The Philosophical Justifications of the "Fair Innings Argument" and Related Controversies

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Title: The Philosophical Justifications of the "Fair Innings Argument" and Related Controversies

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Abstract: Financing innovative and costly treatments in various therapeutic fields entails a number of problems in countries where costs are covered by public services. Providing these drugs is forcing actors to define the maximum sums of money society is willing to spend for given health improvements. This raises the question of whether maximum financing should vary according individuals' circumstances, such as the rareness of a disease, lifestyles, social inequalities experienced over a life time, etc.
This article examines a particular priority, namely that given to the youngest patients, such prioritising usually refers to the "fair innings argument" (FIA). The challenge is to identify if, and on the basis of what arguments, collective choices should take into account age in the name of a right to live the time required for a complete life, within a context of the scarcity of resources and the pluralism of values. Three arguments are considered. At first we consider that FIA could be justified by the objective of equalizing the opportunities of well-being. Next, we proposed justifying the fair innings argument with the aim of equalizing the time provided to individuals to achieve their plan of life, in accordance with Rawls's theory of justice as fairness. Finally, we proposed considering the FIA as being justified because of the goal of equalizing the time provided to individuals to accept death. These three arguments, of course, have many limitations, some of which we have highlighted.

Key Words: health technology assessment, fair innings argument

1. Introduction

1.1. Context

The recent emergence of innovative and costly treatments in various therapeutic fields has raised much hope from a public health perspective, even though financing them entails a number of problems. In oncology, for example, the prices of innovative treatments such as Kadcyla (trastuzumab emtansine, by Roche) or anti-PD1 immunotherapies (Opdivo and Keytruda) can run to €6,000 per month in France: i.e., an additional cost of approximately €100,000 per year yielding an extra, average survival benefit of about 6 months (according to HAS and NICE efficiency evaluations of these treatments) (NICE, HAS). In the United States, a rising number of patients have been forced to give up care due to the high prices set by drug manufacturers (Neal 2009 ; ASCO 2016 ; Gordon 2018). Such price levels are challenging the sustainability of health insurance systems in countries where costs are covered by public services (OCDE, 2017). Equitable access to such innovative treatments competes with other forms of public investment for which social expectations are strong too: education, the environment, care for dependent persons, combating poverty and exclusion, etc. Providing these drugs is forcing actors to define, more precisely than before, the maximum sums of money public authorities and society are willing to spend

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for given health improvements. This raises the question of whether maximum financing should vary according individuals' circumstances, such as the rareness of a disease, lifestyles, social inequalities experienced over a life time, etc.

Economic health calculations commonly used by health technology assessment agencies are implicitly based on a utilitarian type of principle aimed at maximising the sum of health gains, usually measured in quality-adjusted life years (QALYs), obtained with medical treatments funded. The utilitarian dimension of this calculation is based on the principle for "everybody to count for one, and nobody for more than one", as expressed in the well-known formula "1 QALY = 1 QALY = 1 QALY". Individuals' specific characteristics (age, gender, socioeconomic characteristics, lifestyle, etc.) are not taken into account when assessing the value of a health improvement. Any particular treatment is only assessed according to the quantity of health improvement it procures in terms of life years gained in perfect health or QALYs, whatever the situation of the patient. However, there is much discussion in health economics concerning prioritising health improvements for certain patients. Such prioritisation can be done using weightings applied to health gains. Alternatively, it may be achieved by using variable reference values for interpreting the incremental cost-effectiveness ratio (ICER). This is formally equivalent and similar in normative terms. These weightings or ICER interpretation rules are generally attached to particular pathologies or situations (Norheim et al., 2014). Their use may be interpreted as a way of introducing inequality aversion in the distribution of certain outcomes across the population (well-being, health status, lifespan, physical abilities, etc.) (Wagland, 2012). These practices are consistent with recent academic research that proposes considering the principles of egalitarian distribution in economic assessment (Sen, 2002, Brouwer, 2008, Cookson, 2017, Asaria, 2015). Provided that they dispose of accurate data, economists can easily include the priorities of a health system in their calculations. Economics indeed often takes into account distribution considerations in the formulation of social welfare objectives. However, it is absolutely necessary to justify the priorities selected. The translation of social values into the methods and practices of health assessments may lead to (re)directing research and innovation efforts by industry and organisation operating in the health sector. The issue at stake is important.

1.2. The Fair Innings Argument

This article examines a particular priority, namely that given to the youngest patients. Following the work by John Harris, such prioritising usually refers to the "fair innings argument" (FIA). In his book *The Value of Life*, Harris stresses that the death of an individual is always terrible. But, it may be considered a tragedy when it takes place before the individual has benefited from a reasonable life, which he calls a "fair innings". Anyone who dies prematurely (i.e., who dies before reaching this age), suffers an injustice which society is justified in preventing. From this perspective, it is legitimate to allocate more resources to individuals who have not reached this age limit and to allocate fewer resources to those who have already reached it. Harris, however, does not specify what this reference age should be, nor the method to define it. According to him, it is not possible to distinguish different degrees of injustice according to the age of death. Anyone who has not had a fair innings is penalised in the same way, be they 20, 30 or 40 years old. Following Harris, Williams however proposes to define the reference age based on average life expectancy at birth for the population as a whole. In contrast to Harris, Williams considers that the injustice experienced by an individual who dies prematurely increases with the difference between the age of death and this average life expectancy. Finally, he recommends taking into account the quality of life over an individual's entire lifetime. This raises important informational difficulties (Williams 1997; Tsuchiya 1999, 2000). It should be noted that the fair innings criterion is different to granting priority to the youngest populations because of the longer life expectancy they enjoy. The question that is raised by this criterion is the value given to the same extension of lifetime, at different ages or stages in life. Concretely, the Fair Innings Argument may lead, for example, to favouring the financing of specific health treatments when the life expectancy of a target patient group is lower than the average life expectancy, or restricting access to care depending on a

patient's age. From a value point of view, there to be equivalence between providing extra public funding to reduce the mortality of young patients (e.g., children or young adults) and deciding to pay less to extend the life expectancy of older patients. Both situations involve taking into consideration the amount of time an individual has lived and may live. This priority may also be taken into account in calculations using weightings that are applied to the health outcomes of the treatments based on the average age of the patients. In Great Britain, for example, NICE at one point considered to take patients' age into account as a weighting variable in its work on *Value Based Pricing*. This involved notions of *absolute shortfall* and *proportional shortfall*. But this approach was finally given up (Towse 2013). Today, no agency gives priority to younger populations in their assessment of health technologies. However, mechanisms do exist to fund expensive treatments, considered inefficient, in certain particular pathological contexts (for example, the Cancer Drug Fund in Great Britain). Most often these are pathological conditions in which patients have a reduced life expectancy compared to the average life expectancy of the general population. The WHO in fact also proposes allocating resources as a priority to health research in therapeutic areas where the burden of disease is the highest, i.e. where the gap between the life expectancy of sick individuals and that of the general population is the largest.

1.3. Objective

The aim of this article is to consider the normative stands biases which underlie these practices, and to test them using theories of social justice. It is not enough to consider that premature death is a tragedy or a misfortune to judge that it is an injustice, as it is proposed by Harris and Williams. If all misfortunes were injustices, then satisfying our demands for justice would be impossible. We would then risk, in the words of Pogge, of falling into a *"bottomless pit"* (Pogge 1989, 2004). To establish that a misfortune is also an injustice can only be done by referring to a theory of justice whose purpose is to establish a boundary between, on the one hand, what is just and unjust and the other hand, what does not belong to such an evaluation. The question then is whether and on with what arguments, in the context of pluralistic societies which respect different conceptions of a good life, the community is justified in offering everyone a minimum life lifespan, ahead of other objectives. More specifically, it may be asked why it is justified to try to equalise lifespans rather than achieving something else.

This article follows recent publications on this subject (Wagland 2012; Brognar 2014; Menzel 2015; Sodberg 2016; Nagel and Lauerer 2016, and also MacMahan 2002) and it seeks to contribute to this debate, which has recently been reopened. As with Sodberg, Bognar and Macmahan, we propose mobilising Nagel's concept of a deprivation account (Section 2) and the argument for a prudential lifespan account by Daniels (Section 3) to justify the fair innings criterion. However, we will discuss these concepts differently. On the one hand, we propose linking Nagel's concept of a deprivation account to the goal of equalising well-being opportunities. On the other hand, we provide an additional critique of the concept of a prudential lifespan account by considering the possibility of an evolution of life plans defined *a priori* at the approach of death. Finally, we propose a third justification, unprecedented, for the fair innings criterion, based on the goal of equalising the time available to everyone in order to accept dying (Section 4).

It should be noted that there are different ways of implementing the fair innings criterion. In a moderate form, the fair innings criterion leads to giving the youngest a relative priority, while in an extreme form it could lead to the end of collectively funding health care for patients beyond of a certain age, and even to considering forms of euthanasia. These various forms of fair innings depend on the degree of aversion to inequalities of the lifetimes retained: the extreme form of fair innings implies an absolute degree of aversion to inequalities in lifetimes, while the moderate form implies a lower degree of aversion. In the context of this article, we are not considering this extreme form of fair innings because its social acceptability is unthinkable, as evidenced by the intensity of the debate that even moderate forms of fair innings generate (Rivlin 2000, Fisher 2013).

2. Equalizing life years in the name of an equal opportunity of well-being

Following MacMahan (2002) and Solberg (2016), it is indeed interesting to begin by justifying the fair innings criteria by drawing on the concept of the deprivation account put forward by Nagel (1979), in an article entitled "Death". In this article, Nagel aimed to challenge the hedonistic argument that death has no value in itself, neither good nor bad, since it cannot be experienced by a subject: the subject disappears at the instant of experiencing death. *"Death is nothing for us, because as long as we exist death is not here, and when death comes, we are no more."* (Epicurus, *Letter to Meneceus*). In contrast, Nagel suggests considering that the value of an individual's death depends on what it takes away from the person, that is to say activities which the subject can no longer do and which are sources of pleasure or displeasure. *"Death is an evil because it brings to an end all the goods that life contains. It is bad not because of any positive features but because of the desirability of what it removes"* (Nagel, 1979) (for a more precise presentation of the notion of "deprivation account", see Bradley, 2004 ; Johansson, 2012; 2014). Nagel admits that depending on their age, individuals have a certain number of years of life remaining, which are rich in future possibilities (personal relationships, aesthetic experiences, pleasures): and so they are more or less harmed when they are deprived of these early: *"The death of Keats at 24 is generally regarded as tragic; that of Tolstoy at 82 is not. Although they will both be dead forever, Keats's death deprived him of many years of life which were allowed to Tolstoy; so in a clear sense Keats's loss was greater, (though not in the sense standardly employed in mathematical comparison between infinite quantities.)"* (Nagel, 1970). Premature death not only deprives an individual of satisfactions related to the activities they could actually have fulfilled, but also the satisfaction of simply being able to project oneself into the future, as Singer states clearly: *"For preference utilitarians, taking the life of a person will normally be worse than taking the life of some other being, since persons are highly future-oriented in their preferences. To kill a person is therefore, normally, to violate not just one, but a wide range of the most central and significant preferences a being can have."* (Singer, 1993, p. 95).

However, it is necessary to specify that Nagel himself does not mobilise this notion of a deprivation account to justify taking age into consideration in the allocation of health resources. Unlike Sodberg, it does not seem possible to us to base the fair innings criterion directly on the concept of a deprivation account alone. To do so, it would be necessary to go further than Nagel, considering on the one hand that it is justified to distribute these deprivation accounts equitably. On the other hand, it requires using the number of years of life to estimate these deprivation accounts, which amounts to admitting that the deprivation account is identical for all individuals of the same age, whatever their preferences and circumstances.

This choice could be justified by the technical impossibility of measuring *ex post* and individually the amount of well-being they would have received had they lived longer. It would then be considered acceptable to measure well-being opportunities, rather than actual well-being, and to take lifetime as an indicator of these well-being opportunities. Being alive is the first condition for an individual to feel satisfaction. According to Arneson (1988), liberal egalitarian theories centred on an objective of equalising opportunities, based on an equitable distribution of primary goods or objective resources, use the latter, in the same way, to approximate the quantity of well-being that would benefit each individual. *("We may insist that governments have regard to primary good share equality or resource equality as rough proxies for the welfarist equality that we are unable to calculate."* (Arneson, 1988: 87)).

But it would also be possible to justify this objective of equalising welfare opportunities in itself, and not by default, as Dworkin and Sen have done (Dworkin, 2000 ; Sen, 1999). For these authors, it is preferable to distribute resources equitably in order to equalise well-being opportunities, rather than actual levels of well-being, as the latter vary as a function of tastes and circumstances, as well as individuals' success which depend on their original circumstances, and on parameters dependent on individual responsibility (such as effort and motivation). It is therefore preferable to distribute resources equitably to allow everyone reach a certain level of well-being fairly, while at the same time leaving

them with the responsibility of actually attaining this level of well-being. From this point of view, it is possible to consider that lifetime is one resource among others.

3. Equalizing life years in the name of equal opportunity for everyone to develop their own life plans

Secondly, it seems possible to justify the FIA in the name of equal opportunity for everyone to develop their own life plans, on the grounds of the Rawlsian conception of justice as equity, as it is proposed by Norman Daniels, in an essay titled *Am I my parent's keeper?*. For Rawls, every individual is capable of rationally ordering his/her desires and organizing them according to a system of ends in which short term projects are integrated into long term projects (Rawls, 1971, pp. 479-480). Accordingly to Daniels, restricting access to health technologies according to age is not a source of inequality as, unlike other individual characteristics such as gender or skin colour, all individuals end up aging (a similar argument can be found in McKerlie (2001)). The question raised by the FIA concerns the fair distribution of resources according to the ages of life. Daniels states it is likely that rational and cautious individuals, when placed behind Rawls's veil of ignorance, choose to allocate resources in such a way as to maximize the chances of benefiting from a normal life expectancy, even if this means not prolonging their own lives if they were to be lucky enough to reach old age. *"Therefore it seems prudent for me to reserve certain life-extending technologies for my younger years. I would thus maximize the chances of my living a normal lifespan"* (Daniels 1988, p. 496). The majority of people are aware that they are mortal and conceive of their life project given the representation they have of their life expectancy. It is essential that they are able live to an average age because it is during these years that they realise their life project. In addition, it seems prudent to them to keep some of their resources to finance medical-social care in order to guarantee a satisfactory level of life quality in old age, even if this once again means giving up on prolonging their lives. Daniels indicates that such trade-offs are quite close to the choices made in the UK's NHS, which limits certain technologies depending on patients' age (e.g., dialysis) and which invests in care favouring the autonomy of older persons so they may stay at home.
Moreover, the fair innings argument could be justified in the name of the *maximin* principle which aims at distributing resources so as to improve as much as possible the situation of the most disadvantaged persons. There is no doubt, according to Daniels, that dying young is one of the worst situations possible. Yet Daniels went on to question this argument in a more recent book (2008), questioning whether the FIA could indeed be justified using the concept of equity as the basis of justice. In his more recent opinion, the idea of a fair innings is a particular stance, as it refers to one conception of a good life which is valid among other conceptions. To consider that a good life involves living *sufficiently long* is just one position among an irreducible plurality of other positions. Daniels confines himself therefore to considering that the fair innings argument is not unfair in itself. It is still possible morally to adopt this stance collectively, provided that the decision to do so is based on a deliberative process which meets conditions Daniels goes on to define. These are based on what he calls accountability for reasonableness (on the evolution of Daniels' thinking on the FAI see Brauer 2009). It seems to us that another criticism can be levelled at this justification of the fair innings criterion, based on the objective of equalising time given to individuals to achieve their life plan. In particular, the evolution of life plans throughout a lifetime needs to be examined, especially with the approach of death. The adaptation of preferences is a phenomenon that is well-known in behavioural economics (Tversky and Kanneman 1992). Following Heyd et Miller, it raises questions not only about the validity of *ex ante* preferences, but also about the relevance of life plans defined *a priori*. *"The phenomenon of 'adaptive preferences' usually considered as limiting the rationality of more 'local' choices, seems to be essential and inevitable in the context of life planning, of the formation of human personality as whole"* (Heyd and Miller 2010, p. 27). It is possible that the imminence or prospect of death reveals the strength of an individual's opinions. At this moment, an individual's most authentic preferences could be revealed and that a person's life project is

defined retrospectively. From this perspective, it is therefore not possible to consider that beyond a certain age, reasonable and prudent individuals are meant to have achieved the objectives of their lives. This is because these objectives can only become clear when people face death, whatever their age. The weeks, months or even years that can be gained through medical care would then be an opportunity for individuals to examine their lives in the light of their "true" preferences and goals, which can be clearly viewed at this moment. Such a reprieve from imminent death could thus provide them with the opportunity of attaining a sense of accomplishment through reviewing their lives and through any actions they may decide to undertake accordingly (words, acts or various experiences). Yallom (1980) recalls that this idea of death as a revelatory experience is often mentioned both in classical literature (e.g. *In The Death of Ivan Illich* or in Dickens' tale *A Christmas Carol*) as well as in philosophy (according to Heidegger, consciousness of death allows individuals to move from an inauthentic mode of being towards an authentic mode of being, called the ontological mode) (Heidegger, 1927).

4. Equalizing life years in the name of an equal chance to accept death

Lastly, it seems to us that a particular priority could be given in contexts where the end of life occurs early and suddenly, and that it is possible to delay death for some time, in the name of equalising the time given to individuals to accept death. This is especially the case of pathologies such as certain cancers, which are diagnosed in very late stages, thus limiting the life expectancy of patients to less than one or two years, sometimes less. In this case, costly therapies may be proposed to provide these patients with a few additional months of survival. The value given to this reprieve of time today raises concrete questions concerning public policy. The utilitarian framework underlying the calculations of health economics, which are based on estimating differential cost/QALY ratios, yields low valuations in terms of the social value obtained by these therapies, compared to their costs: the extra lifetime is short and the quality of life is often very poor. It is possible, however, that such estimations fail to take into account some benefits these therapies may bring to patients, namely more time to prepare themselves and their relatives for their death. This reasoning is in line with doctors' thoughts about the notion of "compassionate resuscitation" (Deciron-Debieuvre, 2016).

Giving a variable priority to patients' age is justified not so much by the lifespan of which an individual benefited as the unpredictable and sudden nature of death compared to statistical and social norms. This deprives a person of the possibility of implementing a process which classical philosophers, from Plato (with the death of Socrates, as it is described for instance in the well-known prosopopoeia of the Laws in Crito (Plato, Crito, 50 a-c)) and Montaigne (Rohrbasser, 2004), as well as some psychoanalysts, have endeavoured to describe, and at the end of which an individual may be ready to die (Hetherington, 2013). For these classical writers, for example, the acceptance of death involves the recognition of a form of transcendence, via the idea of Good and Truth in Socrates (Guardini, 1948), or Destiny and World Order for the Epicureans as well as for classical or modern Stoics (Cicero, On the Good Life, chap. 3 ; Montaigne, Essays, Book 1, chap.19). Other forces and strengths are of course possible.

Giving more priority to patients at risk of premature mortality could in this case be justified by the idea that this psychic work is undertaken from the moment when an individual becomes aware of his/her finiteness. This is something which the younger people tend to ignore, as they are taken up by their daily activities (Hetherington, 2013, p. 96). *"This 'finiteness', which we share with all living things, however, is not self-evident, because we live most of the time in the forgetfulness of our own mortality. This is what led Freud to assert that 'no one, deep down, believes in their own death or, what amounts to the same thing: in the unconscious, each of us is convinced of our immortality'."* (Dastur, 2009, p.7) Advancing age, along with other events in life may then remind individuals of this finiteness, and lead them to start accepting it. It is more likely that individuals are "ready" to die when they are older than when they are younger. It should be emphasised that in present health systems, the priority given to extending the lives of the youngest individuals results in the provision of therapeutic means being left

to the discretion of patients, with the advice from their doctors. There is no question of imposing on anyone extending their survival against their own preferences.
The limitation of this third justification is that it implies verifying that the degree of acceptance of death does actually progress with age, without imposing a duty on individuals to be wise, as part of a perfectionist approach of the good life. The question then arises of whether it is really possible to prepare for death, above and beyond basic discourses held throughout one's life. Fiat thus describes how the proximity of one's own death, or that of others, leads to a particular rationality which is distinct from the daily rationality: *"Even if one has prepared oneself for death, and for love, their occurrence always overflows the container designed to accommodate them. Their manifestation immediately saturates the receptive capacities of the person experiencing them. It seems to me that to describe the occurrence of death or love requires constructing another phenomenology than the phenomenology which describes the ordinary phenomena of life; unless in fact it is necessary to break with phenomenology itself and instead invent something like an epiphanollogy that is up to the task"* (Fiat 2001, p. 127). Menzel's analyses of the value of hope in end-of-life situations, even when futile, illustrates this particular form of rationality (2011).

5. Conclusion

The still-inescapable character of death, which until recently has marked the philosophies of death, beginning with Stoic philosophers (see Cicero, *On the Good Life)* presents itself today differently. Hardwig discusses more precisely the evolution of the relationship to death, induced by technological development. He stresses in particular that from now on individuals know a few years in advance that their end is near: *"Dr. Joanne Lynn once observed that the average American now knows three years in advance what she will die of.(…) Earlier diagnoses will be possible, giving us a more advanced warning of our terminal illnesses. Better treatments will also be available, allowing us to fight our terminal illnesses for a longer period. Unlike most people in previous generations, we now live facing death for a very long time"* (Hardwig 2006, p. 4). The joint development of scientific progress and health insurance systems raises the question of collective (or social) responsibility for access to technologies which can delay death. The question of the acceptance of death, which used only to be an intimate question, is now also the subject of joint decisions. This situation raises new ethical questions about the value of death from the point of view of the theories of justice. In this paper, we have examined three arguments justifying the fact that the value of death decreases as an individual grows older due to the aim of equalizing lifetimes, commonly called the fair innings argument. At first we consider that FIA could be justified by the objective of equalizing the opportunities of well-being. Next, we proposed justifying the fair innings argument with the aim of equalizing the time provided to individuals to achieve their plan of life, in accordance with Rawls's theory of justice as fairness. Finally, we proposed considering the FIA as being justified because of the goal of equalizing the time provided to individuals to accept death. These three arguments, of course, have many limitations, some of which we have highlighted.
The purpose of this work is to contribute to public debates on priority criteria used in the allocation of health resources. The ethical controversies raised by the fair innings argument are particularly strong. To some, like Harris and Williams, it seems intuitive. But for others, the notion of a fair innings seems to be radically opposed to deeply-rooted moral conceptions held in our societies (respect for elders and filial sentiment, the sacredness of all human life, or support for the most vulnerable). Death as such is the subject of psychological and social taboos which make it difficult to organise reasoned discussions (Déchaux, 2001). The controversies surrounding the FIA may also be sharpened by the personal and professional experiences which determine any individual's views on the issue. The value of death is ultimately little-discussed by contemporary social justice theorists. We believe it is necessary to further discussions on the possibilities of applying the principles of equity used in the distribution of resources

in general (education, income, etc.) to this particular issue of health, especially when it comes to the end of life.

Compliance with Ethical Standards

Conflict of interest: The authors declare that they have no competing interests.

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

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