IN DEFENCE OF THE USE OF MAXIMIN PRINCIPLE OF CHOICE UNDER UNCERTAINTY IN RAWL'S ORIGINAL POSITION*

The principles chosen by the agents of construction in the original position to assign basic rights and duties and to determine the division of social benefits are the principles of justice according to Rawls. The parties in the original position are conceived as not knowing certain particular facts. Rawls assumes that the agents in the original position will make their choice by following the maximin principle of choice under uncertainty. The assumption of Rawls has been criticized severely by Harsanyi. His contention is that 'the maximin principle is not a rational principle of choice under uncertainty. According to him the only rational principle of choice under uncertainty is the principle of maximization of expected utility.' In this essay it has been shown that given the kind of ignorance the parties in the original position suffer from, it is not possible for them to follow the principle of maximization of expected utility. Rather, it is rational for them to follow the maximin principle of choice under uncertainty.

I

To appreciate fully what should be the principle of choice under uncertainty for the parties in the original position, we have to know what the parties in the original position do not know. "First of all, no one knows his place in society, his class position or social status; nor does he know his fortune in the distribution of natural assets and abilities,

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his intellgence and strength, and the like. Nor, again does anyone know his conception of the good, the particulars of his rational plan of life, or even the special features of his psychology such as his aversion to risk or liability to optimism or pessimism..... parties do not know the particular circumstances of his own society. That is they do not know its economic or political situation, or the level of civilization and culture it has been able to achieve. The persons in the original position have no information as to which generation they belong." The veil of ignorance is quite a thick one.

The outcome of the decision to adopt principles made under such ignorance will depend on which circumstances the person finds himself in when the veil of ignorance is lifted, i.e., the parties are facing a decision problem under uncertainty.

II

According to Rawls the parties in the original position will use the maximin principle of choice under uncertainty.² "The maximin rule tells us to rank alternatives by their worst possible outcomes. We are to adopt the alternative the worst outcome of which is superior to the worst outcome of others".³

Rawls is aware that "the maximin rule is not, in general, a suitable guide for choice under uncertainty." But he thinks "it is attractive in situations marked by certain special features". He claims that there are three chief features of the situation that give plausibility to this rule. First, the situation is one in which a knowledge of likelihoods is impossible or at best extremely insecure. "In this case it is unreasonable not to be skeptical of probabilistic calculations unless there is no other way out particularly if the decision is a fundamental one that needs to be justified to others". Secondly "the person choosing has a conception of good such that he cares very little, if anything, for what

he might gain above the minimum stipend that he can, in fact, be sure of by following the maximin rule". Lastly "the rejected alternatives have outcomes that one can hardly accept". Original position has been so defined that all these three features are present. The veil of ignorance leaves no basis for determining likelihoods. Secondly 'the minimum assured by the two principles in lexical order (which is the maximin solution) is not one that the parties wish to jeopardise for the sake of greater economic and social advantage". Lastly "other conceptions of justice may lead to institutions that the parties would find intolerable". Lastly "other conceptions of justice may

III

Harsanyi severely criticizes the use of maximin principle of choice under uncertainty in the original position. He undermines the rationality of the use of maximin principle for choice under uncertainty by showing that it leads to very paradoxical implications for the choice under uncertainty that we face in day to day life. "If you took the maximin principle seriously then you could not ever cross a street (after all, you might be hit by a car), you could never drive over a bridge (after all, it might collapse), you could never get married (after all, it might end in a disaster). etc. If anybody really acted this way he would soon end up in a mental institution".11 As we have already noted this point is conceded by Rawls. What Harsanyi needs to show is that it is irrational to use the maximin principle in the original position. The use of the maximin principle in the original position would lead to the adoption of the difference principle, the principle which evaluates every possible institutional arrangement in terms of the interests of the least advantaged individual: Out of any two alternative institutional arrangements in society, that institutional arrangement is preferable in which the least advantaged individual enjoys a higher welfare level than the welfare level of the least advantaged individual of the other institutional arrangement. Harsanyi argues "that the difference

principle often has wholly unacceptable moral implications". 12 He gives many examples. A typical example is that of a society consisting of one doctor and two patients both of them critically ill. Medicine available suffices only to treat one of the two patients. One of these two patients is a basically healthy person apart from his present illness, the other individual is a terminal cancer victim but even so the medicine could prolong his life by several months. Which patient should be given the medicine? According to the difference principle it should be given to the cancer victim, who is obviously the less fortunate of the two patients.13 But Harsanyi claims, "In contrast, utilitarian ethics - as well as ordinary common sense would make the opposite suggestion".14 The medicine should be given to the healthy person beause, "it would do 'much more good' by bringing him back to normal health than it would do by slightly prolonging the life of a hopelessly sick individual",15

Rawl's reply to the various counter examples of Harsanyi against using the maximin principle in the original position is that "the maximin criterion is not meant to apply to small-scale situations, say, to how a doctor should treat his patients or a University its students..... Maximin is a macro not a micro principle". 16 Harsanyi's rejoinder to this reply was, "Regretfully, I must say that this is a singularly inept defense, I cannot see how anybody can propose the strange doctrine that scale is a fundamental variable in moral philosophy.....".17 Rawls appears to have conceded the force of Harsanvi's counter examples for in as late as 1980 he stipulated it as a condition of a well-ordered society that "no one suffers from unusual needs that are especially difficult to fulfil for example, unusual and costly medical requirements". And he maintained "it is sensible to lay aside certain difficult complications. If we can work out a theory that covers the fundamental case, we can try to extend it to other cases later".18

But it appears to me that Harsanyi's counter examples do not help in proving the point for which they are intended. Harsanyi's claim appears to be plausible only because he has failed to incorporate a few vital features of society stipulated by Rawls. Firstly "a well-ordered society is conceived as on-going society.....Its members view their common polity as extending backwards and forward in time over generations and they strive to reproduce themselves. and their cultural and social life in perpetuity, practically speaking; that is they would envisage any final date at which they were to wind up their affairs as inadmissible and foreign to their conception of their associa-Secondly a well-ordered society is conceived as "a system of co-operation designed to advance the good of those taking part in it".20 And lastly, "a wellordered society does not have a manna economy, nor are its economic arrangements a zero-sum game in which none can gain unless others lose".21 Once we accept these stipulations. the recommendation of utilitarianism as against that of difference principle does not appear to be intuitively acceptable. For it would amount to systematic deprivation of the unfortunate. It would amount to violation of the Kantian precept 'treat one another not as means only but as an end in themselves'. But Harsanyi thinks that the cancer victim is "merely being denied the use of certain resources over which he has no prior property rights, and this is done on the ground that other individuals have 'greater need' for the resources i.e., can derive greater utility from them....".22 Therefore the recommendation of the utilitarianism does not amount to violation of the precept. But this claim of Harsanyi is indefensible once we acknowledge that the medicine is produced by the co-operation of all as required by the stipulations mentioned above. Under such circumstances denving the cancer victim the use of medicine will not amount to "merely denying him the use of certain resources over which he has no prior property rights". To this argument Harsanyi may reply as in fact he does, that "the opposite policy of giving absolute priority to cancer victim's unimportant need will be an even stronger violation of the Kantian principle and will amount a fortiori to treating the healthy person now as a mere means rather than as an end". But this contention is wrong. For this policy has the approval of both in the original position. The healthy person cannot complain now after the veil of ignorance has been lifted. The circle of the argument is now complete. We are back to from where we had started. Will or will not the parties in the original position accept the maximin principle for choice under uncertainty?

Other examples given by Harsanyi also fail to undermine the rationality of the use of the maximin principle in original position.

IV

According to Harsanyi the proper principle of choice under uncertainty is the principle of maximization of expected utility which should have been attributed to parties in the original position. He claims that any decision maker whose behaviour is consistent with a few-very compelling rationality postulates simply cannot help acting as if he used subjective probabilities and he cannot help acting as if he tried to maximize his expected utility, computed on the basis of some set of subjective probabilities.24 A few of these rationality postulate are: (1) "If you prefer A to B, and prefer B to C, then consistency requires that you should also prefer A to C". (2) "You are better off if you are offered a more valuable prize with a given probability. then if you are offered a less valuable prize with the same probability"25 (the sure thing principle). (3) You should be indifferent between two risky lotteries if these yield you the same prizes with the same probabilities — even if these two lotteries use quite different physical processes to generate these possibilities (the principle of probabilistic equivalence) 26. "The other rationality postulates of

Bayesian theory... are equally compelling" according to Harsanyi.²⁷ His claim is that parties in the original position should follow these postulates of Bayesian theory. Any decision which violates any of these Bayesian postulates will be an irrational decision.

One cannot reject the principle of maximization of expected utility for choice under uncertainty without rejecting the set of Bayesian postulates of rationality i.e., without rejecting at least one of these postulates.

So the question is: should we characterize the rational behaviour of the parties in the original position as described by Rawls by this set of postulates?

But before we take up this question let us have a look at the alternative model of moral value judgements as given by Harsanyi. According to him a person "would be making a moral value judgement if he chooses between the two social systems without knowing what his personal position would be under either system". If the society consists of indviduals then the individual would choose between the two alternative social systems on the assumption that under

either system he would have the same probability $\frac{1}{n}$,

of taking the place of any one of the n individuals.²⁹ Since in choosing between two social systems he would use the principle of expected-utility maximization as his decision rule, he "would always choose that social system which, in his opinion, would yield the higher average utility level to the individual members of the society".³⁰ The is Harsanyi's version of the concept of the original position.

It may be noted that the ignorance condition as envisaged by Rawls is different from the ignorance condition stipulated by Harsanyi. The only information denied by Harsanyi to an individual in the original position is "what his personal position would be under either system". Rawls would call it a 'thin veil of ignorance'. According to Rawls 'thin veil

of ignorance' is imposed "to prevent the parties from reasoning according to the principle: to persons according to their threat-advantage".³¹ "The veil of ignorance is thin, because no more knowledge is excluded than is necessary to secure this result, the parties still know the general configuration of society, its political structure and economic organization and so on".³²

Rawls calls his own version of veil of ignorance a 'thick veil of ignorance' which we described before. Rawls denies much of the information to the parties which is allowed to be known to the parties by Harsanyi. The reason as given by Rawls for the exclusion of so much information from the parties in the original position is that the parties are not to be influenced by any particular information that is not part of their representation as free and equal moral persons with a determinate (but unknown) conception of the good, unless this information is necessary for a rational agreement to be reached".33

With this clarification and distinction in mind let us come back to our question; should we characterize the rational behaviour of the parties in the original position as described by Rawls by Bayesian rationality postulates? My question is not whether 'the thin' or 'the quick' veil of ignorance should be imposed on parties in the original position. Also, I am not questioning the validity of the Bayesian rationality postulates for the parties in Harsanyi's 'thin veil of ignorance' version of the original position. Rather I am asking: given that Rawlsian 'thick veil of ignorance' has been imposed on the parties in the original position should these agents follow the Bayesian rationality principles? My answer is in the negative.

Under the ignorance condition stipulated by Rawls and the type of decision they have to make, the ascription of the last of the three Bayesian postulates given above, i.e., the principle of probabilistic equivalence to the parties is not meaningful. This principle assumes the comparability

of the two different events in regard to their objective probability. The ignorance condition is so designed by Rawls that there is no possibility of the knowledge of objectve probabilities of various circumstances that prevail. "The parties have no basis for determining the probable nature of their society, or their place in it". So there is no meaning in the original position to say regarding parties "that they should be indifferent between two risky lotteries if these yield him the same prizes with the same probabilities — even if the two lotteries use guite different processes to generate these possibilities". Rather we have to say that two lotteries which use different physical processes to generate possibilities are non-comparable for the parties in the original position. This, in technical language of the decision theory, means that the parties in the original position will find acts with different domains noncomparable.

The sure thing principle is also unacceptable for the parties in the original position. The original position is designed to be fair to all individuals. But as Diamond has shown the sure thing principle may go against fairness. The example that Diamond considers is the following. Let U_A and U_B stand respectively for welfare levels of individuals A and B, and let L^1 and L^2 be two lotteries with a fifty-fifty probability of two social alternatives specified thus:

It seems reasonable to be indifferent between the second prize of L^1 and that of L^2 because they seem very much the same except for the substitution of name tags A and B. But the first prize of both the lotteries is the same, so that the sure thing principle would make us indifferent between L^1 and L^2 . But lottery L^2 seems so unfair to individual B while

lottery L^1 gives B a fair stake. Hence, the sure thing principle goes against the fairness of the original position.

Harsanyi finds Diamond's argument unconvincing. He constructs some hypothetical situations to undermine the persuasiveness of Diamond's argument. In one example he considers two societies A and B such that A has extreme inequality, without any social mobility, and B is exactly like A except that "by old custom, all bodies born in B during any given calendar month are randomly distributed by government officials among all families who had a body denying that period, so that everybody born in that month will have the same chance of ending up in any given family". Asks Harsanyi, "should we now say that society B would be morally less objectionable than society A, because in B all individuals would have a 'fair chance' of ending up in a rich family and, therefore, in a privileged social and economic position? By assumption, B is a society with an income distribution just as unfair as A is. In both societies, any individual's social and economic position has nothing to do with personal merit, but rather is completely a matter of 'luck'. In A it depends wholly on the accident of birth — on the 'great lottery of life' which decides who is born into what particular family. In contrast, in B it depends wholly on a government conducted lottery. Why should we assign higher moral dignity to a lottery organized by government bureaucrats than we assign to the 'great lottery of life' which chooses a family for each of us without the benefit of government intervention? Why should a bureaucratic lottery be regarded as being a 'fairer' allocative mechanism than the great biological lottery produced by nature?"35

Harsanyi is guilty of confusing two points of view: that of parents and that of babies. Looked at from the point of view of parents both A and B are equally unjust. Since their children in both the alternatives are going to suffer the hereditary social and economic inequalities. The only

difference is that in A they retain their biological offsprings, while in B their children are assigned to them by the lottery, whom they accept as their children by custom. Looked at from the point of view of children, there is a difference between society A and B. In society A some suffer because of birth while in B they have a fair chance with others to end up in rich families. Harsanyi of course will remain unconvinced by this argument. For he will reply "Indeed, suppose we would obtain reliable information to the effect that the families are born into are always choosen literally by huge heavenly lottery. Can anybody seriously assert that this metaphysical information would make the slightest difference to our moral condemnation of hereditary social and economic inequalities?"36 Reply to this is that Harsanyi is taking only post lottery distribution into account. But what is relevant is the prelottery evaluation of the two social situations. In one the inequalities are predetermined while in the other every body has equal chance to end up in rich and poor family. Post lottery distribution may turn out to be identical in both the societies yet the society with lottery is better morally than society without lottery.

Probably the argument will be clearer by taking the second example of Harsanyi against Diamond's argument. In this example government has a choice between two policies. In the first policy protective tariff will be removed benefiting everybody except the workers and employers of the protected industry, which would suffer moderate economic losses. In the second policy the same distribution of gains and losses is envisaged, but the losses and gains are distributed by government conducted lottery. Now asks Harsanyi, "would it make any sense to assert that the second policy would be morally preferable to the first". His answer is in the negative. For, "under the first policy, the lossers would be the members of one particular industry, who presumably have entered this industry by family association or by other accidents of personal life history. Thus,

being a member of the loser group would be just as much a matter of personal 'bad luck as would be under the second policy where the losers would be selected literally by a lottery."37 Even though Harsanyi finds this convincing, this goes against the moral sensibility of many of us. Many people die in industrial accidents. Suppose it is established (may be by astrologers) that a certain number of persons will die by industrial accidents in a calendar year and if as many persons are sacrificed to propriate God no one will die any more by industrial accidents. Now we have two options to continue to live under risk or sacrifice the established number of persons from a certain industry. If we accept the type of reasoning accepted by Harsanyi then we should be indifferent between both the options after all, end result is the same in both cases and the death of persons of the particular industry is as much personal bad luck as the death due to actual industrial accident. But this is surely wrong. The second option is morally pernicious.

According to Rawls the parties in the original position must enter into agreement only if they can honour it even should the worst possibility prove to be the case. That is they must take into account the strains of commitment. Now the sure thing principle goes against this requirement. Consider the following modification of the above mentioned example:

Prize 1 Prize 2
$$U_A = 10$$
, $U_B = 0$ $U_A = 0$, $U_B = 10$ $U_A = 4$, $U_B = 4$

According to the sure thing principle lottery L^1 is to be preferred to L^2 since the expected utility allocation $U_A = 5$ $U_B = 5$ given L_1 is better than the expected utility allocation $U_A = 4$ $U_B = 4$ given by L_2 . But if strains of commitment is taken into account then the lottery L^2 is better than L^1 . Hence the sure thing principle is not acceptable in the original position.

The expected utility maximisation principle looks attractive because of the implicit assumption that by consistent application of this principle on each occasion of choice under uncertainty the agent is not likely to lose on the long run as the chances are not expected to be against him systematically. Principle of maximisation of expected utility is therefore attractive where the decision is one of the many so that losses due to one decision is likely to be made good in another decision. Since the quality of entire life is at stake, and there is going to be no second time, the parties in the original position cannot accept the principle of maximisation of expected utility as their guide.

The point of the controversy is that according to Harsanyi there is no such, thing as 'non-probabilizable uncertainty', while Rawls' claim is that the uncertainty in his version of the original position is an instance of 'nonprobabilizable uncertainty'. Can we find a plausible set of postulates to characterize the rational choice of parties in the original position which rules out the ascription of subjective probabilities to events? Such a set of postulates is now available. Miche'le Cohen and Jean Yves Jaffray's set of axioms38 of rational behaviour under complete ignorance should be used to characterize the rational choice of parties under uncertainty in the original position. The intuitive idea behind their axioms is that when all information on the events is denied then the decision makers' rational behaviour should show a certain "symmetry" with respect to events.39 The intuitive ideas captured by some of the axioms are as follows:

(a) A refinement of the description of an uncertain event can always be made⁴⁰ (b) Two comparable acts must have the same domain⁴¹ (c) the sub-division or the grouping together of states of nature should have no influence on preferences⁴² (d) the identities of the states of nature on which two given acts yield, respectively, such and such outcomes should have no effect on a decision maker's pre-

ferences between those acts. 43 The intuitive ideas behind the other axioms are also equally plausible.

It has been proved that if acts give different outcomes depending on which event takes place then the rational preference under complete ignorance which satisfies Cohen and Jaffray's axioms are not compatible with the ascribing of personal probabilities to the events.⁴⁴ But the rational decision criteria under complete ignorance as defined by their axioms make up an extensive family but one which excludes all criteria based on the ascribing of probabilities to events.⁴⁵

Now we face the problem of justifying the selection of maximin criteria of rational decision for using in the original position, from this family of rational decision criteria.

If we assume that in the original position the alternatives available for choice are such that the least outcome of each is different from the least outcome of every other alternative then under this assumption it is an easy matter to check that the maximin principle of choice under uncertainty satisfies all the six axioms of rational behaviour under complete ignorance.46 This list of alternatives for choice presented to the parties in the original position by Rawls is such that this assumption is readily acceptable. Rawls himself seems to make this assumption when he claims, to justify the use of maximin principle of decision, that "the rejected alternatives have outcomes that one can hardly accept."47 This contention together with his claim that "the person choosing has a conception of the good such that he cares very little, if anything, for what he might gain above the minimum stipend that he can, in fact, be sure of by following the maximin rule"48 justifies the selection of maximin rule from the set of criteria allowed by the axioms of rational choice under complete ignorance given by Cohen & Jaffray.

But these two features of the original position have been questioned by Fiskin. According to him these two features together constitute the assumption of a threshold for an agent in the original position, there is some share — "what he can, in fact, be sure, of by following the maximum rule" — such that, on the one hand "he cares very little if anything" for what he might gain above it and such that that on the other hand he would regard anything less as a share "that one can hardly accept".49 The threshold for each person depends on the rational plan of life that he has. "Now once it is granted that the definition of rational plans would require extreme disparities between the thresholds determined by different plans.....then it becomes evident that the proposed maximin choice procedure would require that the highest threshold determined by any plan must set the standard for everyone. For if there is no way of dismissing some plans as unlikely, and if an allocation which falls short of the threshold is by definition, disastrous then that possibility (whose probability is beyond further evaluation behind the veil of ignorance) must be avoided at all costs....."50 Now says Fiskin "the highest threshold of satiation which is required by any rational plan admissible according to the stated criteria must prove to be a level so high that it could be met for everyone only under condition which fall outside of what Rawls defines as the "circumstances of justice".51 Hence concludes Fiskin, "the threshold level corresponding to the second and third "features" is unsupported by the premises available and by the doctrine of rational plans, in particular. In fact.... were such a threshold to be defined it would by definition not be applicable to the problem of justice."52

Fiskin's objections do not seem to hold good against Rawls. The parties in the original position are not required to take into account each and every rational plan of life as assumed by Fiskin, for the plan of life should not merely be rational but must be consistent with justice too. Be it noted that the ideal person is presumed to have two highest order interests i.e., to exercise effective sense of justice and to exercise his capacity to understand his conception of

good. Hence the plan of life should not merely be rational as required by the later interest but should be consistent with the sense of justice too as required by the first highest order interest. But consistency, with the sense of justice, of a rational plan of life cannot be judged without first deciding what the principles of justice are. Hence no appeal to any specific rational plan of life be made without first deciding justice of it. Hence granting of highest threshold as required by any rational plan of life will be required only after that rational plan of life is shown to be consistent with justice, the principles of which are yet to be decided. Fiskin may reply that if this argument is accepted then Rawls himself also cannot appeal to the rational plan of life for deriving desire for primary goods in the original position without first showing the consistency of these with the principles of justice. But this reply is wrong for primary goods are for all purposes means for executing any rational plan of life and hence any just rational plan of life. But the highest threshold required by any rational plan of life need not be (and in fact it will not be) the highest threshold required by any just rational plan of life.

The justice and also the rationality of a plan of life depends on whether it is in accordance with the just distributive share of a person. Just distributive share of a person does not depend on any specific rational plan of life (say which requires the highest threshold). Fiskin may reply that this argument in fact is against Rawls as he himself requires the distributive share to depend on threshold for rational plan of life and since persons are ignorant about their specific rational plans they will strive to secure the highest threshold required by any rational plan of life (may be with qualification that it be just). But Fiskin is wrong in assuming that the last two of the three features which justify the use of maximin principle of choice under uncertainty in original position define a threshold. For what Rawls says is that the alternatives have some outcomes, which persons can hardly accept. He does not imply

that any outcome less than what is guaranteed by the maximin principle is unacceptable. Fiskin may reply that what is more important for defining threshold is according to Rawls the persons in the original position care very little for what they may get above the minimum assured by the maximin principle. But what is the meaning of the claim referred to by Fiskin? Rawls himself explains in respect of a person in the original position "it is not worthwhile for him to take a chance for the sake of a further advantage, especially when it may turn out that he loses much that is important to him".53 A person cares very little for further advantage not because it is a satiation point in respect to his rational plan of life as assumed by Fiskin but because he does not desire to take any risk of losing the minimum guaranteed by the maximin principle, for the sake of greater advantage. Hence contrary to what Fiskin says, the two features of the original position do not define a threshold. But it may be argued that this construction of Rawls' second feature is irrational as it implies that the parties in the original position have infinite risk aversion. But Rawls argues that it is reasonable for a person to have a high degree of aversion to risk in the original position since by taking risk it may turn out that he loses much that is important to him as the quality of an entire life is at stake. But this contention of Rawls, says Arrous, "raises some questions about the meaning of the utilities and does not do justice to the fact that, at least in Vickrey and Harsanvi, the utilities are already measured as to reflect risk aversion."54 Rawls rejects expected utility maximisation principle of choice under uncertainty not merely on the ground of difficulties with the idea of inter-personal comparison of cardinal utilities but primarily because of nonprobablizable nature of the original position as shown above.

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NOTES

- John Rawls, A Theory of Justice (Oxford University Press, 1971), p. 137.
- 2. It is generally maintained that Rawls attributed the maximin principle of choice under uncertainty to the parties in the original position and this interpretation of Rawls's view has been accepted in this essay. But Rawls merely stated, "There is an analogy between the two principles and the maximin rule for choice under uncertainty". (Ibid., p. 152). It is not clear how seriously he thought his two principles to be the maximin solution of the decision problem in the original position. In one of his latter writings he emphasized "that the maximin equity criterion and the so-called maximin rule for choice under uncertainty are two very different things," and he formulated "the reasons for the equity criterion so that they are completely independent from this rule". John Rawls, "Some Reasons for the Maximin Criterion", The American Economic Review, vol. 64, Papers and Proc. (May, 1974) 141-146, esp. 141.
- 3. Rawls, A Theory of Justice, p. 152.
- 4. Ibid., p. 153.
- 5. Ibid., p. 153.
- 6. Ibid., p. 154.
- 7. Ibid., p. 154.
- 8. Ibid., p. 154.
- 9. Ibid., p. 156. The clause in the brackets added by the present author.
- 10. Ibid., p. 156.
- 11. John C. Harsanyi, "Can the Maximin Principle serve as a basis for Morality? A critique of John Rawls's Theory, "The American Political Science Review, Vol. 69, (1975).
- 12. Ibid., p. 596.
- 13. In any real society the difference principle will have the implication that the medicine be given to the basically healthy person because otherwise the welfare level of the hopelessly sick individual will be even worse for he will be deprived of the help and care of the healthy person etc.
- 14. Ibid., p. 596.
- 15. Ibid., p. 596.
- 16. Rawls, "Some Reasons for the Maximin Criterion", p. 142.
- 17. Harsanyi, p. 605.

- John Rawls, "Kantian Constructivism in Moral Theory: The Dowey Lectures 1980", The Journal of Philosophy, Vol. LXXVII, No. 9, (September, 1980), 575-572, p. 546.
- 19. Ibid., p. 536.
- 20. Rawls, A Theory of Justice, p. 4.
- 21. Rawls, "Kantian Constructivism", p. 536.
- 22. Harsanyi, "Can the Maximin Principle serve as a Basis for Morality?" p. 597.
- 23. Ibid., p. 597.
- 24. Ibid., p. 599.
- 25. Ibid., p. 599.
- 26. John C. Harsanyi, "Bayesian Decision Theory and Utilitarian Ethics", *The American Economic Review*, Vol. 68, Paper and Proc. (May, 1978), p. 224.
- Harsanyi, "Can the Maximin Principle serve as a Basis for Morality?" p. 599.
- 28. Ibid., p. 598.
- 29. Ibid., p. 598.
- 30. Ibid., p. 598.
- 31. Rawls, "Kantian Constructivism", p. 549.
- 32. Ibid., 549.
- 33. Ibid., 549.
- 34. Diamond, 'Cardinal Welfare, Individualistic Ethics and Interpersonal Comparisons of Utility', Journal of Political Economy 75 (October 1967).
- 35. Harsanyi, John C., "Nonlinear Social Welfare Functions", Theory and Decision, Vol. 6 (1975), p. 317.
- 36. Ibid., p. 317.
- 37. Ibid., p. 318.
- Michele Cohen and Jean Yves Jaffray, "Rational Behaviour Under Complete Ignorance", Econometrica, Vol. 48, No. 5 (July, 1980), 1281-1299, esp. pp. 1281-1286.
- 39. Ibid., p. 1284.
- 40. Ibid., p. 1282.
- 41. Ibid., p. 1283.
- 42. Ibid., p. 1283.
- 43. Ibid., pp. 1284-85.
- 44. Ibid., pp. 1287-1288.
- 45. Ibid., pp. 1296.

- 46. Cohen and Jaffray give an example (Example 4) of the rational decision criterion under complete ignorance which satisfy all their axioms. This rational criterion reduces to the maximin criterion under our special assumption. *Ibid.*, p. 1295.
- 47. Rawls, A Theory of Justice, p. 154.
- 48. Ibid., p. 154.
- Fiskin, James, "Justice and Rationality: Some objections to the Central Argument in Rawls' Theory", The American Political Science Review, Vol. LXI, No. 2 (June, 1975), p. 618.
- 50. Ibid., p. 619.
- 51. Ibid., p. 620.
- 52. Ibid.
- 53. A Theory of Justice, p. 154.
- 54. Arrous, K. J. "Some Ordina'ist-Utilitarian Notes on Rawls' Theory of Justice", The Journal of Philosophy, Vol. LXX, No. 9 (May 10, 1973), p. 251.