acknowledges this point, in a backhanded way, when he writes that ‘any given property may turn out to be highly correlated with other criteria that one would *not* want to use for allocating the scarce goods’ (p. 109). This claim makes no sense unless there are indeed criteria that one ought not to use, even after all valid criteria have been exhausted.<sup>11</sup>

Impartiality explains why lotteries are desirable when decisions involving fairness generate indeterminacy. Because a lottery selects an outcome unpredictably, it prevents a decision from being made in accordance with *any* reason. It can thus prevent decision-making on the basis of *bad* reasons. When the good reasons for making allocative decisions have been exhausted, and only bad reasons remain, impartiality thus demands resort to a lottery. This argument also explains why resort to a lottery is not required in cases like the soup can example. There really isn’t any bad reason for selecting between two identical soup cans. When there are no bad reasons to avoid, and no good reasons to embrace, a lottery can do no good, even though it also can do no harm.

Before moving on, I would like to comment on another argument for decision-making by lot that Elster considers and then rejects. This argument holds that allocative decisions should be made by lot because they ‘prevent those who are not chosen for the scarce good from losing self-esteem’ (p. 105). The idea, according to Elster, is that a society might be capable of distinguishing between people with better and worse claims to a good – because, for example, some people are more meritorious than others, or make larger contributions to society – but might nevertheless avoid drawing such distinctions by using a lottery. This, it is said, is good for the self-esteem of those individuals who would lose out if distinctions were made. It is better for one’s opinion of oneself to be denied a good due to chance than to be denied it because one is less qualified or deserving. Elster rejects this argument because it requires an act of what he calls ‘willing what cannot be willed’ (cf. Elster, 1983). A person cannot protect her self-esteem by asking others to avoid making distinctions that will likely indicate she is less



meritorious, and so on, than others. If she does this, she is already well enough aware of her lack of merit for her self-esteem to suffer.

Elster's argument is hard to reject in cases where valid reasons can be found for distinguishing between individuals. But it ignores the possibility that self-esteem and self-respect might well be protected by lotteries in cases where there are no such valid reasons. In such cases, an allocative agent cannot distinguish between individuals on the basis of good reasons; if she uses reasons at all, she must therefore use bad reasons. She must, in other words, show partiality, favoritism, and the like. This arbitrary treatment of individuals – which may well threaten self-esteem – can be avoided by the use of a process that scrupulously avoids bad reasons. When the good reasons have run out, only a lottery, which employs *no* reasons, can do this.<sup>12</sup>

### 3. Incentive effects

'Another fundamental reason for using lotteries', writes Elster, 'derives from incentive effects' (p. 110). Elster illustrates this *argument from incentive effects* with a variety of examples – some political in nature, others involving allocative justice. In each case, his overall evaluation of the case for lotteries is decidedly mixed.

To begin with some political examples,<sup>13</sup> Elster considers the proposal that elections be randomly timed (Lindbeck, 1976). 'The rationale for this policy', he says, 'would be to prevent or dampen the "political business cycle" created by the tendency for each government to begin with austerity and end with potlatch' (p. 91). The disadvantage of such a policy would be to discourage government planning. He also considers a proposal by Richard Thaler (1983) to assign legislators to committees randomly (pp. 91–2). Such a move would weaken the 'iron triangles' that are created between legislative committees, regulatory agencies, and the interests both are supposed to regulate. It would do this by ensuring that committees are not controlled by legislators who are attached to the special interests concerned with those committees. Unfortunately, it would also reduce both the incentive and the opportunity for legislators to specialize and gain expertise relating to their committee assignments.

A quintessential political use of the lottery is the modern Anglo-American jury. Elster considers several arguments in favor of this institution. One of them is the idea that 'all citizens ought to have an equal chance to assume the privilege (or the burden) of jury service'. This is essentially the argument from fairness already considered here. The second of them is the idea that 'random selection of jurors has good incentive effects, by making it more

difficult to bribe or threaten those who have to decide the case' (p. 95). Here the special interests that might wish to influence a jury are prevented from doing so, just as governments facing randomly timed elections and randomly assigned committee members are prevented from engaging in certain types of unwanted behavior.<sup>14</sup>

But Elster does not confine the argument from incentive effects to political examples. Some of his examples involve allocative justice, but in a manner that does not appeal to the argument from fairness. The crucial insight here, as Elster sees it, is that the decision to allocate something by lot is only a 'second-order' allocative decision. It must be considered alongside the 'first-order' decisions affecting how much stuff will be made available for the allocation, as well as the 'third-order' decisions affecting the reasons favoring each potential claimant in the allocation (pp. 68–9). Both the agents who make the first-order decisions, and the agents who make the third-order decisions, might be influenced in their behavior by knowledge of how the second-order decision will be made – including whether or not it may involve a lottery. (Note that the agents at one stage may well overlap with the agents at another stage.) And this might be good or bad. Elster uses the draft as an example of a third-order effect: 'We might think that physical ability, which is an easily measured factor, is the only relevant criterion in the selection for military service and yet use a lottery to reduce the incentive for self-mutilation' (p. 110). Military conscription can also generate first-order effects. As slogans like 'Draft the Bush twins!' make plain, it is widely assumed that politicians would be less likely to start unnecessary wars if their own children faced being pressed into service (p. 68).<sup>15</sup>

In all of these examples, the lack of certainty generated by lotteries influences human behavior. Put another way, the fact that a lottery makes decisions independent of any reasons can also prevent reasons from influencing other decisions. If one does not know whether or not one will be drafted, one may lack the motive for self-mutilation; one may also lack the motive to support wars for the sake of crass or indefensible goals. But the argument has another side. If one does not know whether or not one will be drafted, one may also lack the motive to prepare physically, or make plans to minimize the disruption military service will produce in one's life; the possibility of being drafted might also conceivably lead one to oppose necessary wars out of cowardice. In other words, the lottery affects incentives by preventing action based upon reasons, but the reasons in question may be either good or bad. Elster summarizes all this as follows:

The uncertainty surrounding the impact of lotteries on individuals cuts both ways. Ignorance of the future can remove the incentive for wasteful behavior – but also for

socially useful behavior. Which effect dominates depends on the general level of honesty and of the complexity of social organization. (p. 110)

The net effect of a lottery on incentives, as Elster notes elsewhere, ‘may be positive or negative’ (p. 39), but the general result will be to blunt the best and the worst. Thus, ‘Lotteries and rotation have better worst-consequences and worse best-consequences than alternatives’ (p. 112).<sup>16</sup>

Two further points require emphasis if the argument from incentive effects ‘is to receive its proper dues’. First, the reason-denying impact of lotteries can become quite complex. It might influence a variety of behaviors at some remove from the lottery itself, and the desirability or undesirability of this influence might be similarly removed. Consider again the jury. Legal officials select juries randomly. In doing so, they prevent officials (including the legal officials who select the juries randomly) from putting people they favor onto juries. This may be desirable or undesirable, depending upon the motives of the officials. It also prevents outside interests from trying to influence (through bribes, threats or plain old-fashioned lobbying) the officials who would otherwise select juries; there’s no point in trying to influence someone to favor your preferred jurors if that someone has no control over the final selection. Again, depending upon the motives of these outside parties, this may or may not be a good thing. Both officials and outside parties are similarly prevented from influencing the jurors once chosen, assuming that the juries are immediately put to work. The jurors themselves also are prevented from acting upon advance knowledge of their future status as jurors, either positively (by studying the law) or negatively (by soliciting bribes). Finally, in order to know whether or not all of the above has a positive effect on the jury, one must keep in mind the ultimate purpose of a jury, which is to render decisions in court cases. All of the prior steps are of importance primarily – perhaps solely – because of this purpose, and so the lottery’s ability to keep out reasons (good and bad) must be judged accordingly.<sup>17</sup>

Second, according to the argument from fairness, lotteries are desirable whenever there remain bad reasons, but no good reasons, that might influence an allocative decision. In such a case, a lottery prevents the bad reasons from playing a role without any real cost. The argument from incentive effects, however, relaxes the assumption that there are no good reasons left to use. The argument suggests that a lottery might be of use in preventing bad reasons from influencing a decision *even as they simultaneously prevent good reasons from doing the same thing*. And this effect is of necessity much more ambiguous than the impact in the argument from fairness. Excluding bad reasons comes at a cost under such circumstances. Whether or not the cost is worth paying will depend on the circumstances at hand – circumstances that might prove hard to evaluate.

## Conclusion

Synthesizing Elster's three arguments for lotteries makes it possible to offer some general guidance as to when lotteries are or are not appropriate. The first argument suggests that lotteries are acceptable, but not mandatory, in the event of indeterminacy. When indeterminacy arises, there are no good reasons for selecting one option over others. But, in many cases, there are no bad reasons to avoid in the selection process either. Lotteries thus serve no purpose in such cases, but they also do no harm.

The second argument holds that lotteries are mandatory as a means of resolving indeterminacy whenever justice or fairness is at stake. Again, because there is indeterminacy, there are no good reasons for selecting one option over others. But in decisions of this nature there are also bad reasons to avoid. Impartiality demands that, even if good reasons cannot be used to generate a determinate outcome, at the very least bad reasons are to be avoided. A lottery can ensure that no bad reasons are used when distributing benefits and burdens among people with indeterminate claims to them.

The third argument identifies the influence lotteries can have on incentive effects. Because lotteries operate on the basis of no reasons, agents cannot condition behavior upon the outcomes they generate. This can prevent them from acting upon undesirable reasons, but it can also prevent them from acting upon admirable reasons as well. In such a scenario, there need not be any indeterminacy. Both good reasons and bad reasons may potentially play a role in the final decision. Both are prevented from doing so by a lottery. Whether or not this effect is beneficial or detrimental depends upon the relative importance of enabling the good reasons and disabling the bad reasons.

Elster's three arguments for lotteries thus demonstrate a common underlying logic. At root, all of them involve the need generated by certain decision-making processes of preventing bad reasons from coming into play. This need can be satisfied by a process that relies upon *no* reasons – a lottery. Such a process introduces a *sanitizing effect* into the decision-making process that can keep bad reasons out (cf. Stone, 2009). This need to avoid bad reasons generates an unequivocal recommendation for lotteries in cases where there are no good reasons that might potentially play a role. This is the case with the problem of impartial allocation when considerations of fairness prove indeterminate. But in some cases, good and bad reasons may coexist in a decision-making problem. If a lottery is used in such a case, then such use reflects a judgment that the sanitizing effect against bad reasons outweighs the disabling of good reasons. And when there is no danger of bad reasons, there is no positive argument for lotteries. There is no cost to doing so, however, when there are no good reasons to be found, as in decisions

involving indeterminacy but not fairness. (When there *are* good reasons, and no potential bad reasons, then random selection would be a clear mistake. The sanitizing effect does only harm in such cases.)

If this argument is right, then there is a case to be made for lotteries any-time that the sanitizing effects of a process unresponsive to reasons might prove valuable (a case that may, of course, be overridden by competing considerations). This is the general reason, I submit, for using lotteries; all arguments for the use of a lottery in a particular context presuppose it, and all arguments against using a lottery in a particular context take for granted that this reason is not relevant to that context (because the sanitizing effects are unnecessary or undesirable). By way of a conclusion, I now briefly discuss two other scenarios involving lotteries and show how they relate to the logic of random decision-making expounded here.

First, there is random selection as a form of divine revelation. This idea features prominently in the history of lotteries. As Elster notes, 'lotteries are more frequently used when they can be interpreted as the expression of God's will' (p. 104). Such an expression appears in the story of Jonah in the Old Testament. After Jonah fled from God, God sent a mighty tempest to engulf the ship upon which he was traveling. The ship's crew, recognizing the storm as a sign of divine anger, cast lots to figure out who had angered the celestial powers-that-be, and 'the lot fell upon Jonah' (Jonah 1:7). While the casting of lots as a form of divination has a long and wide pedigree, it is not, strictly speaking, resort to a lottery in the sense I describe. If a lottery is interpreted as an expression of God's will, then 'the outcome of [such] a lottery is not a random event, but the result of an intentional act' (p. 104) – in other words, an action based upon reasons. This kind of decision-making by lot thus appeals to the reasoning of another reasoning agent – in this case, God – in order to take that reasoning into account. (This is true regardless of whether the other reasoning agent actually exists.) In that respect, it is not different from making a decision by asking an expert, or consulting a book. The goal is not to make a decision without reasons, but to make a decision based on someone else's reasons. (This is true even if that someone else never reveals his reasons, so long as he advises the decision-maker on what to do.) This is fully consistent with Elster's judgment that lotteries can be 'a form of uncertainty avoidance, if they are interpreted as an expression of God's will' (p. 39). But if uncertainty is avoided, then the process enabling this avoidance cannot be properly regarded as a lottery.

Second, there are *weighted lotteries* – lotteries in which the outcomes are not equally probable. Lotteries of this type are only partially random, as their outcomes are predictable to a limited extent. With such a lottery, it cannot be a matter of indifference which outcome of the lottery is assigned to

each option. This is therefore not the kind of decision that can be left to picking. But if certain options in a decision-making problem are to be favored with more probable outcomes of the lottery – that is, if some options are to be more likely chosen than others – there must be some reason for assigning those options higher probabilities than the rest. And if there are reasons for selecting option *A* with a higher probability than option *B*, then surely those reasons count as reasons for selecting *A* and not *B*. That would mean that indeterminacy does not really exist here, and *A* should be selected outright. It is this logic that Elster has in mind when he suggests that, at first blush, the use of a weighted lottery appears ‘absurd’ (p. 47).

A full consideration of weighted lotteries is beyond the scope of this article. If, however, the logic of random selection articulated thus far is correct – if lotteries are desirable if and only if the sanitizing effect they provide is needed – then there will be a strong *prima facie* argument against decision-making via weighted lottery. If weighted lotteries are to be justified, it must be in terms of a desire to sacrifice some, but not all, of the sanitizing effect of a non-weighted lottery. A weighted lottery thus becomes a sort of compromise position. An example of this compromise in action would be lottery voting, in which a single ballot is drawn from the pool of votes cast in an election so as to determine the winner (pp. 86–90). This is in effect a weighted lottery among the candidates, with the weights directly proportional to the number of votes received. Other things being equal, this procedure is indeed ‘absurd’; if candidate *A*’s receipt of more votes than candidate *B* counts as a reason for selecting *A* with a higher probability than *B*, then it also counts as a reason for selecting *A* instead of *B*, with probability 1. Overriding this reason requires appeal to some other consideration, one that must be balanced against the desire to take votes into account but without completely overriding that desire (as a fair lottery would). One such reason would be a desire to prevent a persistent minority from losing in perpetuity (cf. Guinier, 1994). Lottery voting would allow for some rotation in office without ignoring the majority’s superior claim to office. I do not suggest that this argument is ironclad,<sup>18</sup> only that any case for weighted lotteries must refer to some compromise between values of this sort.

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## Notes

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1. In practice, it may be hard to distinguish between these two forms of indeterminacy. If a decision-maker cannot find a difference between two options, does that prove that there exists no difference to be found? It may establish that there is no difference *worth finding*, but that is quite another matter. That said, there may exist genuine cases in which options can truly be said to be indistinguishable from a normative perspective. If one believes, for example, that all competent adults have the right to serve on juries, and that this right is the only relevant criterion for jury selection, then one must in principle be indifferent between the selection of any two people for jury service (cf. Kornhauser & Sager, 1988: 493).

2. Much controversy exists over whether incommensurability is a genuine phenomenon. Elster believes that indeterminacy of this type is much more common than equioptimality. If a consumer were genuinely indifferent, for example, between two models of car, than she would have a clear choice between them if the price of one car were to be reduced by a dollar (pp. 8–9). But other philosophers find the idea of incommensurability to be as deeply problematic. For a sampling of the debate, see Chang's edited collection (1997).

3. This account closely parallels Elster's account of decision-making as the product of two filters, the first of which identifies a set of possible options, the second of which selects (ideally) one option from that set (see Elster, 1984: 76). Elster takes for granted that this filtration process involves rank-ordering options in accordance with the strength of the reasons behind each one. But this need not be the only way in which reasons can work so as to filter out options: see, for example, Joshua Gert's account of reasons as possessing both requiring strength and justifying strength (Gert, 2003, 2007).

4. Unfortunately, ordinary language conflates these two options. Thus, people often speak of picking 'at random', as though they were drawing straws or tossing coins.

5. To be more precise, Elster believes this conclusion holds for *parametric* decision-making, in which the decision-maker need not take into account the behavior of other rational agents. But if there are other rational agents whose behavior the decision-maker must consider, then the decision-making is *strategic* in nature. Here Elster believes that 'randomization is sometimes rationally prescribed' (p. 53). Elsewhere, however, he points out that in the strategic context: (1) randomized strategies are never desirable without regard to the behavior of other players (i.e. they never constitute dominant strategies); and (2) randomized strategies are never uniquely desirable (i.e. holding constant the behavior of the other rational agents involved, there will always be other strategies that are at least as good) (p. 60). These observations sit uneasily with the claim that strategic randomization is 'rationally prescribed'.

6. The allocation of a bad is simply the mirror image of the allocation of a good. This is because an exemption from a burden functions as the receipt of a benefit (see Sher, 1980: 214). For this reason, I assume from this point on that the allocative process involves some good.

7. Elster first considers, and rejects, the idea that when allocating goods, all people should be given exactly equal chances of receiving them – regardless of need, merit, etc. – in order to show equal respect to all human beings. He then considers, and rejects, the idea of granting equal chances to everyone subject to a maximin criterion – that is, everyone should receive the good with equal probability unless an alternative arrangement would increase the well-being of the worst-off. He then considers the idea that goods should be allocated with *unequal* probabilities, with higher probabilities going to those with greater need, merit or desert. He concludes



that this proposal ‘lacks psychological stability’, but in the end he does not dismiss it completely (pp. 113–5).

8. Indeed, Elster does not regard random selection as a *pure* rival to any of these criteria, because he assumes that in any allocative decision, efforts will be made to find reasons for distinguishing between potential recipients. Only after this process results in indeterminacy does resort to a lottery make sense. ‘I know of no instance of social lotteries without some preselection or postselection scrutiny on the basis of need, merit, and the like’ (pp. 67–8). Duxbury (1999) stresses the many ways in which lotteries can be combined with other allocative procedures.

9. This presupposes, of course, that the good is indivisible. In cases where there are no reasons for allocating a good to one person rather than another, and the good is divisible, the obvious solution is to divide the good in half. But for some goods – a kidney or heart transplant, for example – this either cannot be done at all, or can only be done at great cost to the good. For this reason, as Elster points out, ‘Lotteries are preferred to physical division when division reduces the value of that which is to be divided’ (p. 70).

10. This intuition is reflected in a number of papers that have defended the practice of allocating scarce medical resources (such as organ transplants) by lottery (see, e.g., Rescher, 1969; and Childress, 1970).

11. As an example of this phenomenon, Elster points out that ‘Tall and beautiful people ... tend to earn more’ (109–10). Elster appears to accept physical attractiveness, but not social class, as an acceptable criterion for resolving indeterminacy. Outside of beauty pageants, it is unclear why this should be the case.

12. Elster appears to regard his argument against protecting self-esteem as an argument against *process values*. But this move is unwarranted if the suppression of bad reasons counts as a process value. And it is difficult to see how else to classify it. When indeterminacy exists, there are no valid reasons for favoring one *outcome* over another. And so there cannot be any outcome-based arguments for resolving the indeterminacy one way rather than another.

13. Elster does discuss the use of lotteries to select political officials directly, as was the practice in ancient Athens and Renaissance Florence (pp. 80–6). He does not, however, explicitly consider the merits and disadvantages of this practice.

14. Elster also makes a third argument for randomly selected juries – that ‘the defendant or litigant has a right to be judged by an impartial and representative group of his peers’ (p. 95). This argument appeals to the effect random selection has upon the composition of the jury as a whole, not just individual jurors, and so raises complexities that I cannot address here.

15. Elster adds that ‘Other things being equal, we would want second-order mechanisms that did not shape or preempt the political first-order choices’ (p. 68). As stated, this claim is too strong. Second-order mechanisms can have positive and negative effects on first-order choices, and so a blanket condemnation of them is unwarranted. Goodwin (2005) makes much of the positive first-order effects of lotteries.

16. Rotation does not have all the advantages or disadvantages that lotteries do. In the case of selecting political officials, for example, rotation would preclude anyone from ‘stacking the deck’ with their supporters, but it would not preclude bribery or threats being offered to those in line for the rotation. Of course, it would also allow those in line to prepare for their jobs ahead of time. Thus, it will often be the case that lotteries have better worst-consequences and worse best-consequences than rotation.

17. The following passage from Elster also highlights the complexity of the effects that lotteries can have as they prevent the operation of certain types of reasons:



Incentive effects arise at several levels. Random selection prevents officials from using their discretionary power to play favourites, punish enemies, enrich themselves or simply bask in the arbitrary exercise of power. In addition to this top-down effect there is the bottom-up effect that prevents potential appointees or recipients from bribing and threatening officials. More generally, randomizing prevents recipients of scarce resources from trying to make themselves more eligible, at cost to themselves or to society ... Finally, to the extent that the chosen individuals have themselves favours to dispense, randomization can deter third parties from extending bribes or threats. (p. 111)

18. For an argument that it is desirable, on democratic theory grounds, for persistent minorities to lose, see Rehfeld (2005).

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