

## article

*Revisiting the Fair Innings Argument*

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**Abstract**

*Debate regarding the 'fair innings argument' has not always focused on that argument's most plausible formulation. The aim of this paper is to make substantial progress toward stating that argument in its most plausible form. Only when this is done can we confidently assess the fair innings argument.*

The term 'fair innings argument' was first used by John Harris in *The Value of Life*. Harris (1985, pp.91-4) described the fair innings argument as the:

view that there is some span of years that we consider a reasonable span of life, a fair innings ... the idea being that it would be morally defensible to prefer to save the lives of those who 'still had their lives before them' rather than those who had 'already lived full lives'.

In broad terms, the fair innings argument is based on the intuition that if we had to choose between saving the life of a young person and that of an old person, it is preferable to save the young person, as they have not had as many years of life.

The grounding assumption of the fair innings argument is that one consideration in healthcare resource allocation should be the life expectancy a person would have if not treated. That assumption will not be questioned in this paper. The paper's purpose is instead to elucidate the most ethically sound version of the fair innings argument in the context of healthcare resource allocation decisions. These are decisions about how to distribute healthcare resources when there are more healthcare resources needed than there are available. In this paper it will be assumed there is a scarcity of life saving healthcare resources. It is obvious that friends of the fair innings argument have an interest in finding the most ethically sound version of that argument. Foes of the argument should

share this same interest, however, for they will want to be sure that they direct their critical energies at only the most worthy target.

Roughly speaking, the fair innings argument favours saving the young before the old. It is, however, more specifically concerned with how the expected length of a person's life, from birth to death, should influence their entitlement to scarce healthcare resources. Therefore we will compare people's life expectancy without treatment, rather than age, to determine who is most strongly favoured by the fair innings consideration. For example, a sixty-year-old, who is expected to die in three years if not treated, would have a life expectancy of sixty-three years.

To examine the fair innings argument, only simple two-person situations will be considered, in which there is only one life saving resource available and both people need it. To give some real life context, for example, we can imagine the situation of there being two people requiring a kidney transplant and there only being one transplantable kidney compatible with both people. It will be assumed that we have full knowledge of a person's life expectancy, both before and after medical treatment, and that the resource remains indivisible at all times. We will focus only on cases in which treatment will definitely bring a gain in life expectancy. Life expectancy, and gain in life expectancy, will be measured only in full years, though it could in principle be measured in much

smaller units, like months or weeks. All these simplifying assumptions are made to make the main issues about the fair innings argument stand out more clearly. Once the fundamentals of the argument are well understood in the simple cases, we will be better placed to assess whether it should be applied also to the more complex settings of real healthcare decision-making.

In healthcare resource allocation there are normally a number of considerations, such as the expected number of life years gained with treatment, which bear on who should receive treatment. This paper, however, will not deal with these other considerations and will purely focus on refining the fair innings consideration. The weight that the fair innings consideration should have in relation to the other factors relevant to resource allocation will not be addressed here. This paper nevertheless does aim to lay important groundwork for that further weighting task.

In this paper, three different versions of the fair innings argument will be rejected and a new version will be put forward. It is now time to examine the first version of the fair innings argument found in the literature.

### 1. The Original Fair Innings Argument

The fair innings argument was first formulated by John Harris in *The Value of Life*. I will examine Harris's fair innings argument, abstracted from the wider approach to allocation that he advocates and within which he places his discussion.

Harris puts forward an example in which there are two people suffering from a life threatening condition and there are only enough resources to treat one person. Harris's idea is that if, and only if, one person has had a fair innings and the other person has not at point of allocation between the two people, there is a fair innings reason to treat the person who has not had a fair innings. If both have or both have not had a 'fair innings', then the fair innings consideration does not speak in favour of either candidate; it is indifferent between them. The fair innings consideration would then favour their each having a fifty percent chance of being allocated the service (for example by flipping a coin).

An important requirement for any health policy tool is that it can be consistently applied. Unfortunately, Harris's description of a fair innings, namely to have a 'full life', is too vague to

be consistently applied. Therefore I will define a fair innings, as Tsuchiya (2000, p.66) has done, in terms of a person's life expectancy. The term 'cut-off' will be used to describe the life expectancy a person requires to have a fair innings. I will call this more precise version of Harris's argument the cut-off version, and will now scrutinise it more closely.

It is difficult to know where the cut-off should be set if the cut-off version were applied, though one possible place would be to set it at the average life expectancy of the population. To avoid the problem of not knowing where the cut-off should be set all the criticisms, to be made below, will apply to any cut-off chosen to define a fair innings. Before criticising the cut-off version it is worthwhile defining it more accurately. We will call the situation in which there is only one indivisible life saving resource and two people requiring the life saving resource, situation S. The cut-off formulation of the fair innings consideration is as follows:

In situation S, there is fair innings reason to allocate to one person rather than the other if that one person is below the cut-off and the other is above it. If both are below the cut-off or both are above it, then they are equal in terms of the fair innings consideration.

To illustrate the cut-off version, suppose that one person has a life expectancy of eighty years without treatment and the other person thirty years, and the cut-off is seventy years. In such a case, the person who has a life expectancy of thirty years without treatment would have a fair innings reason to be entitled to treatment. I will now put forward two criticisms of the cut-off version.

First, let us take the situation of there being two people requiring treatment, with life expectancies of thirty-five and sixty-five without treatment. We will say for sake of argument that the cut-off is eighty years and there is only enough treatment for one person. If we adopt the cut-off version, these two people have equal fair innings claims, as both are under the cut-off. However it would seem instead that there is fair innings reason to give treatment priority to the person with a life expectancy of thirty-five. More generally, if the cut off-version is adopted, the fair innings consideration is unsatisfactory when there is a substantial difference in life expectancy between two people who are both either above or below the cut-off.

The second criticism is similar to one put forward by Harris (1985: 93), and it applies to the cut-off version when one person is just over or at the cut-off and the other person is just under the cut-off. Let us say, for the sake of argument, that the cut-off is eighty years and one person has a life expectancy of eighty-one years without treatment and the other seventy-nine years. Now, as one person is above the cut-off and the other person under the cut-off, there is a fair innings reason to allocate treatment to the person under the cut-off. It seems unfair, however, that the person with only marginally more life expectancy without treatment has no fair innings claim.

If it is possible to find a version of the fair innings argument that is not vulnerable to the two criticisms set out above, then that is what should be done. That is the task of the following sections.

## 2. The Relative Version

The relative version of the fair innings argument is based on the idea that we should aim to reduce inequality of life expectancy. By inequality it is simply meant the difference in life expectancy between two people. For example, if one person has a life expectancy of sixty years and another person has a life expectancy of twenty years, then the inequality of life expectancy between them is forty years.

Tsuchiya (2000, pp.61-2) attributes the relative version of the fair innings argument to Lockwood (1988). However Tsuchiya was unsure whether the relative version really adopted a theory of strict equality. I have assumed the relative version does so, so as to draw a sharp distinction between the relative version and what I have called elsewhere the graded fair innings principle (Dunlop, 2001). While the graded version does not warrant discussion in this paper the relative version does. The relative version of the fair innings consideration can be stated as follows:

In situation S, there is fair innings reason to allocate treatment to the person with the lower life expectancy, as long as doing so would not increase inequality in life expectancy between the two people. If treating the person with the lower life expectancy would increase inequality of life expectancy between the two, then the fair innings consideration favours not offering treatment at all.

To illustrate the relative version, we might imagine the

situation where one person had a life expectancy without treatment of thirty years and the other sixty years, and each would gain twenty years with treatment. Therefore the fair innings consideration, if we follow the relative version, would give priority to the person with a life expectancy of thirty years, as this would reduce the difference in life expectancy of the two people from thirty years to ten years. I will now put forward a criticism of the relative version.

The problem with the relative version arises over its claim that when the inequality in life expectancy between people increases with treatment, there is a fair innings reason to treat no one. To see the problem, consider the following example. Suppose that in a two-person situation one person has a life expectancy of thirty years without treatment and the other person a life expectancy of forty years. The inequality between the two people is ten years. There is only enough treatment for one person and both people would gain forty years of life expectancy with treatment. The fair innings consideration, if adopted in its relative version, would tell us to treat neither person, as the inequality between the two would increase if either were treated. If the person with the lower life expectancy were treated the inequality would increase to thirty years and if the person with the higher life expectancy were treated the inequality would increase to fifty years. In this, we are assuming, of course, that we cannot treat the person with the lowest life expectancy and then kill them when they reach the life expectancy of the other person.

Mere avoidance of even the slightest increase in inequality of life expectancy is not a good enough reason to justify any decision to treat neither person. Such a policy would be analogous to a fire-fighter, with only enough resources to save one of two people trapped in a burning building, deciding to save neither of them because saving either of them would result in an increase in the inequality in life expectancy between the two. It is a waste of resources not to save someone where possible. This means that we must reject the relative version of the fair innings consideration. It is time to put forward a new version.

## 3. The Worse-Off Version

I will now introduce a version of the fair innings argument that ensures the fair innings consideration is fairer, than if the cut-off version is adopted, and will not result in resource wastage, as can happen if the relative version is adopted. We

will call this the 'worse-off version' of the fair innings argument, as it gives priority to the person who is worse-off with respect to life expectancy.

The fair innings consideration, under the worse-off version, is that when the difference in life expectancy between the two people is large enough, then the person with the lowest life expectancy (the worse off person) is entitled to treatment. If the difference in life expectancy is not that large, however, then a weighted lottery, in favour of the worse-off person, should be held to determine who receives treatment. The distinctive feature of weighted lottery is that each person can have a different chance of 'winning the lottery', where 'winning the lottery', in this case, means a person receives treatment. We could, for example, have a weighted lottery in which one person had a seventy-five percent chance of winning the lottery and the other person a twenty-five percent chance. This then begs two important questions. Firstly, what is the minimum difference in life expectancy, for the fair innings consideration to tell us that the worse-off person should definitely receive treatment? Secondly, how are the weightings for the lottery to be determined?

To help answer the first question, we will say that 'M' is the minimum difference in life expectancy required for the fair innings consideration to be that the worse-off person is definitely entitled to treatment. If M is twenty, for example, then if the difference in life expectancy between the two people is twenty years or more, the worse-off person is entitled to treatment. The value of M could be set with conceptual trial and error by policy makers. By this it is meant crunching various numbers through hypothetical cases, rather than actual ones, to see what value seems right. It would seem likely that M would be set somewhere in the range twenty to forty years. What is crucial, to ensure that the system is fair, is that once the value of M is determined it is applied consistently to all cases.

We can now answer the second question, which was how the weightings would be determined if the difference in life expectancy is less than M. Suppose that a person's weighting, which is their probability of winning the lottery, is determined by the following equation:

$$(1.) P(A) = (0.5 + D/2M)$$

$$(2.) P(B) = (1-P(A))$$

$$0 < D/M < 0.5$$

P(A) is the probability of person A, the person with the lowest life expectancy without treatment, winning the lottery and P(B) is the probability of person B, the person with the highest life expectancy without treatment, winning the lottery. D is the difference in life expectancy between the two people without treatment, measured in years, and M is a constant.

The fair innings consideration, for differences in life expectancy less than M, is then that the worse-person should have a higher chance of receiving treatment, the greater the difference in life expectancy between the two people. The fair innings consideration is designed so the person with the lowest life expectancy always has more than a fifty percent chance of receiving treatment. If the two people have equal life expectancies without treatment, then the fair innings consideration tells us that each person should have a fifty percent chance of receiving treatment.

Therefore the fair innings consideration, if the worse-off version is adopted, never advocates wasting the scarce resource. This gives it an important advantage over the relative version. Furthermore, the worse off person gets priority to treatment proportional to how much worse off they are than the other person. This is an improvement over the cut-off version, in which the worse off person can either have no priority to treatment, if both people are under or over the cut-off, or too much priority for treatment, as can happen if the worse off person is just under the cut-off and the other person is just over or at the cut-off. I will now illustrate the nature and implications of the worst-off version with an example of a weighted lottery where M is set at 20:

Life Expectancy without treatment:

A=30 years, B=40 years

Therefore D (Difference in Life Expectancy) = 10 years

$$P(A) = (0.5 + 10/40) = (0.5+0.25) = 0.75$$

Therefore A has a seventy-five percent chance of receiving treatment.

$$P(B) = 1-P(A) = 1-0.75 = 0.25$$

Therefore B has a twenty-five percent chance of receiving treatment.

#### 4. Conclusion

I conclude that the worse-off version improves on those previously published versions of the fair innings argument that are discussed above. But this paper has not ruled out the

possibility that an even better version of the fair innings argument might be able to be worked out. It is nevertheless to be hoped that the version of the argument that is proposed in this paper can be applied to more complex situations, closer to those actually faced by policy-makers. If so, this leaves one major question for the policy-maker: how much, if at all, should the fair innings consideration influence the distribution of life-saving healthcare resources, when other factors are also relevant to allocation decisions, and might in some cases conflict with the fair innings consideration? This important further question has not been addressed in this paper.

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