The Value of Chance and the Satisfaction of Claims

Richard Bradley has recently suggested a new explanation for the rightness of lotteries. According to Bradley's account, using a lottery to distribute an indivisible good among the members of some group is sometimes justified because the members of the group are risk-averse with respect to the chance of having the good.

To be risk-averse with respect to the chance of having a good is to value every additional unit of chance for the good less, the higher one's overall chance of having the good is. Bradley's account has some significant advantages over the existing accounts in the literature. However, to make the account compelling it must be shown that the assumption that people are risk-averse with respect to chance indeed holds in those cases in which we intuitively judge lotteries to be morally justified.

Whether it is possible to do this depends on the notion of individual value used. Here I suggest such a notion that fits well not only with Bradley's account but also with John Broome's account. Broome's account is based on the idea that in some cases using a lottery to distribute an indivisible good is *fair* in the sense that it allows the distributor to satisfy the individuals' claims for the good in a way that is proportional to the strength of their claims. Broome, however, does not suggest a full explication of the term "claims".

The notion of personal value I suggest here can be seen as a measure of the strength of an individual's claim for a good. Thus, the paper can be seen as suggesting a happy synthesis between Bradley's and Broome's accounts (although, as in most cases of such syntheses, it might involve giving up on some of the components of the two accounts).

An example can illustrate the main intuition that drives my suggestion (which - in the full paper - is presented formally within Richard Jeffrey's decision-theoretic framework). Consider a case that involves one indivisible good, E (education), and one divisible good, B (books), and suppose B and E are complementary goods, i.e. having E increases the utility an agent gains from each unit of B, and vice versa.

Now, the utility of each unit of B (each book) for the agent is the expected utility of each unit of B for the agent when the expectation is calculated relative to the agent's probability of getting E. In other words, the utility of each unit of B for the agent equals the utility of a unit of B in case the agent gets E (e.g. the agents is accepted by a good university) multiplied by the probability the agent will get E, plus the utility of a unit of B in case the agent does not get E, multiplied by the probability the agent will not get E. Thus – since E and B are complementary goods - as the chance of the agent getting E increases, the utility the agent gains from each unit of B increases.

It is easy to see that, since the utility of each unit of B increases as the chance of E increases, the agent will be willing to sacrifice fewer units of B to get an extra unit of chance for E, the higher the chance of getting E is. This is not because the agent values E less, the higher the chance of getting E is. It is because the agent values each unit of B more the higher the chance of getting E is.

Thus, if we take the strength of the agent's claim for E to be the number of units of B he is willing to trade for an extra unit of chance for E, we can say that the agent is risk-averse with respect to chances for E in terms of the strength of his claim for E. Can we generalize this conclusion to actual cases in which lotteries seem intuitively justified? I argue that we can.

A natural first move is to focus our attentions on goods which are (overall) complementary to everything the agent possess. Although it is plausible to consider that goods like health and education fit into this category -- and indeed two contexts in which we sometimes judge lotteries as being justified are the distribution of education and medical services -- there is a sense in which my account can cover a broader range of goods.

To measure how valuable a chance for a good, G, is in terms of everything the agent possess, we need to identify a unit of measurement for "everything the agent possess" which allows for interpersonal comparisons. This can be done in the following way. First we find some hypothetical state of affairs which can plausibly be taken to be "bad" (in terms of utility) for all individuals in the group to the same extent (we can call this state of affairs S). Then we can measure the value for each individual of a unit of chance for G in terms of how many units of chance for moving from her current position to S she is willing to risk for an extra unit of chance for G. Let us call this notion of value "Willingness to Risk" value (WR value).

By the definition of S, units of chance for avoiding moving to S are complementary to any good which increases the agent's utility. Thus, if it is possible to find a state of affairs like S (and whether it is possible to do that depends on the context of the distribution), my account can explain agents' risk aversion, in terms of WR value, with respect to chance. Thus, if WR value is the correct measure of the strength of an individual's claim, we get Broome's claim that fairness requires proportional satisfaction of claims *as a result* (Broome only assumes it is true). Moreover, I demonstrate that the account nicely predict several features we intuitively judge fair lotteries to have.