Aggregation and Numbers

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This article considers the reach of arguments for saving the greater number without interpersonal aggregation, and argues that interpersonal aggregation is useful to encompass the proper respect due to each separate person. I first give a precise definition of interpersonal aggregation, which many non-utilitarians try to avoid. Then, I show that consequentialism and Scanlon can justify the case for the greater number without interpersonal aggregation. However, I propose the Aggregation Approach, which justifies the case for the greater number in some cases and the case for tossing a fair coin in other cases. I conclude that interpersonal aggregation does not disrespect the separate person.

I. INTRODUCTION

Consider the choice between (a) saving one stranger's life and letting five different strangers die, and (b) saving five strangers' lives and letting another stranger die (call this the *Rescue Case*). In his controversial paper, John Taurek argues that we should flip a fair coin in this situation, since flipping a coin gives each person an equal chance of being saved, and this best captures the moral claim that we should treat each person with equal concern and respect.[1] By endorsing coin-tossing, he rejects the comparison between the combined good of five lives saved and the good of one life saved, thus ruling out interpersonal aggregation.

Taurek's argument is not controversial for those who favour interpersonal aggregation. There is no controversy but rather a disagreement. It is controversial for non-utilitarian philosophers who are supposed to share the objection to interpersonal aggregation with Taurek, yet may want to save five lives directly, not tossing a coin. They believe it implausible that distributive principles, based on interpersonal aggregation, justify the case in which the sufficiently great gains for the sufficiently large number of people outweigh the losses for the smaller number of people. They think that the failure to give proper respect to each separate person rests on interpersonal aggregation. In order to give proper respect to each separate person, they reject interpersonal aggregation and put forward some sort of non-aggregative distributive principle. However, we should ask the following question: If the goods/bads of different people are not allowed

[1] John Taurek, 'Should the Numbers Count?', *Philosophy and Public Affairs* 6 (1977).

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to be aggregated, how could they justify the case for saving the five in the Rescue Case? Does the rejection of interpersonal aggregation imply that we should toss a coin in the Rescue Case? Some non-utilitarians want to give proper respect to each separate person but at the same time want to save the greater number in the Rescue Case. Let us call this problem the *Number Problem*.

There seem to be two ways to approach the Number Problem. The first approach, that of the non-utilitarians, regards the rejection of interpersonal aggregation as a necessary way to give proper respect to each separate person, and offers an argument for saving the greater number of people without appealing to interpersonal aggregation. Let us call this approach the *Non-Aggregation Approach*. This approach has recently been advocated by Frances Kamm and Thomas Scanlon.[2] The other approach is based on the belief that interpersonal aggregation does not necessarily fail to respect each separate person equally. Interpersonal aggregation and the respect given to each separate person are not in conflict. According to this approach, we can justify the case for the greater number with proper respect for each separate person, but this does not rule out interpersonal aggregation. Let us call this approach the *Aggregation Approach*.

The present article defends the Aggregation Approach because it seems that we should save the greater number in some cases, and that we should toss a coin in other cases even if one group is strictly larger than the other. It is not the case that we should always save the greater number. And the Aggregation Approach best captures the rationale behind this judgement.

The article is organized as follows. Section II shows that two non-aggregative principles, Maximin and the pairwise comparison, do not support saving the greater number. Section III suggests what is meant by interpersonal aggregation (or the implausible form of interpersonal aggregation), which many non-utilitarians wish to avoid. Section IV discusses the consequentialist case for saving the greater number of people without appealing to interpersonal aggregation. Section V examines Scanlon's proposal in favour of saving the greater number. Section VI raises the question of whether we should always save the greater number and discusses what I call the Converse Number Problem. Section VII puts forward the Aggregation Approach, which solves both the Number Problem and the Converse Number Problem by giving proper respect to each person concerned.

[2] Frances Kamm, *Morality, Mortality*, vol. 1 (New York, 1993), pp. 101, 114–19; Thomas M. Scanlon, *What We Owe to Each Other* (Cambridge, Mass., 1998), pp. 229–41.

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II. RAWLS AND NAGEL ON THE NUMBERS

Some philosophers think that we should reject interpersonal aggregation in order to give proper respect to each separate person. And they put forward non-aggregative principles. For example, as part of his two principles of justice, John Rawls proposes the Difference Principle, according to which social and economic inequality should be arranged so as to benefit the least advantaged group in terms of primary social goods.[3] The Difference Principle does not aggregate the goods of different groups and, not surprisingly, it does not consider the numbers. To illustrate his argument, suppose that there are two million people in the least advantaged group in a possible state x and that there are a million people in the least advantaged group in another state y. If both groups are at the same level of primary social goods, the Difference Principle judges that x and y are equally good. It also implies that any small gain for the worst-off group outweighs the greater losses for the non-worst-off groups, however large the size of the non-worst off-groups actually are. Thus, the numbers do not count on the Difference Principle.

Thomas Nagel also puts forward a non-aggregative distributive principle, which he calls the *pairwise comparison*. It compares one person's gain and loss with another's, in order to identify which alternative would be less unacceptable, and chooses the least unacceptable one from individual standpoints.

> Where there is conflict of interests, no result can be completely acceptable to everyone. But it is possible to assess each result from each point of view to try to find the one that is least unacceptable to the person to whom it is most unacceptable. This means that any other alternative will be more unacceptable to someone than this alternative is to anyone. The preferred alternative is in that sense the least unacceptable from each person's point of view separately. A radically egalitarian policy of giving absolute priority to the worst off, *regardless of numbers*, would result from always choosing the least unacceptable alternative, in this sense.[4]

The pairwise comparison compares each person's gain and loss with another's, and, through the series of pairwise comparisons, it identifies the alternative which is least unacceptable to everyone. Given that the comparison is made between the gains and losses of two persons, it rules out the possibility that the combined gains of a group of different persons outweigh the combined losses of another group. The pairwise

[3] John Rawls, *A Theory of Justice* (Cambridge, Mass., 1971).
[4] Thomas Nagel, 'Equality', in his *Mortal Questions* (New York, 1979), p. 123. Emphasis added.

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comparison is non-aggregative. Even if x is slightly better than y for a million people but if y is considerably better than x for one very badly off person, the pairwise comparison would claim that y should be chosen. Nagel thus rules out interpersonal aggregation of gains and losses, and hence thinks numbers irrelevant.[5]

Let us see what the non-aggregative principles of Rawls and Nagel would claim in the Rescue Case. Given that Rawls's Difference Principle is applied only to the basic social structure and to the representative individuals of groups, it should not be applied to the Rescue Case. But consider Maximin, which underlies the Difference Principle. Maximin is concerned with the betterness relation of states of affairs. It claims that x is better than y if and only if the level of the worst-off person in x is higher than that in y.[6] Since someone dies whichever group we might save, Maximin judges that saving five lives is equally as good as saving one life. Maximin itself does not give any reason to support saving five lives. It would not disagree with tossing a coin.

Nagel's pairwise comparison would not claim to save five lives, either. The gain and loss of each person is compared with another, and by continuing the pairwise comparisons for all pairs of six individuals concerned, it turns out that the gain and loss of each person is equally great. Therefore, saving five lives and saving one life are equally acceptable/unacceptable to each of them. Nagel's pairwise comparison implies that saving five lives is equally acceptable as saving one life. Consequently, like Maximin, the pairwise comparison itself does not support saving five lives. It would not disagree with tossing a coin.[7]

Thus, neither Maximin nor the pairwise comparison justifies the case for saving five lives. This invites the following question: Does respect to each separate person lead us to toss a coin in the Rescue Case? If we want to save the five, does this mean that we are appealing to interpersonal aggregation? The answer is 'no'. It is possible to justify the case for saving the greater number without interpersonal aggregation. In later sections, I shall examine two proposals that take a Non-aggregation Approach: the consequentialist proposal and Scanlon's argument. But before we begin to analyse the Non-aggregation Approach to the Number Problem, we need to pin down what exactly the Non-aggregation Approach wants to avoid.

[5] Nagel is fully aware of the importance of numbers. See Nagel, 'Equality', p. 125, and his *Equality and Partiality* (New York, 1991), p. 73.

[6] I assume that people's well-being is measured by well-being at each temporal stage, not lifetime well-being.

[7] This point was first made by Michael Otsuka, 'Scanlon and the Claims of the Many versus the One', *Analysis* 60 (2000), pp. 290–1.

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III. AGGREGATION AND CONSEQUENTIALISM

I have so far used the term 'interpersonal aggregation' without defining it precisely. Let me define it in order to clarify what Taurek and non-utilitarians exactly wish to avoid. Taurek says:

> [i]t is not my way to think of them [five strangers] as each having a certain *objective value*, determined however it is we determine the objective value of things, and then to make some estimate of the combined value of the five as against the one.[8]

Here, he does not want to combine the losses of five individuals into an 'objective value' and to balance the combined value of the five against the one. I shall follow Taurek's characterization of interpersonal aggregation. By interpersonal aggregation, I mean, roughly, the combination of separate people's goods, happiness, losses, well-beings, and so on, into an objective value. In what follows, I will provide a precise definition of aggregation in general and interpersonal aggregation in particular.

First, let us define aggregation in general. Aggregation combines the values of separate morally relevant features into a single value in order to determine a comparative relation between the non-singleton sets of these features (a set containing more than two elements). Suppose there are two sets. One set contains i features and the other contains j features. The relation between the two sets is as follows:

> **Relation**: $(a_1, a_2, \ldots, a_i)$ is at least as F as $(a'_1, a'_2, \ldots, a'_j)$, where F is some property, e.g. good, great, strong, and so forth.

Fer is a strict relation which holds between two sets, e.g. better, greater, stronger, and so forth. For simplicity, let us assume that the Fer relation is reflexive, transitive and complete, and hence that the Fer relation constitutes an F-ordering. The features in each set can be good, well-being, happiness, claims, loss, pain, and so on. Aggregation combines these separate features into a single value. This is best understood by introducing a real valued function, which is a numerical representation of an ordering. The relation of the two sets is represented by a strictly increasing function f, and this defines the notion of aggregation.

> **Aggregation**: $(a_1, a_2, \ldots, a_i)$ is at least as F as $(a'_1, a'_2, \ldots, a'_j)$, if and only if $f(a_1, a_2, \ldots, a_i) \geq f(a'_1, a'_2, \ldots, a'_j)$, where $f(\ )$ is strictly increasing in its arguments and not bounded above.

[8] Taurek, p. 307. Emphasis added.

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When the subscripted indices above indicate persons, we have interpersonal aggregation. Thus, interpersonal aggregation is the combination of each person's morally relevant features (i.e. good, well-being, happiness, claims, loss, pain, and so on) into a real value in order to determine the relation of two sets.

Function $f(\ )$ should be increasing in its arguments because, other things being equal, the increase of one feature should make the value of combined features strictly greater. Function $f(\ )$ should not be bounded above because the value of combined features has an upper limit. That is, the value of a sufficiently large number of features should outweigh the higher value of some combination of features. If we do not assume that the function is not bounded above, there is some case, in which any increase in the combined value of a large number of people does not outweigh a small decrease in the value of a single person.

Take classical utilitarianism as an example. Classical utilitarianism is concerned with the betterness relation of states of affairs, i.e. it seeks to establish the relative goodness of states of affairs. Classical utilitarianism assumes that a state of affairs is a set of persons' happiness and that a state of affairs x is better than another y if and only if the sum of happiness in x is greater than that in y. So classical utilitarianism combines each separate person's happiness into a real value in order to establish the betterness relation between states of affairs. In classical utilitarianism, the real valued function is an increasing, linear, additive function. That is,

> **Classical utilitarianism**: a state of affairs $x = (w_1, w_2, \ldots, w_n)$ is at least as good as another state of affairs $y = (w'_1, w'_2, \ldots, w'_n)$ if and only if $f(x) = w_1 + w_2 + \cdots + w_n \geq f(y) = w'_1 + w'_2 + \cdots + w'_n$,

where w_i is a person's happiness.[9]

It should be emphasized that, on the above definition, interpersonal aggregation does not entail consequentialism and that consequentialism does not entail interpersonal aggregation. Consequentialism is concerned with the relative goodness, or betterness, of states of affairs. A state of affairs x is better than y if and only if the good in x is greater than in y. Some principles aggregate the goods of different people without appealing to the betterness of states of affairs. Some

[9] It should be noticed that adding-up is not the only way to combine the well-beings of different people. One example of non-additive interpersonal aggregation is what economists call the Nash social welfare function, which is a product of individual well-being: that is, a state of affairs $x = (w_1, w_2, \ldots, w_n)$ is at least as good as another $y = (w'_1, w'_2, \ldots, w'_n)$ if and only if $f(x) = w_1 \times w_2 \times \cdots \times w_n \geq f(y) = w'_1 \times w'_2 \times \cdots \times w'_n$. This formula certainly combines individual well-being into an objective value so to determine the relative goodness of states of affairs, but it is not additive.

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principle, for example, may aggregate the claims of different people and claim that we have a duty to respond to the stronger claim as a whole. This is not a theory about the betterness of states of affairs, yet it combines the claims of different people into an objective value.

Similarly, consequentialism does not entail interpersonal aggregation. Some consequentialist principles determine the betterness of states of affairs without combining separate goods into an objective value. But the good in a state of affairs can be specified without combining the good of separate people. For example, according to Maximin, the good of a state of affairs is the well-being level of the worst-off person. It does not combine the goods of separate people, yet it is still a principle that refers to the betterness of states of affairs.[10]

IV. CONSEQUENTIALIST PROPOSAL

Given a clear distinction between interpersonal aggregation and consequentialism, there may not be any controversy even if someone wants to accept consequentialism without interpersonal aggregation. She might want to say that one state of affairs is better than another state but without combining the goods of separate people. I think that consequentialists can justify the case for saving the greater number without combining the goods of separate people into an objective value. In what follows, I shall consider the *consequentialist proposal* for saving the greater number without interpersonal aggregation.[11]

Consequentialism requires only two non-aggregative conditions in order to show that saving more is better than saving fewer.

> **Symmetry**: the permutations of personal identities do not change the goodness of a state of affairs: e.g. $x = (10,5)$ and $y = (5,10)$ are equally good.
> **Pareto**: if one state of affairs is better for some person than another state, and if it is worse for no persons, then it is better than the other.

[10] One might wonder whether Maximin is aggregative according to my characterization, since Maximin can be represented by a functional form, i.e. a state of affairs $x = (w_1, w_2, \ldots, w_n)$ is at least as good as another $y = (w'_1, w'_2, \ldots, w'_n)$ if and only if $f(x) = \min\{w_1, w_2, \ldots, w_n\} \geq f(y) = \min\{w'_1, w'_2, \ldots, w'_n\}$. Certainly, the good of a distribution is represented by a real value. However, the Maximin function is not increasing in its arguments, and hence it does not satisfy the characterization above. The gist of my characterization is that interpersonal aggregation dissolves the goods of different people into an objective value: Maximin does not dissolve the goods of different people.

[11] The following argument first appeared in my 'Saving the Greater Number without Combining Claims', *Analysis* 61 (2001). It is similar to what Frances Kamm calls the *Aggregation Argument* (Kamm, pp. 85–7). However, as I shall show, it does not aggregate the good of separate people, and my formulation captures the basic structure of her argument neatly.

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Equipped only with these two non-aggregative conditions, I shall show that saving more is better than saving fewer. First, consider the choice between (1) saving A and letting B&C die and (2) saving B&C and letting A die. Now, compare three states of affairs, each of which shows the states of A, B and C.

x: = (saved, dead, dead)
y: = (dead, saved, dead)
z: = (dead, saved, saved).

What I need to show is that z is better than x. By Symmetry, x is equally as good as y. By Pareto, z is better than y. Consequently, z is better than x, as required. Thus, saving two is better than saving one. By continuing the same process for comparisons between saving n persons and n-1 persons, I conclude that saving more is always better than saving fewer. As neither Symmetry nor Pareto aggregates the goods of different people, consequentialism combined with Symmetry and Pareto supports saving the greater number without combining the goods of different people into an objective value.

Symmetry and Pareto are weak conditions, and many principles such as utilitarianism, Prioritarianism, lexicographic extension of Maximin rule (Leximin, for short),[12] and so on, satisfy these two conditions. As shown, any principle satisfying both conditions judges that saving more is always better than saving fewer. Therefore, it is not surprising that some non-utilitarians agree with utilitarians that saving more is better than saving fewer.

Nonetheless, some principles do not satisfy either condition. Those principles do not necessarily claim that saving more is better than saving fewer. Take Maximin again. It satisfies Symmetry but does not satisfy Pareto. It judges that x and y are equally good, but that y is equally as good as z; consequently, it judges that x is equally as good as z. According to Maximin, there is no ground to support saving the greater number.[13]

It is important, however, to note that the conjunction of Symmetry and Pareto fails to provide the definitive answer in a more complicated choice problem. Consider the 'television studio example' of Thomas

[12] Prioritarianism is proposed by Derek Parfit, *Equality or Priority* (Kansas University: Lindley Lecture, 1995). Leximin first compares the worst-off across the alternatives and, if the worst-off are at the same level, compares the second worst-off, and so on.

[13] It should be noted that Maximin and Taurek's claim are based on a different reasoning although both reach the same conclusion. By rejecting Pareto, Maximin does not give positive respect to the state of the non-worst-off people, whereas Taurek may wish to give it to them. However, Taurek may not disagree with Pareto, but Symmetry. I owe this point to the anonymous referee.

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Scanlon, where we face a choice between (a) interfering with the enjoyment of a billion World Cup viewers in order to save Jones who suffers an accident in the transmitter room, and (b) letting Jones be in pain and waiting until the match is over.[14] In this example, the conjunction of Symmetry and Pareto does not tell whether we should save Jones or let him be in pain for the sake of the amusement of a billion viewers. To consolidate goods of different strength, we need some stronger condition than Symmetry and Pareto. It is at this stage that some principles allow interpersonal aggregation, while others do not. Some people would adopt an aggregative formula, and would say that the combined goods of a billion viewers outweigh the goodness of saving Jones. Even if the individual good is very small, the combined goods of a sufficiently large number of people may outweigh the good of one person. Needless to say, utilitarians adopt the aggregative formula at this stage. However, some others adopt a non-aggregative formula, like Leximin. In the television studio case, Leximin judges that saving Jones is better than letting a billion viewers watch the match. So Leximin disagrees with utilitarianism with regard to this example.

Symmetry and Pareto are so weak that diverse principles satisfy them. In so far as the good of each person has the same moral importance, Symmetry and Pareto tell us to save the greater number without combining the goods of different people into an objective value. The numbers count if the goods are equally weighty; but the numbers do not necessarily count if the goods differ from one another.

V. A NON-CONSEQUENTIALIST PROPOSAL: SCANLON'S ARGUMENT

Recently, Thomas Scanlon has suggested a different argument for saving the greater number.[15] His argument is based on his contractualism, not on the betterness of states of affairs. Scanlon does not say that saving more is necessarily better than saving fewer.

Scanlon's contractualism maintains that an act is wrong if it is ruled out by principles that no one can reasonably reject from individual standpoints. According to Scanlon's contractualism, whether or not principles can be rejected depends only on the reasons from various individual standpoints. When there exists even one person who has a plausible reason to reject a principle, Scanlon argues, the same principle is not seen as a basis to judge the rightness and wrongness of an act, even if many people, however many, would have benefited from

[14] Scanlon, p. 235.
[15] Ibid., pp. 229–41. See also Kamm, pp. 101, 114–19.

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adopting such a principle. Scanlon's contractualism seems to reject any possibility of aggregating different people's claims.

However, Scanlon does not want to rule out the possibility that the numbers count, saying that:

> contractualism appears to go too far in the opposite direction, disallowing any appeal to aggregative benefits even in cases in which the right thing to do does seem to depend on the impact that various actions would have on particular individuals but also on the number of individuals who would be affected.[16]

He wishes his contractualism to allow the numbers to count at least in some cases so long as it does not open the door to an implausible form of aggregation like the utilitarian one.

Scanlon then puts forward his own case for saving the greater number. He first considers a choice between (a) saving A and letting B&C die and (b) saving B&C and letting A die. His argument runs as follows. If there is only one person on each side, tossing a fair coin might be the principle which no one can reasonably reject from individual standpoints. But if the presence of C's claim makes no difference to how we are required to go about deciding what to do, this implies that C's claim to be saved would have no moral significance and hence that C is not shown a positive concern. Therefore, C can reasonably reject the principle of tossing a coin. This is all Scanlon says.

It should be noticed that Scanlon's argument is similar to the consequentialist proposal in structure. In Scanlon's argument, A's and B's claims are balanced out and C's claim provides the basis to reject the principle of tossing a coin, tipping the balance in favour of the principle of saving the greater number. The chief difference is (1) that Scanlon's argument is based on an individual *claim* whereas the consequentialist proposal is based on the betterness of states of affairs, and (2) that Scanlon's argument sees C's claim as a basis to reject the *principle* of tossing a coin whereas the consequentialist proposal sees the betterness of C's states as a basis to judge the betterness of states of affairs. Even if there are these differences, Scanlon's argument is structurally similar to the consequentialist proposal and, from this, there is good reason to think that Scanlon's argument, like the consequentialist proposal, supports the case for saving the greater number without interpersonal aggregation.[17]

[16] Scanlon, p. 230.

[17] This structural similarity begs a question: Does Scanlon's contractualism add anything to the conventional theory of value? There might be metaphysical, semantic or epistemological reason to think that reasons are a more fundamental normative element than values. But, given that the value-based ethical theory can reach the same conclusion as Scanlon's reason-based ethical theory, what does Scanlon add in so far as

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However, it may be argued that Scanlon's argument implicitly relies on a type of interpersonal aggregation because C's claim rejects the principle of coin-tossing only when C's claim is presented together with B's claim. This point was recently made by Michael Otsuka, according to whom Scanlon's argument 'considers C's claim *in combination with* B's claim so that they *together* tip the balance in favour of saving B and C. So Scanlon's argument compares the claim of a group of individuals against the claim of one person.'[18] As Scanlon's argument appeals to the claim of a group of individuals to be saved, Otsuka concludes that it relies on a type of interpersonal aggregation.

Surely, C's claim tips the balance in favour of saving the greater number only when C's claim is presented with B's claim against A's claim. So Otsuka is right to say that Scanlon's argument considers C's claim *in combination with* B's claim. However, it is not clear if Scanlon's argument relies on interpersonal aggregation. Otsuka seems to imply that whenever someone's claim in combination with other people's claims tips the balance in favour of them, interpersonal aggregation takes place, even if their claims do not dissolve into an objective value. But I will argue that Scanlon's argument does not aggregate B's and C's claims or aggregate the claims of different people.[19]

Assume that Scanlon's argument aggregates the claims of different people, and let us write C_i for person i's claim. Assume also that the strength of claims of a group can be represented by a real-valued function $g(\ )$, where the claim of i is stronger than the claim of j if and only if $g(C_i) > g(C_j)$. So the *combined* claim of B and C is stronger than the claim of A alone if and only if $g(C_B, C_C) > g(C_A)$. This is because it is natural to think that the function $g(\ )$ is increasing in the number of its arguments. Now, consider the 'television studio example' again. If Scanlon's argument aggregates the claims of different people as Otsuka claims, then there must be a sufficiently great number n such that $g(C_{Jones}) < g(C_1, C_2, \ldots, C_n)$, even if $g(C_{Jones}) > g(C_1, C_2, \ldots, C_{n-1})$. That is, there must be a sufficiently large number of people such that the combination of weaker claims of those people outweighs

the structure of theory is concerned? This question supports what has become known as the *redundancy objection* to Scanlon's contractualism. Kent Hurtig and I have discussed this issue formally in 'Lexical Dominance in Reasons', St Andrews (2003). See also Michael Ridge, 'Saving Scanlon: Contractualism and Agent-relativity', *The Journal of Political Philosophy*, 9 (2001), and Philip Stratton-Lake, 'Scanlon's Contractualism and the Redundancy Objection', *Analysis* 63 (2003).

[18] Otsuka, p. 291. Original emphasis.

[19] One might think that the disagreement between Otsuka and me is nothing more than a difference in definition, i.e. Otsuka's understanding of interpersonal aggregation is broader than mine. Even if this is the case, it can still be said that my argument clarifies the implausible form of interpersonal aggregation that Scanlon and other non-utilitarians wish to avoid.

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the stronger claim of Jones. Scanlon, however, does not allow such a combination of claims into an objective value. He does not need such a combination in order to justify the case for saving the greater number. Just as in the case of the consequentialist proposal, as far as the claims of people are the same strength, Scanlon's argument can justify it by balancing A's and B's claims out and by then seeing C's remaining claim as a balance-tipping force. When the claims of people are different as in the television studio example, Scanlon's argument claims that, like Leximin, we should save Jones. This is because Scanlon's argument, like Leximin, does not allow interpersonal aggregation. Otsuka is right to say that Scanlon's argument considers C's claim in combination with B's claim. But this does not necessarily imply that Scanlon's argument relies on some sort of interpersonal aggregation. Scanlon's argument falls under the Non-aggregation Approach to the Number Problem.[20]

VI. SHOULD THE NUMBERS ALWAYS COUNT? THE CONVERSE NUMBER PROBLEM

I have examined two successful non-aggregative arguments in the Number Problem. Both the consequentialist proposal and Scanlon's argument maintain that we should *always* save the greater number. This is the case whenever the goods/claims of people are equally weighty. However, as I briefly mentioned in section I, I believe that we should save the greater number in some cases, but that we should toss a coin in other cases even if one group is strictly larger than the other.

Consider the large scale Rescue Case, where we face a choice between (a′) saving 1,000 lives and letting 1,001 people die and (b′) saving 1,001 lives and letting 1,000 people die. The consequentialist proposal says that saving 1,001 lives is better than saving 1,000 lives. Scanlon's argument would say that, if we are to adopt the principle of tossing a coin, the additional person on the side of 1,001 could reasonably reject a principle that favours saving 1,001 lives. So both the consequentialist proposal and Scanlon's argument maintain that we should save 1,001 lives. But I believe that we should toss a coin in the large-scale Rescue Case, even if it is the case that we should save the five rather than saving the one. If these two judgements are intuitively appealing, we need to provide a different argument to explain two seemingly

[20] This is just one possible interpretation of Scanlon's argument. It might be argued that the claim of Jones *silences* the claims of World Cup viewers. That is, the claims of World Cup viewers lose the reason-giving force when they meet with Jones's claim. But my point here is that, even if Scanlon does not appeal to the notion of silencing a certain claim-type, he can still hold that his case for saving the greater number does not rely on interpersonal aggregation.

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conflicting judgements: that (1) we should save the greater number in some cases; and (2) we should toss a coin in other cases. On the face of it, the numbers count in the former judgement, whereas the numbers do not count in the latter judgement. I have called this the Number Problem of the search for arguments for saving the greater number. I shall then search for an argument which justifies the case for tossing a coin. Let us call this problem the *Converse Number Problem*.

What is the idea behind the judgement that we should toss a coin in the large-scale Rescue Case? Frances Kamm offers a possible answer, though I disagree. She considers the large-scale Rescue Case.

> Now suppose 1000 people are on one island and 1001 people are on another. Here, I believe, it may even be correct to ignore the difference of one life. If so, then in this context the one life has become an irrelevant utility.

She continues:

> [I]t is not only the (objective) significance of the additional loss to the person who will suffer it that counts. . . . In addition, the size of the chance for life that is at stake for others and the number of others whose lives are at stake may make relevant or irrelevant an additional utility that is irrelevant or relevant in other contexts.[21]

Here, Kamm thinks it wrong to deprive 1,000 people of their 50 per cent chance to be saved simply in order to obtain the extra utility of saving one more person. An additional life in the group of 1,001 is unimportant and negligible in the large-scale Rescue Case, and it should not count. According to Kamm, it is an 'irrelevant utility'. She believes it right to toss a coin and to give each person an equal chance to be saved.[22]

Is an additional life saved in the larger group an irrelevant utility in the large-scale Rescue Case? I think it a *relevant* utility. But it is

[21] Kamm, p. 103. Originally, her idea of an irrelevant utility is used as a possible criticism against the substitution of equivalents (which roughly corresponds to my Symmetry in the consequentialist proposal) in her Aggregation Argument.

[22] To understand Kamm's idea of an irrelevant utility, it may be helpful to look at another example Kamm discusses (Kamm, pp. 101–2). Suppose a choice between saving A's life, on the one hand, and saving B's life and curing C's sore throat, on the other hand. Call this example the *Sore Throat Case*. Kamm thinks it wrong to deprive A of his 50 per cent chance to be saved in order to get the additional utility of curing C's sore throat. She thinks that the additional utility of curing C's sore throat is an irrelevant utility. According to Kamm, it is right to toss a coin in the Sore Throat Case. As far as this example is concerned, Scanlon might share a similar view. He might claim that, faced with a claim to being saved, the claim that the sore throat be treated may lose its reason-giving force, or that the claim that the sore throat be treated is *silenced* by the claim to being saved. However, in the large-scale Rescue Case, the claim of an additional person may never be silenced by other equally weighty claims.

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outweighed by some other consideration. The good of an additional life saved is outweighed by the bad of something that is caused by saving 1,001 lives directly. What is this 'something' then? It is unfairness: unfairness done to 1,000 people who are not saved. The next section presents my own argument for tossing a coin in the large-scale Rescue Case, capitalizing on the notion of unfairness.

VII. TAKING UNFAIRNESS SERIOUSLY

First of all, let me introduce two accounts of unfairness: a strict account and a moderate account. In the Rescue Case, each person, regardless of which group he/she might belong to, has an equally strong claim to the good. The good is being saved. Each person is equally entitled to this good. So their claims should be satisfied equally. When their claims are not satisfied equally, it is unfair to those persons whose claim is not satisfied. If the good is divisible, we may divide it equally and distribute it to each person equally. This is perfectly fair. However, in the Rescue Case, the good is indivisible. When some people's claims are satisfied, other people's claims will not be satisfied. The only way to satisfy their claims equally is to save nobody. This is perfectly fair.[23]

The strict account of unfairness claims that, if an act or policy is unfair to someone, it ought to be ruled out, full stop. Unfairness ought to be ruled out regardless of how much good would be obtained by allowing the unfairness. Thus, according to the strict account of unfairness, unfairness cannot be outweighed by any amount of good, obtained by allowing the unfairness. In the Rescue Case, it is unfair to save the people in the larger group and let the people in the smaller group die. As each of them has an equally strong claim to the good, their claims ought to be satisfied equally. As saving nobody is the only way to satisfy the equally strong claim equally, it is the only option which is not ruled out by the strict account of unfairness. On the face of it, the coin-tossing seems a *fair device*. Yet, saving someone in the Rescue Case necessarily involves unfairness, because some people are left unsaved and this is an unequal satisfaction of equally strong claims. Thus, the strict account of unfairness would demand that we save nobody.

On the other hand, the moderate account of unfairness allows a trade-off between unfairness and other considerations. Like the strict notion of unfairness, the moderate notion of unfairness claims that it is unfair that some people are saved and others are not saved whenever they have an equally strong claim. If we save the people in the larger group,

[23] For more detailed treatment of fairness in this line, see John Broome, 'Fairness', *Proceedings of the Aristotelian Society* 91 (1990–1), pp. 87–102. Reprinted in his *Ethics out of Economics* (Cambridge, 1999), pp. 111–22.

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it is unfair to those in the smaller group. Even if we save the lives of either side by tossing a coin, it is still unfair to people who are not saved. However, saving no one seems stupid. It may be *better* to save someone than no one, even if doing so involves some unfairness. It is the moderate account of unfairness which warrants this move. On the moderate account, unfairness is not the only relevant normative consideration. Other considerations such as the good of saving someone are also relevant. Even if saving someone in the Rescue Case includes unfairness, that unfairness may be outweighed by the good of saving someone. That is, the good of saving someone outweighs the bad of unfairness done to those people not saved. This implies that unfairness can be outweighed by a sufficient amount of good. What if unfairness is allowed to be outweighed by the good of saving someone? The least unfair thing to do is to give each person an equal chance to be saved, e.g. by tossing a coin. So, the moderate account may claim that we should toss a coin.[24]

The moderate account has a further implication. On this account, it is better to save someone than no one. It includes some unfairness. But the bad of some unfairness is outweighed by the good of saving someone. This implies that, as soon as we judge it better to save someone than no one, we are slipping into the domain where unfairness is reduced to a bad, which can be outweighed by a good. This opens the door to the possibility that the badness of unfairness be outweighed by a sufficiently large amount of good, brought about by saving the greater number of people. We shall save someone because saving someone is good enough to outweigh some unfairness. Then, it might be said that saving more lives is even better and outweighs more unfairness; and saving the sufficiently large number of lives is good enough to outweigh unfairness after all.[25]

[24] It is not my contention that one account of unfairness is more plausible than another in general. Whether one account is more plausible than another depends on the context of moral judgement. Take racism, for example. If a university does not admit a student because he is from a certain ethnic group, it is unfair to that student. Many people believe that such racism ought to be eliminated, however much benefit the university would gain by maintaining such a racist admission policy. In this context, unfairness may never be thought to be outweighed by any other consideration, and hence we may adopt the strict account of unfairness. But, in the Rescue Case, if we adopt the strict account, we would end up saving nobody and this seems to be implausible. We should save at least some people, even if it includes the unequal satisfaction of equally strong claims, which is unfair. Thus, in the particular context of the Rescue Case, it seems that the moderate account is more plausible than the strict account.

[25] Taurek's claim may be seen as either a weaker version of the moderate account or a completely different account of fairness. In the former case, he wants to say that the badness of unfairness is outweighed by the goodness of saving someone, but not that the goodness of saving people in the smaller group is outweighed by the badness of letting people in the larger group die. In the latter case, he may say that the most plausible

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Let us see how this moderate notion of unfairness works in the original Rescue Case. In the original Rescue Case, if we choose the least unfair device, i.e. the coin-tossing, we will save either one life or five lives. Therefore, the good of coin-tossing is the expected number of lives saved. As the probability of each possibility is 50 per cent, the expected good of lives saved is three lives saved. On the other hand, if we choose to save the greater number, we will save five lives for sure. But this is unfair to one person, because he is deprived of the chance to be saved. However, if we directly save five lives, unfairness is done to the person on the side of the one, and does not do any harm to five persons; it is not unfair to five persons to be saved, because their claims are satisfied. Unfairness is a negative factor, or one aspect of the bad, which is attributed to the persons whose claims are not satisfied. The bad of unfairness is determined by the people who are the victims of unfairness. Let us write u for the bad of unfairness done to one person.

Given that unfairness done to this person should be taken into account as a negative factor, we compare the goods of tossing a coin and of saving the greater number, i.e. (1) ⟨three lives saved⟩ and (2) ⟨five lives saved⟩ − ⟨u⟩. Now, the focal point is whether unfairness can be outweighed by the good of saving two additional lives. It is hard to determine the relative weight of unfairness and of the good of saving two additional lives, but the following can be claimed. We toss a coin if u is more important than the good of two lives saved; we directly save five lives if the good of two lives saved is more important than u. I think that the good of two lives saved is more important than the bad of unfairness done to one person. This is why I hold that we should save five lives.

Next, consider the large-scale Rescue Case. If we toss a coin, the expected good is 1,000 lives and half a life saved. On the other hand, if we save the greater number, we will save 1,001 lives for sure. What about the bad of unfairness? The bad of unfairness, done to *each* person, is constant regardless of the number of people concerned. It is a matter of whether one person receives proper respect or not, and has nothing to do with the number of people concerned. The bad of unfairness for each person is the same in both the original Rescue Case and the large-scale Rescue Case. But the *overall* bad of unfairness is different in the two cases. Unfairness done to 1,000 people is greater than the unfairness done to one person. For simplicity, suppose that we represent the overall bad of unfairness by the sum of unfairness done to each person. In the original Rescue Case, if we directly save five lives, unfairness is done to one person; so the bad of unfairness is u. In the large-scale Rescue

notion of fairness in the Rescue Case is to give an equal chance to each person, not to save no person.

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Case, if we directly save 1,001 lives, unfairness is done to 1,000 people; so the overall bad of unfairness is $u \times 1000$. Thus, the unfairness done to 1,000 people is greater than the unfairness done to one person.[26]

After all, we compare (1) ⟨1,000 and half lives saved⟩ and (2) ⟨1,001 lives saved⟩ − ⟨$u \times 1000$⟩. Now, the issue here is whether the good of half a life saved is more important than the bad of unfairness done to each of 1,000 people. We should toss a coin if $u \times 1,000$ is more important than the good of half a life saved. Alternatively, we should save 1,001 lives if the good of half a life saved is more important than $u \times 1000$. I think that the bad of unfairness, done to 1,000 people, is more important than the good of half a life saved. This is why I believe that we should toss a coin in the large-scale Rescue Case.[27]

It should be noted that this argument involves interpersonal aggregation in two ways. First, to measure the overall bad of unfairness, it aggregates the individual bad of unfairness into the overall bad of unfairness. I proposed that unfairness is a bad done to each person. To measure the overall bad of unfairness, my argument has aggregated each person's bad as a result of unfairness. In my argument, the overall bad of unfairness increases as the number of people to whom unfairness is allowed increases. Here, the numbers are taken into consideration.

Second, my argument aggregates the good of lives saved. We compare the overall bad of unfairness and the difference between the expected number of lives saved by tossing a coin and the number of lives saved for sure. In the original Rescue Case, for example, we compare the overall bad of unfairness and the good of two lives saved. Here, my argument explicitly demands the interpersonal aggregation in order to measure the good of two lives saved. As the difference increases between the expected number of lives saved by tossing a coin and the number of lives saved for sure, it is more likely that the good of the extra lives saved outweighs the bad of unfairness. Here, again, the numbers are taken into consideration.

Thus, in my argument, the numbers count in two ways. First, when we measure the overall bad of unfairness: If the number of the smaller group gets larger, it works in favour of tossing a coin. Second, when we

[26] We can make the same argument without using the additive form. Suppose that the overall bad of unfairness is represented by a real-valued, increasing function $h(\ )$. If we do not give proper respect to one person, the overall bad of unfairness is $h(u)$. On the other hand, if we do not give proper respect to 1,000 people, the overall bad of unfairness is $h(\langle u \rangle_{\#u=1000})$. As we assume that the function $h(\ )$ is increasing, $h(\langle u \rangle_{\#u=1000}) > h(u)$.

[27] My proposed Aggregation Approach does not need to reject Symmetry or Pareto of the consequentialist proposal, if we take it that someone's being treated unfairly is worse for him and that the relative goodness of states of affairs involves the badness of unfairness. It is perfectly consistent with the consequentialist proposal. I am grateful to the anonymous referee for this point.

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measure the good of extra lives saved: If the difference between two groups gets larger, it works in favour of saving the greater number.

My argument explicitly includes interpersonal aggregation. This is because it does not take the view that the rejection of interpersonal aggregation does not necessarily imply the proper respect to each person involved in the Rescue Case. Thus, my argument falls under the Aggregation Approach to the Number Problem. And this approach, I believe, consistently explains my position in the Rescue Case and large-scale Rescue Case.

VIII. CONCLUSION

I have discussed several arguments provoked by Taurek's claim. Although there is a substantial difference, these arguments attempt to show *how* we should give a proper respect to each person in Taurek's example. Taurek believes that we should respect each person equally and separately, thus flipping a fair coin. Consequentialists maintain that the good of the additional life saved in the larger group should be given a positive respect, thus claiming that saving more is better than saving fewer. Scanlon argues that if we adopt the coin-tossing-procedure, the claim of the additional person in the larger group would not be respected. As the additional person in the larger group can reasonably reject that procedure, the principle of saving the greater number is one that nobody can reasonably reject. Finally, I have argued that unfairness is a failure to give equal respect to equally important claims, and that whether we should save the greater number or toss a coin depends on the balance between the badness of unfairness done to people not saved and the goodness of additional lives saved. All these arguments respect each person in one way or another. Given that the difference between these arguments rests on the different interpretations of what counts as giving respect to each person, it is not easy to determine which one is most plausible. However, my proposal sharply contrasts with other arguments at least in one respect. It does not claim that interpersonal aggregation entails a lack of respect for each person. Rather, interpersonal aggregation is useful for encompassing proper respect (or the lack of respect) to each separate person in the overall goodness of alternatives. Interpersonal aggregation is not problematic itself. The problem is how we use interpersonal aggregation for the sake of respecting each separate person.[28]

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