[NOTE: This draft is very rough, especially towards the end.]

I called a chapter in a recent book 'Five Mistakes in Moral Mathematics'. One of these mistakes, I claimed, was to ignore the effects of what we together do. There seemed to me several cases in which we should appeal to these effects. I now believe that the mistake was mine: we never need to appeal to these effects. In this paper I explain this change of view.

The paper defends Act Consequentialism. But it can be read, more broadly, as a defence of one view about the part of morality which depends on consequences.

I OBJECTIVE AND SUBJECTIVE RIGHTNESS

We must first distinguish two kinds of rightness. Call my act

subjectively right if it is what I ought to do given what, at the time of acting, I have reason to believe. ¹

and

¹ This use of 'subjective' has nothing to do with the objectivity of ethics. Note that, on some definitions, what is subjectively right depends on what the agent actually believes. On my definition, it depends on what he ought to believe. If his beliefs are unreasonable, they cannot justify his acts.
objectively right if it would be what I ought to do if I knew all of the morally relevant facts.

Suppose I have every reason to believe that my act will save your life. In fact, it kills you. My act is subjectively right, but objectively wrong.

The notion of objective rightness has, in a moral theory, obvious priority. It is this theory's ideal. But it has little practical importance. When we are deciding what to do, we should aim at subjective rightness.

This may seem surprising. Should we not try to do what is objectively right?

In some cases, this would make no difference. This is so if, when acting, we know all of the relevant facts. The two kinds of rightness then coincide.

In other cases, this may not be so. Objective rightness depends on what is true. Subjective rightness depends on what we have reason to believe. These may differ. But we cannot aim at the truth rather than what we have reason to believe. We cannot in practice distinguish these.

This may suggest that we should aim at both kinds of rightness. We may think, 'The subjectively right act is whatever is most likely to be objectively right.' But this is too simple. Suppose that several miners are trapped, with floodwaters rising. Before we can find out where these men are, we must decide which floodgate to close. The outcomes would be these:
The men are in

<table>
<thead>
<tr>
<th>Gate 1 (closed)</th>
<th>Shaft A</th>
<th>Shaft B</th>
</tr>
</thead>
<tbody>
<tr>
<td>We save ten</td>
<td></td>
<td>All die</td>
</tr>
<tr>
<td>All die</td>
<td></td>
<td>We save ten</td>
</tr>
<tr>
<td>Gate 3</td>
<td>We save nine</td>
<td>We save nine</td>
</tr>
</tbody>
</table>

Assume that, on the evidence, the men are equally likely to be in either shaft. On this assumption, we ought to close Gate 3. But, though subjectively right, this act is certain to be objectively wrong. If we knew where the men were, we could, by acting differently, save an extra life. ²

Consider now Act Consequentialism, or AC. On this theory,

the objectively right act is whatever will in fact produce the best possible outcome.

As the case just given shows, we should not always aim at objective rightness. We should not always try to do what is most likely to produce the best outcome. We should sometimes aim at a less good outcome, because it is easier to achieve, or the risk of bad effects is less.

This, which is implicitly the common sense view, Act Consequentialism makes more precise. On this theory,

² Cf Regan, p.265.
the subjectively right act is whatever will have the greatest *expected* goodness.

To calculate an act’s expected goodness, we add together its possible good effects, and subtract its possible bad effects, with each effect being multiplied by the chance that the act will produce it. Thus, if an act has a one in two chance of saving twenty lives, and a one in five chance of losing five, the expected goodness, in terms of lives saved, is \( \frac{20}{2} - \frac{5}{5} \), or 9.

I have claimed that, when we are deciding what to do, we should ask what is subjectively right. In most contexts, this is what ‘right’ means. Similarly, when we are assigning blame, we should be concerned with subjective wrongness. Utilitarians have been criticized for claiming that, when Hitler’s parents had a child, their act was objectively wrong. If this claim seems absurd, this is because we take it in the sense which implies blame. It has no such implication. What it means is that, if Hitler’s parents had known about the consequences of their act, it *would have* been wrong. Since they could not possibly have known, such claims are naturally ones that, in our ordinary moral thinking, we ignore.

II COORDINATION PROBLEMS

[NOTE: This section discusses a rather narrow question. It may be of interest only to those who have read Donald Regan’s book *Utilitarianism and Cooperation*. Others can jump to Section III.] (on page 14)

When our acts have combined effects, what each of us ought to do may depend upon what others do. If we cannot easily communicate,
we then face coordination problems. Donald Regan has argued that, in such cases, Act Consequentialism is seriously flawed. 3

Consider first Regan's Case. You and I each have two alternatives. The outcomes would be as shown below:

<table>
<thead>
<tr>
<th></th>
<th>do A</th>
<th>do B</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>do A</td>
<td>Second-best</td>
</tr>
<tr>
<td></td>
<td>do B</td>
<td>Bad</td>
</tr>
</tbody>
</table>

Regan's claims are these. An act is objectively right, according to AC, if produces the best possible outcome. Suppose that we both do B. Since we produce the best of these outcomes, each of us acts rightly according to AC. It may therefore seem that we have done what AC tells us to do. Surprisingly, this is not so. Suppose instead that we both do A. Though we produce a worse outcome, each again acts rightly according to AC. Each produces the outcome which is the best that is possible, given what the other does. Since you have done A, the outcome would have been even worse if I had done B. A similar claim applies to you.

As Regan says, AC implies that we each act rightly if we either both do A or both do B. This is so despite the fact that, if we act in one of these two ways, we will thereby make the outcome

3 Utilitarianism and Cooperation, Oxford University Press, 1982.
worse. Regan takes this to show that we should reject AC. It fails to have one virtue which he thinks essential to a Consequentialist theory. It is not true that if everyone satisfies this theory—does what it tells them to do—they will be certain to produce the best possible outcome.

Other forms of Consequentialism have this virtue. On one theory, each of us should do his part in the pattern of acts which, of all possible patterns, would make the outcome best. Clearly, if everyone satisfies this theory, this will produce the best possible outcome. But this theory lacks another essential virtue. It is not true that, if any single person satisfies this theory he will be certain to produce the best possible outcome. In Regan’s Case this theory tells me to do B, since this is what it would be best for both of us to do. But, if I do B when you do A, I make the outcome worse than it could have been. As is often urged against the similar Kantian Test, or the thought ‘What if everyone did that?’, it can be disastrous to ignore what other people will in fact do.

We need a theory, Regan claims, with the virtue that he calls adaptability. It must be true that, however many people satisfy this theory—whether only one, or some, or everyone—they will be certain to produce the best possible outcome. In the first half of his book, Regan shows that no traditional theory has this feature. In the second half, he presents a new theory, Cooperative Utilitarianism, which is designed to do so. This theory is extremely complicated, and, as he admits, a partial failure. 4

Regan’s project seems to me misguided. What he objects to in AC may, I believe, be no fault. And, if it is, there is a simpler remedy. Act Consequentialists need not revise their claim about objective rightness. It is enough to extend this claim.

4 It cannot wholly explain how the agents manage to cooperate (Regan, pp. 161-2).
AC is usually applied only to single acts, or to each of several acts considered on its own. But it can also be applied to sets of acts, considered together. In Regan's Case, when it is applied to single acts, AC says that we each act rightly if we either both do A or both do B. It fails to say that we should ideally both do B, thereby producing the best possible outcome. But it could say this. An Act Consequentialist could say that, if we both do A, though each has done the best he can given what the other does, we together have done worse than we could. He could say that we act rightly only if we both do B.

I shall first explain why AC need not be revised. As Regan says, when we apply AC to single acts, it does not select the set which would produce the best outcome. But this is no objection. As far as single acts are concerned, AC claims just what it should. It claims that each of us acts rightly if he produces what, in the circumstances, is the best possible outcome. When I ask what I should do, what you do is part of the circumstances. That's why, if you do A, I should do A too. No other act by me could, in these circumstances, make the outcome better.

Suppose that I now extend AC, so that it covers sets of acts. When I ask what we should do, what you do is not part of the circumstances. I can therefore add the claim that, if we both do A, we together act wrongly. Though neither by himself could have made the outcome better, we together could have done so. As Jackson says, we had an alternative that neither, by himself, had.  

Does AC need to be extended in this way? Only if, as Regan claims, a Consequentialist theory ought to be adaptable. Is this so? Why should it be true that, however many people satisfy this theory, they will be certain to produce the best possible outcome?

---

5 Frank Jackson, 'Group Morality' [in a festschrift for J.J.C. Smart]. I owe much to this paper.
We might say, 'Unless this is true, the acceptance of this theory may not have the best effects. But, on a Consequentialist theory, everything should be judged by its effects. If the acceptance of this theory does not have the best effects, it fails even in its own terms.'

This reply, though natural, overlooks a point I earlier made. Regan's target is AC's claim about objective rightness; and this is not the claim which should guide our acts. If we accept AC, what we should try to follow is AC's claim about subjective rightness. As we shall see, this is untouched by Regan's criticism. Regan's objection cannot be to the effects of accepting AC. But he may claim that, even if it works in practice, AC is theoretically flawed. He may claim that, if a moral theory is not adaptable, it is intuitively unappealing.

If this is so, my second point applies. In their account of objective rightness, Act Consequentialists need not turn to Regan's highly complicated theory. It is enough to extend AC so that it covers sets of acts. AC claims that each of us acts rightly if he produces the best outcome that he could produce. It can add that we act rightly if we produce the best outcome that we could produce.

This suggestion differs from Regan's in the following way. His Cooperative Consequentialism applies only to single acts, or to sets considered one by one. It takes the form, 'each has acted rightly if and only if . . . ' Regan tries to find some formula which is such that, however many people satisfy this formula, they will be certain to produce the best outcome. This seems to me impossible. It also seems unnecessary. My suggestion substitutes, for the second half of Regan's book, a single sentence. This can be simple because it is about what we should do.

My suggested version of AC may seem incoherent. Suppose that, in Regan's Case, we both do A. On my suggestion, though each of us acts rightly, we act wrongly. This may seem impossible. How can truths about each not be true of us?
With some truths, this is not possible. Thus, if each is old, we cannot be young. Youth is a property of individuals: we together cannot be young. But other properties are different. Even though each is weak, we together may be strong.

My suggestion is of this second kind. If we both do A, each acts rightly because he makes the outcome as good as he can. We act wrongly because we together could have made the outcome better. As we have seen, these claims can both be true.

Here is a similar objection. On my suggestion, though each acts rightly, we act wrongly. This may seem to imply that, though each is blameless, we deserve blame. And this may not seem possible.

It is not. Blame attaches only to individuals. If each is blameless, we cannot deserve blame. But this is no objection to my claim. This is a claim about objective wrongness. As we saw in the case of Hitler's parents, such a claim implies no blame.

It may next be objected that, even if it is coherent, my extended version of AC cannot, in practice, be applied. Should each of us try to act rightly, or should we try to do so? And, if the latter, how should we try? On my suggestion, we act rightly only if we produce the best possible outcome. This claim does not tell us how we are to achieve this result.

It may next be said that, unlike me, Regan addresses this question. As he explains, cooperation may be very hard to achieve. That is why his theory is so complicated. But since it is about what each of us should do, it can at least be applied. My suggested version of AC, with its single claim about what we should do, may seem wholly to ignore these problems. It may seem to be simple only at the cost of being useless.

This objection makes the same mistake. Since my claim is about objective rightness, it does not need to be applied. The practical question is always what we ought subjectively to do. We can now turn to this question.
In an account of subjective rightness, it is enough to apply AC to what each of us should do. There is no need for an extra claim about what we should do. Just as it is individuals, and not groups, who deserve blame, it is individuals, and not groups, who make decisions. (This is so even when these individuals act together as members of a group. When a group decides what to do, this is not a separate decision, over and above the decisions made by the members. We impute a decision to the group, according to certain rules or procedures, given the only actual decisions, which are those taken by the members.  

Reconsider Regan’s Case. At the level of objective rightness, this case is puzzling. But this is entirely a theorist’s problem. At the practical level, that of subjective rightness, the case presents no problem.

Suppose that, as we know that we both know, we have the alternatives shown below, and we are both Act Consequentialists.

<table>
<thead>
<tr>
<th></th>
<th>do A</th>
<th>do B</th>
</tr>
</thead>
<tbody>
<tr>
<td>do A</td>
<td>Second-best</td>
<td>Bad</td>
</tr>
<tr>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>do B</td>
<td>Bad</td>
<td>Best</td>
</tr>
</tbody>
</table>

6 I suggested that we extend AC so that it covers sets of acts. On my definition, we act objectively wrongly only if we fail to do what, if we knew all of the relevant facts, we ought to do. This claim treats a group as a moral agent. If this makes no sense, even in a theory of objective rightness, we cannot extend AC in this way. But, for the same reason, this extension is not needed. It is no objection to AC that it fails to tell us what we should all ideally do. Either way, there is no surviving objection.
What does our theory tell us to do?

It is in some sense obvious that we should both do B. But AC does not directly tell us this. On this theory, it can be subjectively wrong to aim for the best outcome.

The subjectively right act, according to AC, is whatever will maximize expected goodness. To apply this claim to Regan's Case, each of us must try to predict what the other will do. This is not difficult. Each of us ought to predict that the other will aim for the best outcome. Given that prediction, AC tells each to do the same. 7

These remarks may arouse suspicion. I have admitted that AC does not directly tell us to aim for the best outcome. It tells us only to maximize expected goodness. Each must therefore try to predict what the other will do, and then do the same. But each knows the other to be an Act Consequentialist. Each can predict that the other will do what AC tells him to do. It may therefore seem that, for each to be able to predict that the other will aim for the best outcome, he must already know that this is what AC tells each to do. This reasoning may seem circular, or to beg the question.

There need be no circularity. To see why, consider a different case. Suppose that you and I cannot communicate, and that the outcomes would be these:

7 Note that we would solve this problem even if each thought the other was equally likely to act in either way. Even on this assumption, each ought to aim for the best outcome. A one-in-two chance of the best outcome has more expected goodness than the same chance of the second-best. This problem is too easy.
<table>
<thead>
<tr>
<th></th>
<th>You do A</th>
<th>do B</th>
</tr>
</thead>
<tbody>
<tr>
<td>do A</td>
<td>Equal-best</td>
<td>Bad</td>
</tr>
<tr>
<td>I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>do B</td>
<td>Bad</td>
<td>Equal-best</td>
</tr>
</tbody>
</table>

Such cases may be, in practice, real coordination problems. It may be hard for each to predict what the other will do.

Whether this is so depends on further details of the case. If A is an act like pushing a button, and B an act like not-pushing, there is no basis for a prediction. It will be mere luck if we end up doing the same thing. But, as Schelling famously explained, something very trivial and apparently irrelevant may be enough to solve such problems. Suppose that A is calling 'Heads', and B calling 'Tails'. Most of us would then call 'Heads', correctly predicting that the other would do the same. In Schelling's word, calling 'Heads' is 'salient'.

This act is salient even outside coordination problems. When tossing coins, 'Heads' is what most people call. But an act may be salient only because we know that we face a coordination problem. Suppose that, in some rescue mission, each has three alternatives. In terms of the numbers of lives saved, the outcomes would be these:
<table>
<thead>
<tr>
<th></th>
<th>You</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>do A</td>
<td>do B</td>
</tr>
<tr>
<td>do A</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>I</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>do C</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

What is salient here is the second-best outcome. More exactly, this will be salient if we know that we both know that we face a coordination problem. Given these assumptions, the second best outcome is the obvious choice. Since we know that we both want to meet, this is the obvious place to go. It is the salient outcome, though inferior to others, because of the fact that, among the good outcomes, it is the one that is unique.

Now return to Regan’s Case. Here the unique best outcome is clearly salient. It is the obvious place to meet.

Note next that such reasoning need not require either moral thinking, or moral motivation. Egoists can just as easily solve these coordination problems. In such cases, their interests coincide: they will want to meet. If they know that they all know this, it can be just as obvious to them what the salient meeting-place is. Egoists can coordinate without accepting some cooperative moral theory.

The same is true of Act Consequentialists. Regan suggests at various points that defenders of AC are, in effect, converting to Cooperative Consequentialism. This may be true of some of the writers he discusses; but it is unnecessary. Like Egoists, Act Consequentialists would solve these problems without abandoning their theory.

They would not always solve these problems. If we apply AC, we are not certain to produce the best outcome. In some cases, the subjectively right act may make the outcome worse. This may be so,
for example, if no act is salient, or if different acts seem salient to
different people.

There are other ways in which we might go astray. Thus in
Regan's Case each of us might have reason to believe that the other
will do A. Some credible joker may have told us this. AC would then
tell us to do A, and we would fail to produce the best outcome. But
for this failure it is not our theory but the joker who is to blame.

In the cases where AC fails to lead us to the best outcome, we
can describe other theories which would do better. Thus Rule
Consequentialists might ignore what the joker said. Each might do
what it would be best for both to do, even though he has reason to
believe that, because the other will act differently, he will thereby
make the outcome worse. But though we would sometimes gain if we
ignored our beliefs about what others do, we would more often lose.
In judging theories, we should ask how well in general they would do.
And the best general policy, in coordination problems, must be the
one prescribed by AC. We will on the whole produce the best effects
if we always do what, on the evidence, will have the best predictable
effects. There is no other theory which, in coordination problems,
would on the whole do better. 8

III OVERDETERMINATION

I turn now to the second kind of case where my book appealed to
what we together do: cases of overdetermination. I failed to see how
similar these cases were to those that I have just discussed.

8 It may be worth adding to AC various hints about how to
coordinate. It may even be worth suggesting what should be treated as
salient in hard cases. But this would not be a move to a different theory.
In these cases, two or more people jointly cause some effect. This effect is overdetermined because, if any one person had acted differently, this effect would still have occurred. In the example in my book, two men simultaneously shoot me. Either shot, by itself, would have killed.

This case is not ideal, since it would be hard to be sure that it involves overdetermination. This would be more likely if there were several agents, as in a Firing Squad. In some cases of this kind, the acts need not be simultaneous. The effects may also come, not from acts, but from omissions. In all these cases there are thresholds, or numbers of people acting, above or below which different numbers would not alter the effect. Stock examples are: failing to vote when not enough others vote, or walking on the grass when more than enough others walk. There are many actual cases of a more serious kind.

These cases have the structure of Case (2) in the diagram below. How do they compare with Regan's Case, which is Case (3)?

Here is a way to describe both kinds of case. We can regard each agent as on a moral contour-map, with better outcomes being higher ground. An agent is acting wrongly, according to AC, if he is on a slope: if, that is, by acting differently, he could have reached higher ground. The problem in Cases of type (2) is that, when the agents both do A, they are in a Flat Valley. If either alone had acted differently, this would have made no difference. Neither on his own could have reached higher ground. The problem in Regan's Case is that, when the agents both do A, they are on a Lower Peak. Since they are on this peak, the outcome would have been worse if either alone acted differently. But in both cases, if we consider both agents
(1) Cases where co-ordination is no problem

Cross-sections of the Contour Map

Mount Fuji

<table>
<thead>
<tr>
<th></th>
<th>do A</th>
<th>do B</th>
</tr>
</thead>
<tbody>
<tr>
<td>do A</td>
<td>Bad</td>
<td>2nd-best</td>
</tr>
<tr>
<td>do B</td>
<td>2nd-best</td>
<td>Best</td>
</tr>
</tbody>
</table>

(2) Overdetermination

Mountains with Flat Valleys

<table>
<thead>
<tr>
<th></th>
<th>do A</th>
<th>do B</th>
</tr>
</thead>
<tbody>
<tr>
<td>do A</td>
<td>Bad</td>
<td>Bad</td>
</tr>
<tr>
<td>do B</td>
<td>Bad</td>
<td>Best</td>
</tr>
</tbody>
</table>

(3) Regan's Cases

Mountains with Lower Peaks

<table>
<thead>
<tr>
<th></th>
<th>do A</th>
<th>do B</th>
</tr>
</thead>
<tbody>
<tr>
<td>do A</td>
<td>2nd-best</td>
<td>Bad</td>
</tr>
<tr>
<td>do B</td>
<td>Bad</td>
<td>Best</td>
</tr>
</tbody>
</table>

(4) Symmetrical Coordination Problems

Mountains with Twin Peaks

<table>
<thead>
<tr>
<th></th>
<th>do A</th>
<th>do B</th>
</tr>
</thead>
<tbody>
<tr>
<td>do A</td>
<td>Equal-best</td>
<td>Bad</td>
</tr>
<tr>
<td>do B</td>
<td>Bad</td>
<td>Equal-best</td>
</tr>
</tbody>
</table>
together, they are on slopes. They together could have reached higher ground. 9

The other cases on this diagram complete, I believe, the interesting possibilities. 10 We are concerned with cases where we have failed to reach the summit. In these cases, if we had acted differently, we would have made the outcome better. It must be true of each person that, if he alone had acted differently, this would have either (a) also made the outcome better, or (b) left it the same, or (c) made it worse. Each person is on either a slope, or a flat valley, or a lower peak. In cases of kind (1), cone-shaped mountains or *Mt. Fuji*, there is no coordination problem, since each individual's route to the summit goes uphill all the way. In such cases, we do worse than we could only if each does worse than he could. Cases of types (2) and (3) I have just discussed. (4) is the remaining case. This is like (3) except that, if we both do A, we are on one of two twin peaks.

It was a mistake, in my book, to contrast cases of types (2) and (3), calling (2) cases of overdetermination, and (3) coordination problems. Suppose that, in both cases, we both do A. It is then overdetermined, in both cases, that we don't produce the best outcome. This is overdetermined because in neither case could either alone have achieved this outcome by acting differently. Only we together could have done so, by both acting differently. Similarly, for this same reason, both cases are coordination problems.

The difference between these cases can be re-expressed like this. Suppose that in each case each believes that the other will do A. Each knows that he can't by himself achieve the best outcome. Still, in a Flat Valley, there's no harm in either person's at least trying to

---

9 Note that, in such diagrams, the individuals must move like rooks, horizontally or vertically. Only we together can move diagonally like queens.

10 I consider only the simpler cases where we are symmetrically situated.
reach this outcome, in the hope that the other person will do the same. It is here the dominant act, since it can’t make the outcome worse, and might make it better. But in Regan’s Case neither act is dominant. There is harm in either person’s trying, on his own, to reach the best outcome. If the other does not do the same, this will make things worse.

This is why it was only Regan’s Case that I called a coordination problem. Only here will it be worse if one of us, but not the other, aims for the best outcome. So only here does each need to know what the other will do. But the difference between these cases may be slight. In what seem to be Flat Valleys, there will often be some small cost if any one extra person aims for the best outcome. That converts these into Regan Cases. (Thus if voting involves some cost, and not enough people vote to secure the right result, each extra voter makes the outcome slightly worse. That makes this a Regan Case. But if we ignore these extra costs, it is a mere case of overdetermination.)

[FROM HERE ON MY DRAFT IS VERY ROUGH]

Overdetermination raises a problem for theories about causation. Return to the men who simultaneously shoot me. If either had not shot, I would still have died. According to some writers, causes must be necessary for their alleged effects. Since neither shot was necessary, neither of these men caused my death. Other writers claim that, if we describe the effect more precisely, we shall see that each shot was necessary. If either had not shot, I would have died a slightly different death. 11 Other writers claim

that causes need *not* be necessary for their effects. It is enough if they are both operative and sufficient. 12

We need not try to resolve this disagreement. It does not matter morally whether each man killed me. Killing is wrong only if it shortens the victim's life. Neither man did this to me.

The point can be put more generally. We should revise for moral purposes our ordinary use of words like 'harm' and 'benefit.' On that use, I may harm you even when my act is not worse for you. This will be so when my act, though sufficient to produce this harm, is not necessary. But in the morally relevant sense my act must be necessary. It must be true that, if I had not acted, you would not have been harmed. I harm you, in this sense, only if my act is worse for you.

In this sense, neither of my murderers harmed me. Neither's act was worse for me. So how can we explain why these men acted wrongly?

12 As Hart and Honore write, in cases of this kind, 'the test of necessary condition must break down altogether, unless supplemented by that of generally sufficient conditions.' There are harder cases. One example is *the Punctured Poisoned Bottle*. When X is about to cross the desert, Y poisons his waterbottle. Z then punctures the bottle. During his journey, X dies of thirst. Since it is thirst from which X dies, it may seem that Z, the puncturer, is the murderer. Z does cause it to be true that X's dies of thirst. But this is not enough to show that Z kills X. If it did, whenever a doctor saves someone's life, he would thereby kill that person, since he would cause it to be true that this person dies at a different time, and in a different way. Suppose that Z's motive in puncturing the bottle was not to kill X, but to save him from the poison. Perhaps Z hoped that X would find an oasis before he died of thirst. If Z had this good motive, we would count him as trying to save X's life. We should not count the same act, with a bad motive, as a case of killing.
In my book I claimed that we should appeal to what they together did. They together harmed me. That is why they together acted wrongly.

What I wrote suggested that, because they acted wrongly, each acted wrongly. Since I was discussing objective wrongness, this was a mistake. I should have claimed that, in the objective sense, though they together acted wrongly, neither individually did. \(^{13}\) I should have then explained that the objective sense is not the ordinary sense of ‘wrong’, or the sense which implies blame. It is a different question whether, in the ordinary or subjective sense, each acted wrongly, and should be blamed. And it is a further question how much punishment each deserves.

On the questions of blame and desert, we can distinguish two views. On the Causal View, blame and desert depend in part on what the agent actually did, and on how much harm he caused. On the Kantian View, they depend only what he intended, and tried to do.

Suppose two men attempt similar murders. Through good luck, one of them fails. On the Causal View, this man is less guilty. On the Kantian View, he is just as guilty. There are reasons for punishing attempted murder less than murder—such as the need to deter second attempts—but these reasons do not appeal to a difference in desert. We can say, to the successful murderer, ‘Because you had bad luck, we’re going to punish you more.’ But we should not say, ‘Because you had bad luck, you deserve to be punished more’.

As Nagel says, the Kantian View seems in theory compelling. How can desert depend on luck? But our reactive attitudes seem to reflect the Causal View. As I run upstairs because I left the baby in

\(^{13}\) Cf Jackson again. [Add more about the relevance of counterfactual intentions.]
the bath, I may naturally think that I don't yet know how badly I have acted. I may think that, if the baby is all right, I have merely been negligent, while, if it has drowned, I have done a terrible thing.

Unlike Nagel, I believe that we should here be true to our theoretical beliefs. If we accept the Kantian View, as I do, we should try to change our reactive attitudes. Perhaps we should not try to lose these entirely. But we should reject the moral judgments which they naturally produce, and by which they are reinforced. 14

Reconsider the men who simultaneously shot me. Let us first assume that this was a coincidence. Each man intended to kill me, and neither knew that the other was about to shoot. The overdetermination played no part in the agents' motives. There are various actual cases where comparable claims are true.

On the Causal View, to assess each man's guilt, we must know whether he killed me. We must solve the causal puzzle mentioned above. On the Kantian View this is not necessary. Both men attempted murder. There would be no injustice if we punished

---

14 I've said that I accept the Kantian View about desert. This is perhaps misleading, since I reject desert. I accept the conditional view that, if there was desert, it could not depend on luck. This is partly why I believe that there is no such thing. As Nagel reminds us, whether an agent attempts murder may itself depend on luck, since it may be luck that the opportunity arose. And the agent's intentions, desires, and beliefs seem also, in the relevant sense, to depend on luck. In this sense, heredity is luck, so is environment, and so are any events which don't depend on these. There is nothing left on which desert could possibly depend. This may seem a reductio of the Kantian View. How can this be the true view about the nature of desert if, when we think it through, it implies that there is no such thing? But this seems possible. On the true view about time travel, there could be no such thing.
each as much as a successful murderer. 15 This view can be combined with Act Consequentialism. According to AC, since each man had reason to believe that he would be harming me, he acted wrongly in the ordinary or subjective sense.

Suppose next that, when these men acted simultaneously, this was no coincidence. Each shot only because he believed that the other was about to shoot. Each knew that my death would be overdetermined.

When agents know all of the relevant facts, objective and subjective wrongness coincide. So do the Kantian and Causal Views. If someone knows what he is doing, and how much harm he will in fact cause, there is no distinction between what he intends and what he actually does.

In this version of the case, neither man intends to kill me, in the sense of shortening my life. Since each knows that the other will shoot, each knows that his own act will not be worse for me. This suggests that, according to AC, neither acted wrongly. But why did they shoot?

Suppose there was prior collusion. Each agreed that they would both shoot. At this earlier stage, there was no overdetermination. Since neither would have acted without the other’s agreement, each knew that, in agreeing, he was making it likely that the other would shoot. Each then acted wrongly according to AC. 16

---

15 Cf. Hart and Honore: "an act done with the intention of shortening life, which would normally be sufficient to kill and which only fails because of the substitution of another cause of death, should be treated as murder."

16 And, as Hart and Honore remark, such collusion would be sufficient for a charge of murder.
What if there was no collusion? Though unlikely here, this is true in Firing Squads. And there are many other cases of this kind. Thus there are many cases where, in an overdetermined way, we together harm each other, or pollute or destroy our environment. In these cases there is some threshold, or number of people acting, above which further numbers do not increase the harm. Each of us may have reason to believe that, because this number will be passed, his own act will do no harm. Is each then acting wrongly according to AC?

In some of these cases, the answer is Yes. As I remarked, if we all aim for the second-best outcome, we are in a Flat Valley. None by himself could have made the outcome better. But aiming for the better outcome is here the dominant choice. It cannot make the outcome worse, and, if enough others make the same choice, it will make it better. So, if there is the slightest chance that enough others will make this choice, this is what Act Consequentialists ought subjectively to do.

Suppose there is no such chance. Suppose that in my example, though there was no collusion, each man had reason to be certain that the other would shoot. We must again ask why they shot. There are various possibilities. They may have been obeying orders. They may have wanted to shield each other from the responsibility of having killed. Depending on the details of the case, acting with these motives may deserve blame. In the cases of overdetermined pollution or destruction, our motives may be better. It may here be true that, if any single person acted differently, he would make the outcome slightly worse. He might, for example, have to bear a pointless cost. As we have seen, this changes the example. It becomes, like Regan's Case, a coordination problem.

IV DISPERSED EFFECTS
I turn now to a third kind case. In these cases, each of our acts either harms or benefits other people. But, because these effects are spread over so many people, the effect on each is either trivial or imperceptible.

In much of our moral thinking, we ignore such cases. We assume that, if an act has effects on others that are either trivial or imperceptible, it cannot be wrong because of these effects. My book argued that this is a mistake. If an act has such effects on very many people, the smallness of each effect may be cancelled out by the size of the number affected. 17

I gave two examples. One was the *Drops of Water*. Many wounded men lie out in the desert, suffering from intense thirst. We are as many potential helpers, each of whom has a pint of water. Each of us could pour his pint into a water-cart. This would be driven into the desert, where our water would be shared equally between the wounded men. By adding his pint to the cart, each of us would give each man slightly more water—a very small drop. Even to a very thirsty man, the benefit from each extra drop would be either trivial, or imperceptible. If we ignore such effects, we must conclude that each of us has no reason to pour his pint into the cart. This is clearly wrong.

My other case was the *Harmless Torturers*. Each of many torturers slightly increases a painful stimulus on each of many

---

17 It's not just our ordinary moral thinking which works badly when we confront very small or very large numbers. Our natural emotions, such as fear or sympathy, also go astray. (Here is one example. It seems emotionally impossible to give the right weight to very tiny risks, since we either fear these too much, like those who refuse to fly, or too little, like those who don't wear seat-belts. The right amount of fear is something we can't feel. We have to use our reasoning to correct our emotions here. I shall be making a similar claim about very small effects on large numbers.)
victims. These torturers inflict great suffering on their victims. But because each effect is so dispersed, no torturer makes any victim’s pain perceptibly worse. If we ignore imperceptible effects, we must conclude that no torturer acts wrongly. This is absurd.

I was discussing objective wrongness, insofar as this depends on consequences. If we are also discussing blame, as I am here, the case should not involve torturers, since there are other reasons why these should be blamed. We could substitute the *Harmless Polluters.* Suppose that, in a city like Los Angeles, each of many people fails to repair the purifier on his exhaust. As a result, many people suffer. But, because the effects are so dispersed, no polluter makes a perceptible difference.

How do these cases differ from those discussed above? In all of my examples, if enough of us had acted differently, we together could have made the outcome better. For each person, there are three possibilities. If he alone had acted differently, this would have either (1) also made the outcome better, or (2) left it the same, or (3) made it worse. (3) is true in coordination problems, such as Regan’s Case. (2) is true in cases of overdetermination. In the cases now to be considered, (1) is true.

More exactly, I believe that in these cases (1) is true. I believe that, if each had acted differently, he would have made the outcome better. But others disagree. Since they ignore trivial or imperceptible effects, they believe that no one person could have made the outcome better. On their view, (2) is again true; these are further cases of overdetermination.

Though this distinction is important, it can be hard to draw. But it often correspond to a physical distinction, which may be clear. Consider this variant of the Drops of Water. When I arrive, the cart is already full. If I add my pint, I will cause one pint to overflow. In this version of the case, my act will indeed make no difference to the wounded men: each will receive just as much water. Since (2) is true, I have no reason to add my pint. But in the other version of
the case, where the cart is never full, there is no overdetermination. Each extra pint will make some difference: it will give each man an extra drop. Since (1) is true, I ought to contribute.

It may help to add these remarks. The effect of any single act may depend on the number of other acts. At one extreme, this dependence may be all or nothing. There may be some threshold, or number of people acting, such that above (or below) this number, any extra single act will have no effect. The classic case is voting. When this is true, there is overdetermination. It is true, in my example, once the watercart is full. At the other extreme, there is no dependence. Each act will have the same effect, however many other people act. This is true, in my example, before the watercart is full. When this is true, the total effect of all the acts is purely additive. The marginal effect of each act is the same as the average effect. The truth may lie between these two extremes. Each act may have some effect, however many other people act; but the size of each effect may depend on the number of other acts. The marginal effect may here diverge from the average effect. Thus, as the numbers grow, the marginal effect of each extra act may slowly decline. The same example may have all three features. Below some rough threshold, any extra act may have the same effect; these effects may then diminish; and above some higher threshold there may be no effects.

In my examples, the facts are simple. Any extra act would always have the same effect. Since the cart is never full, any extra pint would give one extra drop to each wounded man. And each drop would give each man the same benefit: it would do as much to reduce the pain of his thirst. Similarly, each Harmless Torturer does as much to increase the pain of each victim.

Because these effects are so small, I assumed that they are imperceptible. We may object that, in the case of pain and pleasure, an imperceptible benefit is no benefit at all. This objection would not arise if we considered cases where the harms or benefits were merely trivial. (Thus, in my Fisherman’s Dilemma, each imposes on
each of the others a trivial financial loss. In the Commuter's Dilemma, each imposes a trivial waste of time.) What I claim below could be applied, less controversially, to these other cases.

I turn now to the moral question. Why should each of us pour his pint into the cart? And why are the Harmless Torturers, or Polluters, acting wrongly?

I discussed two explanations. One involves the assumption that pain can become really though imperceptibly worse. On this assumption, each torturer inflicts some extra pain on each victim. Though each effect has little moral importance, these effects add up. Each act is wrong because it imposes on the victims a significant total sum of suffering.

The other explanation appeals to what the Torturers together do. On this view, each acts wrongly because, though his own act makes no difference, he is a member of a group who together inflict great suffering on the victims.

Of these explanations, I prefer the appeal to single acts. It seems to me theoretically better. But in my book I gave three grounds for doubting this.

First, there seemed to be other cases in which we cannot appeal to the effects of single acts, but must appeal to what we together do. These were cases of overdetermination, and coordination problems. I have now changed my view. As I have argued here, we can appeal in such cases to the effects of single acts. We need not appeal to what we together do. This strengthens the case for claiming that we never need this explanation.

Second, as I have said, we may doubt that pain can become imperceptibly worse. Though I believe that this is true, in the morally relevant senses of the words 'pain' and 'worse', I shall not pursue this further here. (It involves the special problems of the Sorites Paradox.)
A third objection appealed to my example of the Single Torturer. To exclude professional guilt, let this case involve some torturer’s innocent nephew, up from the country and offered a whirl on the machine. The uncle explains that, for the torturers, this is a holiday. But, if the nephew presses the button, this will have the same effect as on an ordinary day. Each victim’s painful stimulus will be imperceptibly increased. Given these effects, would it be wrong to press the button?

Many people answer No. If we give this answer, we must apply it to the torturers on ordinary days. The effects of each act cannot make it wrong, since these effects are just the same. Our explanation must appeal to what the torturers together do.

I believe that the Torturer’s Nephew would be acting wrongly. Here is another ground for thinking this. 18 Can it make a moral difference whether we act with other agents, or with Nature? Suppose the nephew knows that the machines are already half primed, as on an ordinary day when half the torturers have pressed their buttons. His uncle says, ‘Don’t worry. No one else is here today. The machines are half-primed because of a flash of lightning caused a short-circuit.’ Can this make a difference? If this claim is true, the nephew is acting alone. If the claim is false, he is acting with other agents. But in either case, the effect on the victims is the same. So, I believe, is the moral objection to what he is doing.

We can ask a similar question about the water and the wounded men. Suppose that, when I arrive, there is already water in the cart. This may be rainwater, from some gutter overhead; or it may have been poured in by other people. How can it make a moral difference which of these is true? How can it affect whether I should add my pint?

18 partly due to Peter Unger and Jerry Cohen.
[A SECTION IS MISSING HERE. ITS ROUGH CONTENT WILL BE THIS:]

In all these cases we can appeal to the effects of single acts. This, moreover, is the better explanation. It is theoretically simpler. And, to be plausible, the appeal to sets of acts needs to be filled out in ways which make it parasitic on the appeal to single acts.

One problem is to define the group who, by acting together, have certain good or bad effects. In many cases, this cannot be done by appealing merely to the way in which each person acts. Some of these acts may have no effects. We must count, as members of the group, only those whose acts will have certain real but imperceptible effects. This returns us to the other explanation.

Another problem is to assess the strength of our reasons for or against acting in such groups. We might claim that each produces his share of the total harm or benefit. But this is acceptable only when the average effects are the same as the marginal effects. When these diverge, we should appeal to the marginal effects. This again returns us to the appeal to single acts.]

[THE TEXT RESUMES]

. . . . . Of the two explanations, it is better to appeal to the effects of single acts. This suggests that we should never appeal to what groups together do. But this conclusion may be too swift. Even if we do not in theory need this appeal, it may have practical merits. It may provide what Broad called a *Moral Microscope*.

Reconsider the Harmless Polluters. Suppose that I fail to repair my exhaust in a city like Los Angeles. On my preferred explanation, my act is wrong because it imposes significant total harm on my fellow citizens. But since the effect on each will be either trivial or imperceptible, it may be hard to think of my act as

28
seriously wrong. When I consider what I am doing to each victim, my natural sympathy may not be aroused.

It may help to remind myself that I am a member of a group who together do great harm. We are lowering the quality of life of our fellow-citizens. We may even be responsible for killing certain people, those whose lungs cannot stand so much pollution. Thinking in this way may be psychologically more effective.

V THE EQUIVALENCE OF GLOVER PAIRS

There is a better remedy. This involves a further use of some of my examples. I shall call them *Glover Pairs*. 19

The main idea is shown below:

![Diagram of One to One and Many to Many connections]

Whether the effects are one to one, or many to many, they are in total just the same.

---

In the case of the Drops of Water, if each of us pours his pint into the cart, the effects will be many to many. Suppose instead that each of us carried his pint into the desert, and then gave it to some wounded man. The effects would then be one to one. In the case of the Harmless Torturers, we can suppose the following. In the Bad Old Days each torturer turned some switch many times. Though each turning was imperceptible, their combined effect was to inflict severe pain on one victim. Things have now changed. Each of the torturers presses a button, thereby turning the switch once on each of the many instruments. Though the victims suffer as much, no torturer makes their pain perceptibly worse.

Is there a moral difference between these Glover Pairs? I believe not. I believe that, if the total effects would be the same, it makes no difference whether the causal routes are one-one or many-many. Each of us has a reason to carry out his pint and give it to some wounded man; but it would be just as good to pour this pint into the cart. And the Harmless Torturers are acting just as wrongly as in the Bad Old Days. These claims express what I shall call the Equivalence of Glover Pairs. 20

20 This view may seem to conflict with an assumption that is widely made, about the incommensurability of certain kinds of effect. Suppose that I can relieve either the great suffering of one person, or the discomfort of very many others. It is often claimed that helping the one should have priority. It is therefore claimed that no number of minor benefits to each of many people could together outweigh great burdens on a few.

This is a common objection to Consequentialist reasoning. But it should often be restated as a claim about the goodness of outcomes. This may partly depend on the pattern of distribution. Thus an outcome may be better, though it has a greater sum of burdens, if these burdens are more fairly shared between different people. This difference need not be present in Glover Pairs. We can assume that, in both cases, there is the same resulting
This is a view about what we are doing. On this view, we have equal reasons for or against these acts, whether their effects are one-one or many-many. When we turn to discuss blame, other questions enter in. Thus, if the effects are one-one, the agent's motives may be worse. It may take more brutality to inflict concentrated harm. Compare the bomber who knowingly kills innocent civilians from above the clouds, and the soldier who kills them with his bayonet. Though what he does is no worse, the soldier shows a worse character, and may deserve more blame. For the same reason, the Harmless Torturers may deserve less blame than they did in the Bad Old Days. It might be true, of new recruits, that they would have refused orders under the old regime.

When we blame people, it may also make a difference whether they act as members of a group. And the degree of blame should not simply correspond to the harm that each predictably does, whether this is judged as the average or the marginal effect. We should not assume that there is some fixed quantity of blame, to be shared out. My two murderers don't deserve only half the blame that any single murderer would.

As these remarks suggest, the Equivalence of Glover Pairs is not the natural view. We are inclined to give more weight to effects that are one-one. Compare Oxfam and Adopt-a-Child. Oxfam is more efficient. In schemes like Adopt-a-Child, much money is wasted on extra administrative costs. But, if I give to Oxfam, the effects may be spread out over many people, each of whom may benefit very little. If I give to Adopt-a-Child, I shall make a significant difference to at least one person. If we are not rational distribution. This strengthens the view that both sets of acts are morally equivalent.
altruists, we may prefer to have such effects. We shall then do less good.

A similar point applies to harm. When our acts do harm, we may prefer that the bad effects be dispersed over many people. But the total effects may then be greater. If the distribution is no better, we shall thereby make the outcome worse.

We need to refine our sympathy, and correct our inability to give due weight to tiny fractions and large numbers. Here is another suggestion. When our acts have small effects on each many people, we should imagine the corresponding member of a Glover Pair. We should imagine a case in which the effects of each act would be concentrated on one single person. We might find it hard to impose, on one person, the same total amount of pollution, or loss of time or livelihood. But what we are doing in the actual case is just as bad. It is no defence that none of us makes anyone perceptibly worse off. Nor do the Harmless Torturers.

I shall end with another example. Suppose that I am shipwrecked on a desert island. The only other survivor is some stranger's child. I would be vividly aware of my moral reason to help this child. His fate depends entirely on me. Compare this with my situation when I consider giving to a scheme like Adopt-a-Child. In that case, there is not one but many children who need my help, and each of these children could be helped by many other people.

This suggests another kind of Glover Pair. The arrows on the diagram can show not actual but possible effects. If each of us was shipwrecked with a single child, the possibility of help would take a one-one form. If any child suffered, because he was not helped, one of us would be wholly responsible. In a case like Adopt-a-Child, the actual help would still be one-one. But, if we do not help, our negative responsibility is dispersed. Since each of us could help any child, none is uniquely responsible for the fate any one child.
This dispersal of responsibility makes a great difference to our natural emotions. But it makes no moral difference. Nor, as we have seen, does the dispersal of effects. Oxfam is also morally equivalent. We have as much reason to help as if we were shipwrecked with a single child.

[UNFINISHED]