

Omission and commission in judgment and choice

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Abstract

Subjects read scenarios concerning pairs of options. One option was an omission, the other, a commission. Intentions, motives, and consequences were held constant. Subjects either judged the morality of actors by their choices or rated the goodness of decision options. Subjects often rated harmful omissions as less immoral, or less bad as decisions, than harmful commissions. Such ratings were associated with judgments that omissions do not cause outcomes. The effect of commission is not simply an exaggerated response to commissions: a reverse effect for good outcomes was not found, and a few subjects were even willing to accept greater harm in order to avoid action. The ‘omission bias’ revealed in these experiments can be described as an overgeneralization of a useful heuristic to cases in which it is not justified. Additional experiments indicated that that subjects’ judgments about the immorality of omissions and commissions are dependent on several factors that ordinarily distinguish omissions and commissions: physical movement in commissions, the presence of salient alternative causes in omissions, and the fact that the consequences of omissions would occur if the actor were absent or ignorant of the effects of not acting.

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1 Omission and commission in judgment and choice

Is withholding the truth as bad as lying? Is failing to help the poor as bad as stealing? Is letting someone die as bad as killing? In most cases, the answer would seem to be no. We have good reasons for the distinction between omissions and commissions: omissions may result from ignorance, and commissions usually do not; commissions usually involve more malicious motives and intentions than the corresponding omissions; and commissions usually involve more effort, itself a sign of stronger intentions. In addition, when people know that harmful omissions are socially acceptable, they look out for themselves; this self-help principle is, arguably, sometimes the most efficient way to prevent harm. For all these reasons, the law usually treats omissions and commissions differently (Feinberg, 1984): Very few states and nations even have ‘bad Samaritan’ laws by which a person may be prosecuted for failing to help someone else in need.

In some cases, however, these relevant differences between omissions and commissions seem to be absent. For example, choices about euthanasia usually involve similar intentions whether the euthanasia is active (e.g., from a lethal drug) or passive (e.g., orders *not* to resuscitate). In such cases, when intentions are held constant, omissions and commissions are, we shall argue, morally equivalent. Yet many people continue to treat them differently - not everyone, to be sure, but enough people to influence policy decisions. We suggest that these people are often overgeneralizing the distinction to cases in which it does not apply.

Such overgeneralization results from two sources: First, by failing to think reflectively about their own heuristics, these people fail to recognize the conditions under which heuristics do not serve their purposes (Baron, 1985, 1988a). The overgeneralization of heuristics is therefore analogous to inappropriate transfer of mathematical rules, as when a student learns the base-times-height rule for the area of a parallelogram and then applies it unreflectively to a trapezoid (Wertheimer, 1945/1959). Second, the omission-commission distinction could be motivated in that it allows people to limit their moral responsibility to others (Singer, 1979). If we hold ourselves responsible only for commissions that cause harm, we need not concern ourselves with our failure to help when we can. The intuition that harmful commissions are worse than otherwise equivalent omissions is therefore a self-serving one.

The distinction between omissions and commissions can also be maintained by our perception of situations. For example, we tend to consider omissions as a point of comparison or reference point (Kahneman & Miller, 1986). Suppose Paul considers selling his stock, does not sell, and finds he would have done better to sell. George, however, sells his stock and finds he would have done better not to sell. George will feel worse, because he will be more inclined to compare his outcome to the outcome of doing nothing, while Paul will tend to regard his outcome as simply the thing to be expected (Kahneman and Tversky,

1982b).

1.1 Normative views

Jonathan Bennett (1966, 1981, 1983) defends the view that the omission-commission distinction is, in itself, morally irrelevant. He argues that the difference between what people call acts and omissions is difficult to define, and those definitions that can be maintained have no apparent moral relevance. For example, Bennett (1981) suggests that omissions involve many more possible movements than corresponding commissions. If John intends to make Ivan eat something that will make him sick, John has only a few ways of suggesting that Ivan eat the food in question, but John has many ways of *not* preventing Ivan from eating the food on his own. Bennett argues that the number of ways of bringing about an effect is morally irrelevant, and he applies the same sort of argument to other possible differences between what we call omissions and commissions, such as whether movement is involved or whether we describe something positively or negatively (staying home versus not going out, lying vs. not telling the truth).

Utilitarians such as Singer (1979) and Hare (1981) also maintain that the omission-commission distinction is, in itself, morally irrelevant. Indeed, this conclusion follows from any definition of morality in terms of intended consequences of decisions. Finally, in cases of non-moral or self-interested decision making, the distinction between omission and commission is, in itself, clearly irrelevant. All extant theories of rational choice assume that the best option is the one with the best expected consequences, the one that best achieves the decision-maker's goals (Baron, 1985, 1988a).

Other philosophers argue for the relevance of the distinction (see Kagan, 1988; Kamm, 1986; Steinbock, 1980), but their arguments are ultimately based on the philosopher's (and sometimes the reader's) intuition that certain commissions are worse than certain omissions. However, we have at least two reasons to question this intuition. First, some of these cases differ in other features than the omission-commission distinction itself (Tooley, 1974). For example, our reluctance to shoot one political prisoner (a commission) in order to stop a cruel dictator from shooting ten others (the consequence of our omission) can be justified by the precedent-setting effects of giving in to such a brutal ultimatum. Second, the intuitions in other cases could be misleading. Philosophers are not immune to psychological biases (Hare, 1981). The situation here is similar to other studies of decision making, in which accepted normative models are challenged on the basis of intuitions about cases (see Gerdner & Sahlin, 1988, for examples).

1.2 Psychological mechanisms

In the experiments reported here, we presented subjects with scenarios in which a judgment or decision must be made. We compared judgments of omissions and commissions in cases in which intentions, outcomes, and knowledge are held constant, in which the difference in effort between omissions and commissions is

trivial, and in which issues of autonomy or precedent setting do not distinguish the cases. Because we assume, on the basis of the arguments just cited, that there is no moral difference between omissions and commissions in such cases, we say that subjects show a *omission bias* when they judge harmful commissions as worse than the corresponding omissions. Note that we define ‘bias’ as a way of thinking that prevents us from achieving our goals, including altruistic goals. By this definition, a bias can be present even in someone who does not acknowledge it after reflection.

One previous study, Sugarman (1986), has compared subjects’ judgments of omissions and commissions. Subjects judged commissions (active euthanasia) as worse than omissions (passive euthanasia). Many of Sugarman’s questions, however, could be interpreted as concerning questions of law or codes of medical practice, where the distinction might be legitimate even when intentions are held constant, unlike the case of moral judgments. Our study thus goes beyond Sugarman’s primarily by designing our situations so that the omission-commission distinction is truly irrelevant to the questions we ask. In addition, we are concerned with the omission-commission distinction in general, not in any particular case. We also examine in more detail the cause of omission bias.

Exaggeration effect. Other findings lead us to expect subjects to judge omissions and commissions differently. Kahneman and Tversky (1982a) reported that subjects felt more regret when bad outcomes result from action than when they result from inaction. The examples were personal decisions about stock purchases - buying the less profitable of two stocks versus failing to buy the more profitable stock. Miller and McFarland (1986) found similar results for judgments of victim compensation. Landman (1987) extended these findings: Joy in response to positive outcomes was also stronger when the outcomes were the result of action rather than inaction. Her examples also concerned decisions with outcomes primarily for the decision maker. We can therefore expect that omission bias will be found in personal decisions as well as decisions that affect others.

To explain these results, Kahneman and Miller (1986) suggested that ‘the affective response to an event is enhanced if its causes are abnormal’ (p. 145). Commissions are considered abnormal because ‘it is usually easier to imagine abstaining from actions that one has carried out than carrying out actions that were not in fact performed’ (p. 145). This explanation, which Kahneman and Miller call ‘emotional amplification,’ may be even more relevant outside the laboratory than in the experiments of Landman (1987), or those reported here, since in all of them the experimenter tells the subject specifically what would have resulted from commissions that did not occur.

Note that by this account, omission bias is limited to bad outcomes, and it is a subset of a more general effect that works in the opposite direction for good outcomes.

Loss aversion. Another reason to expect omission bias is that gains are weighed less heavily than losses of the same magnitude (Kahneman and Tversky, 1984; Knetsch and Sinden, 1984). If subjects take the consequence of omission as a reference point (Baron, 1986), an omission that leads to the worse of two

outcomes would be seen as a foregone gain, but a commission that leads to the worse outcome would be seen as a loss. The loss would be weighed more heavily than the foregone gain, so the commission would be considered worse than the omission. When the omission and commission both lead to the *better* outcome, however, the omission would be seen as a foregone loss, so it would be considered *better* than a mere gain. The omission would always be considered better, with the outcome held constant. This prediction is inconsistent with Landman's (1987) results, but it might apply elsewhere.

Commissions as causes. Another reason for expecting omission bias is that, when omissions cause harm, there is usually some salient other cause. Following the principle of causal discounting (Kelley, 1973), the perceived causal role of the actor is diminished by the salience of the other cause. This can be an illusion. What matters for decision making is the contingency of various outcomes on the actor's options. Sometimes, the addition of other salient causes corresponds to a reduction of this contingency, but when contingency is held constant, the actor is inescapably caught in the causal chain (Bennett, 1981). In this case, other causes amount to background conditions (such as the presence of air).

More generally, subjects might consider commissions to be more heavily involved in causing the outcome because commissions are more abnormal and abnormal events tend to be seen as causes (Hilton & Slugoski, 1986). Although such an interpretation of 'cause' is in accord with common usage, it is not the sense that is relevant in morality or decision theory. What matters here is whether some alternative option would have yielded a different outcome (Bennett, 1981). (In any case, abnormality itself is controlled in most of our scenarios.)

Shaver (1985) has proposed that judgments of causality are prerequisite to judgments of responsibility or moral blame. If this is right, and if blame is different for omissions and commissions, we can ask whether this difference is exerted before or after the judgment of causality. If it is before, then we would expect a difference in causality judgments too and we would expect them to correlate with judgments of blame. Brewer's (1977) model also suggests that responsibility or blame judgments would be closely connected with judgments of causality. Her model of causality is based on comparison of two probabilities, the probability of the outcome given the action (or inaction?) performed, and the probability of the outcome 'in the absence of the perpetrator's intervention.' We have argued that the latter probability should be based on the alternative option facing the perpetrator, but even Brewer's wording suggests that people might instead think about what would happen if they were absent or if they were ignorant of the possibility of reducing harm. If they did, they would not hold themselves responsible for bad effects that would have occurred anyway if they were absent or ignorant.

Overgeneralization. Finally, as we noted, omission bias can represent an overgeneralization of rules that normally apply because of differences in intention. Failure to act does not seem as immoral or irrational when it results from mere thoughtlessness, so even when it occurs after thinking, it is excused. Subjects might not have appreciated the statement - included in all the Kahneman-

Tversky and Landman omissions - that the decision maker ‘considered’ acting but then decided against it. The various mechanisms we have suggested are compatible and may reinforce each other.

1.3 Purposes

The main purpose of the experiments we report is to demonstrate the existence of omission bias in judgments and evaluations of decision options. Although we found that some procedures produce the bias more than others, we do not concern ourselves with the differences. (Even if the bias is rare, it could be consequential, if those who display it influence important social choices or if they subvert their own goals.) Our second purpose is to isolate those aspects of omissions and commissions that subjects find relevant.

We are interested in subjects’ reflective judgment, not their immediate reactions. To make sure that subjects did their best thinking (following Tetlock & Kim, 1987), we paid them by the hour and we asked for written justifications (in blue books, of the sort usually used for examinations). In addition, we used a within-subject design in which the cases that we compare are presented next to each other. If subjects are biased here, they are likely to be biased elsewhere. Also, if we had used a between-subjects design, subjects in the commission condition would very likely infer stronger intention than those in the omission condition. By using a within-subject design, we make sure that subjects understand the equivalence of intention.

2 Experiment 1

The first experiment presented scenarios in which a decision maker (or ‘actor’) intends to bring about some harm to someone else. In various endings of each scenario, the actor attempts to bring about the harm either through omission or commission. Subjects were asked to judge the morality of the actor *in the situation*.¹ We included questions about the role of causality because pilot subjects had justified omission bias on the grounds that omissions do not cause the outcomes.

We also varied the outcome of the decision (e.g., whether Ivan gets sick, as John intends, or not). Baron and Hershey (1988) found that subjects evaluated identical decisions as well made or poorly made depending on whether their consequences were good or bad, even when the subjects knew everything that the decision maker knew at the time the decision was made. (Baron & Hershey argued that subjects overextended a heuristic that was usually a good one.) In that study, cases that differed in outcome were placed far apart in the questionnaire, so that subjects would not make explicit comparisons. In this experiment, we placed the cases next to each other to determine whether anyone *knowingly*

¹Arguably, a judgment of the morality of the actor in general might legitimately attend to the omission-commission distinction, because harmful commissions might be a better sign (than omissions) of poor character.

evaluates decisions according to their outcome. Such an outcome bias could be related to omission bias. Subjects would make both errors if they judged morality on the basis of behavior and outcome alone. They would do this if they tended to ignore intention and evidence about the probability of harm (both of which are held constant), that is, to judge an actor as particularly immoral just when an action succeeded in producing a bad outcome.

2.1 Method

Subjects and procedure. Subjects were 57 undergraduate and graduate students at the University of Pennsylvania, recruited by signs in prominent places. They were paid \$4.50 (or, in later sessions, \$5) per hour for completing questionnaires at their own pace. All questionnaires asked for both numerical ratings and justifications. Answers were written in examination-type blue books.

Materials. We describe here the results of two scenarios. Two others are not reported here because many subjects gave ratings of ‘0’ (not immoral) and the other subjects’ ratings merely agreed with the results reported here.

Case 1: The tennis tournament

John West plays tennis at the Wyncote Tennis Club two or three times a week. John is the best player belonging to the club, but he is not good enough to play professionally.

The club holds an annual tennis tournament, which occasionally attracts a big-name tennis player in need of a warm-up before Wimbledon. The first prize is \$20,000, and the prize for the runner-up (who plays in the final but loses it) is \$10,000. This year, Ivan Lendl agreed to play in the tournament. John and Ivan quickly advanced until they were to meet in the final. John would of course love to win, but he realizes that he is at a large disadvantage.

The tradition at Wyncote is for both finalists to meet for dinner at the club before the final the next morning. While getting dressed for dinner John remembers reading that Ivan is allergic to Cayenne pepper. He also recalls that the house dressing served in the dining room contains Cayenne pepper. John thinks, ‘If Ivan eats the house dressing, he will probably get a stomach ache that will keep him up much of the night. Then I’ll have a chance to win.’

At the dinner, Ivan orders first. After he orders his main course, the waiter asks him whether he prefers the house dressing or Italian dressing. Ivan does not think that the house dressing might contain Cayenne pepper.

Consider the following endings to this story:

1. Before Ivan makes a choice, John recommends that Ivan try the house dressing. Ivan orders it and gets a stomach ache, as predicted. If John had said nothing, Ivan would have ordered

Italian dressing, but John does not know this for sure. John wins the match.

Ivan orders the house dressing and gets a stomach ache, as predicted. John says nothing. John realizes that if he had warned Ivan about the Cayenne, even after Ivan announced his choice, Ivan would have ordered Italian dressing. John wins the match.

Ivan orders Italian dressing. John then recommends that Ivan try the house dressing. Ivan changes his mind, orders the house dressing, and gets a stomach ache, as predicted. John wins the match.

In three other endings, the ruse fails and Ivan wins anyway. Subjects were asked the following questions:

A. Rate John's morality in this situation for each of the six endings on a scale from 0 (not immoral at all) to -100 (as immoral as it is possible to be in this situation). Then explain what reasons you used in rating John's morality in this situation. If you gave *different* ratings to any of the six cases, explain your reasons for doing so. If you gave the *same* ratings to any of the cases, explain your reasons for doing so.

B. For the first three endings, suppose that Ivan found out (from witnesses) that John knew about the dressing and Ivan's allergy. Suppose further that Ivan sues John for the lost \$10,000 and for an additional \$10,000 for pain and suffering. You are on the jury and are convinced by the evidence that the case and the ending is exactly as described above. For each of the first three endings, what award would you recommend? Give reasons for giving different awards for different cases, if you did. Give reasons for giving the same award in different cases, if you did.

C. For the first three endings, are there differences in the extent to which John caused the outcome? Explain.

D. Does your answer to question C explain your answers to question A for these endings? Explain.

Case 2: The witness

Peter, a resident of Ohio, is driving through a small town in South Carolina. At a 4-way stop, he gets into a small accident with a town resident named Lyle. The accident came about like this:

Traveling north, Lyle approached the 4-way stop and failed either to slow down or stop. Meanwhile, Peter had just finished stopping and began to move east through the intersection. Peter noticed that a car, Lyle's, was crossing the intersection after having failed to stop. Peter slammed on his brakes, but too late to prevent his car from

hitting Lyle’s car as it passed in front of him. The accident was clearly Lyle’s fault, because the accident was caused by his failure to stop. However, because the accident’s cause is not clear from its effects, the police may believe that Peter failed to stop and that caused Peter to run into Lyle’s car broadside. [A diagram of the accident was included.

Immediately after the accident, both men exclaimed that it was the other’s fault. When the police came, Peter told them that the accident was caused by Lyle’s failure to stop. Lyle told the police that the accident was caused by Peter’s failure to stop.

Unknown to either man, there was an eyewitness to the accident, Ellen. Like Lyle, Ellen is a town resident. She thought to herself, ‘I know the accident is Lyle’s fault, but I know Lyle and do not wish him to be punished. The only way that Lyle will be faulted by the police is if I testify that the accident is indeed Lyle’s fault.’

In the four endings to be considered, Ellen either told the police that the accident was caused by Peter’s failure to stop (#1 and #2) or told the police nothing (#3 and #4); in endings #1 and #3, Peter is charged with failure to stop and fined, and in endings #2 and #4, Lyle is charged and fined. Subjects were asked the same questions as before, except that they were not asked about legality or lawsuits.

Twenty-two subjects did these two scenarios in the order given, 35 in reverse order. There were no order effects, and the results were combined.

2.2 Results

Our main interest is in whether subjects distinguished omissions and commissions. Our analyses were based on ordinal comparisons only, because too many differences were zero for us to use parametric statistics. (When a justification for rating omissions and commissions differently mentioned differences in intention, we counted the subject as rating omissions and commissions the same, to be conservative.)

In case 1, 37 out of 57 subjects (65%) rated each omission as less bad than either corresponding commission, showing an omission bias, and only one subject (for idiosyncratic reasons) rated an omission as worse than a commission. In case 2, 39 (68%) subjects rated each omission as less bad than its corresponding commission, and none did the reverse.² The responses to the two cases were correlated ($\phi = .33$, $\chi^2 = 4.78$, $p < .025$, one-tailed). Of the subjects who made a distinction, the difference between mean ratings for omissions and commis-

²We counted several responses as ‘no distinction’ even though a distinction was made in the numbers. These were cases in which subjects referred to a difference in motivation - despite our instructions that this was the same - or in the likely effectiveness of the choice. For example, two subjects attributed Ellen’s withholding of the truth as possibly the result of shyness, or John’s failure to warn Ivan as due to possible confusion.

sions ranged from 1 point (five subjects) to 70 points on the 100 point scale (mean, 27.6; s.d., 21.2; median 25).

A few subjects showed an outcome bias. In case 1, 8 subjects rated behavior as worse (on the average) when the intended harm occurred than when it did not, and none did the reverse. In case 2, 6 subjects rated behavior as worse when the intended harm occurred than when it did not, and one subject did the reverse. Over both cases, 9 subjects showed an outcome bias on at least one case and 1 subject showed a reverse outcome bias, a significant difference by a binomial test ($p < .02$, one-tailed). All subjects who showed this outcome bias in a given case also rated commissions worse than omissions for that case. The association between the outcome bias and the omission bias is significant by Fisher's exact test for case 1 ($p = .027$). Although the corresponding test is not significant for case 2 ($p = .095$), we take this association to be real because of its consistency.

For case 1, 34 subjects answered question B by saying that a greater penalty should be paid for commissions than for omissions, 14 subjects said that the compensation should be equal, no subjects said that the penalty should be greater for omissions, and 7 subjects said no penalty should be paid. (The remaining 3 subjects did not answer the question clearly.) Of the 34 subjects who distinguished omissions and commissions, 24 did so in their moral judgments as well, and of the 14 who did not, only 5 did so in their moral judgments ($\chi^2 = 3.69$, $p < .05$, one tailed).

Of the 26 subjects who showed omission bias in case 1 and who answered the causality questions (C and D) understandably, 22 said that John played a greater causal role in the commission endings than in the omission endings and that this was good reason for their different moral judgments, 2 said that John played a greater causal role in omission but this did not account for their different moral judgments, and 2 said that John's causal role did not differ. Of the 15 subjects who did not show omission bias and who answered the causality questions understandably, 9 said that John's causal role did not differ and that this was why their moral judgments did not differ, 1 said that John's causal role did not differ but this was not why this subject's moral judgments did not differ, and 5 said that John's causal role did differ. In sum, 31 out of 41 subjects felt that their perception of John's causal role affected their moral judgments, and, in fact, differences in judgments of causal role were strongly associated with differences in moral judgments ($\chi^2 = 13.26$, $p < .001$).

Those subjects who showed omission bias frequently cited differences in causality: 'John [in case 1, ending 2] did not *recommend* the dressing.' 'In [ending] 1 [case 2], she affects [the outcome] greatly by lying. In [ending] 3, she affects it by failing to give any testimony, which results in the police finding the wrong party guilty. This is a lesser effect than in 1 because the police could have still found Lyle guilty.' Such arguments are reminiscent of the causal discounting scheme proposed by Kelley (1973): when there is another cause (Ivan's choice) the cause at issue (John's choice of whether to warn Ivan) is discounted.

Other justifications of the distinction (each of which occurred several times) were made in terms of rules that made a distinction between omissions and

commissions, at least implicitly. Some of these rules concerned responsibility: ‘It isn’t John’s responsibility to warn Ivan about the Cayenne. It’s Lendl’s responsibility to ask if it is in the salad dressing.’ Other rules concern descriptions of the act in question: ‘She is again causing the innocent man to be charged but this time through neglect, which I don’t believe to be *as* immoral as directly lying, but perhaps this is because today, keeping your mouth shut seems to be the norm.’ Several subjects referred to the wrongness of ‘lying,’ which did not include deliberately misleading someone through one’s silence. Other rules concerned rights: ‘She should have said something, but I don’t think that she should be required to do so. It should be her right to mind her own business.’ Finally, some subjects referred to the omission-commission distinction directly: ‘Choosing to do nothing isn’t really immoral.’ ‘John doesn’t plant the seed [in the omission], he just lets it grow.’ These rules might express the heuristics that subjects use.

Those subjects who made no distinction between omissions and commissions most frequently referred to the equivalence of intentions, causality, or gave no justification at all. In other cases, they referred to duty or obligation (e.g., ‘It’s Ellen’s duty to report the truth’), rules that did not distinguish omissions and commissions (e.g., that it is wrong to mislead people), or intended consequences (‘By saying nothing it is just as bad as lying because she is hindering justice’).

In summary, Experiment 1 showed four things: 1., moral judgments of others exhibited omission bias; 2., an outcome bias was found in a few subjects, all of whom showed the omission bias as well; 3., legal judgments distinguished omissions and commissions; and, 4., the perceived causal role of the actor at least partially accounted for the bias.

3 Experiment 2

Recall that one legitimate reason for making a distinction between omissions and commissions is that commissions are associated with greater intention to do harm. The justifications provided in Experiment 1 suggest that omission bias was not based on different beliefs about intentions. In the present experiment, we asked explicitly about possible differences in intention. We also modified the cases used in Experiment 1 so that the equivalence of intention in cases of omission and commission was more apparent. Specifically, we made it clear that the actor would have brought about the result through commission if it were necessary to do so.

3.1 Method

The ‘John’ case from Experiment 1 was used with the following endings and questions:

1. Before Ivan makes a choice, John recommends that Ivan try the house dressing.

John is about to recommend the house dressing, but before John can say anything, Ivan orders the house dressing himself. John says nothing.

Question 1. Is John's behavior equally immoral in both endings? If so, why? If not, why not?

Question 2. Is there a difference between the two endings in John's intention, that is, what he was trying to bring about?

The 'Ellen' case was used with the following endings and with the same questions (about difference in morality and intention):

1. Ellen told the police that the accident was caused by Peter's failure to stop.

Ellen is about to tell the police that the accident was caused by Peter's failure to stop, but before she could say anything, she heard one policeman say this to the other policeman, who agreed, so Ellen said nothing.

Two additional cases were included. One will be presented as Experiment 3. The other, the last case, will not be described because its results merely agreed with the results of the first two cases. Thirty-six subjects filled out the questionnaire.

3.2 Results

Of the 36 subjects, 33 rated intention as equivalent in the John case and 33 in the Ellen case. (Most of those few who did not rate intention equivalent gave incomprehensible answers rather than negative ones.) Of those who rated John's intention as equivalent, 10 rated his commission as more immoral than the omission, and none rated the omission as more immoral ($p < .002$, binomial test, two-tailed). Likewise, of those who rated Ellen's intention as equivalent, 5 rated her commission as more immoral and none rated her omission as more immoral ($.05 < p < .10$). Altogether, 12 out of the 35 subjects who rated intention as equivalent in at least one case showed omission bias, and none showed a reverse bias ($p < .001$). Several differences between these cases and the comparable cases in Experiment 1 could account for the lower percentage of subjects showing the effect here: we told subjects here that the actor was on the verge of action; we did not tell them the outcome; and we used a different method of eliciting the response.

Justifications were similar to those in Experiment 1, for example: 'It's more immoral in the first, because John actively ... causes Ivan to eat the peppered salad. His silence in the second case at least relieves him of the responsibility of *actively* causing Ivan's allergic reaction. As long as Ivan has done this to himself, John has a certain leeway of moral[ity]. ... [John is] just damn lucky that Ivan orders before he can recommend.' One subject who did not show omission bias made a distinction worth noting: 'Immorality is found in intentions and 'blood

on the hands' is found in deeds. Therefore, ... John is equally immoral - it's just that John has 'less blood on his hands' in ending #2. That is to say, only John will ever know the immorality of his deeds in ending #2.' Another subject who did not show the bias quoted a Catholic prayer, 'Forgive us for what we have done and for what we have failed to do.' Some heuristics oppose the bias.

In summary, Experiment 2 showed that the results supporting omission bias are not due to perceived differences in intention.

4 Experiment 3

The questionnaire used in Experiment 2 included a new case based on the 'branch line' example from Bennett (1981), in which a person can switch a vehicle onto a new track or leave it where it is. If the train goes down one track, two men are put at risk; if it goes down the other track, three men are at risk. There are four different endings: switch from three men to two men, switch from two to three, do not switch from three to two, do not switch from two to three. We expected that the action putting three men at risk would be considered worse than the inaction that leaves three men at risk.

If omission bias is a subset of a more general effect in which the effects of commissions are exaggerated, actions that put two men at risk (instead of three) would be considered better than inactions that leave two men at risk. Such exaggeration could result either from emotional amplification (as suggested by Landman, 1987) or from the subjects assuming that the outcome was more strongly intended when it resulted from a commission than from an omission.

If, on the other hand, deprecation of harmful commissions were not accompanied by commendation of beneficial commissions, the deprecation could not be explained in terms of perceived differences in intention between omissions and commissions. Such perceived differences in intention would induce both deprecation of harmful commissions and commendation of beneficial ones. So a finding of deprecation unaccompanied by commendation would indicate in yet another way the existence of omission bias. It can be explained by overgeneralization of heuristics favoring omission, or by loss aversion.

4.1 Method

The subjects were, of course, the same as those of Experiment 2.

The new case was as follows:

Sam works as a mechanic in the train yard. While he is alone in the switching station checking the machinery, he notices that a train has started to roll slowly down a sloping part of track 1. The brakes seem to have been released accidentally. Sam knows how to work the switches, and he could change the train to track 2 (but not to any other track). At the bottom of both tracks (1 and 2), some men are working with jackhammers. (They will probably not hear the train approach.)

Rank Sam's behavior in each of the following four endings from best to worst. Explain your rankings. You may use ties.

The first case read 'Sam sees that there are three men at the bottom of track 1 and two men at the bottom of track 2. He does not switch the train to track 2.' The remaining cases were constructed by changing 'does not switch' to 'switches' in the second and fourth, and by switching the groups of men in the third and fourth. We refer to these cases as $3o$, $2c$, $2o$, and $3c$, respectively: the number refers to the number of men at risk, and the letter refers to omission vs. commission.

4.2 Results

Four subjects gave incomprehensible or unusable answers (e.g., saying that the track with 3 men was better because one of them was more likely to notice, in which case the ranking of the outcomes was opposite to what we expected). As expected, 21 of the remaining 32 subjects ranked ending $3o$ higher than ending $3c$, and none ranked ending $3c$ higher than ending $3o$ ($p < .001$, binomial test, two-tailed).

To ask whether deprecation of harmful commissions ($3c < 3o$) was found without equivalent commendation of beneficial commissions ($2c > 2o$), we counted patterns of ranks that were consistent with such an effect and patterns that were consistent with the opposite effect ($2c > 2o$ but not $3c < 3o$). Twelve subjects showed patterns consistent with the effect and only one showed a pattern consistent with the opposite ($p < .005$, binomial test, two-tailed). This result cannot be accounted for by differences in perceived intention between omissions and commissions, for such differences alone would simply exaggerate the judgments of the better and worse outcomes, leading to equal numbers of rankings in which $3c < 3o$ and $2c > 2o$.

In fact, nine subjects ranked each of the commissions ($2c$ and $3c$) lower than its corresponding omission ($2o$ and $3o$, respectively), but no subject ranked each of the omissions higher than its corresponding commission ($p < .01$, binomial test). Two of the nine subjects ranked $2c$ equal to $3o$ and two ranked $3o$ higher than $2c$; these four subjects considered omission versus commission to be at least as important as expected outcome.

We also found an exaggeration effect. Ten subjects ranked ending $2c$ higher than $2o$, although 9 ranked the $2o$ higher than $2c$. Overall, 14 subjects provided rankings consistent with an exaggeration effect, in which action was ranked higher (better) than inaction for the good outcome (2 men) or worse for the bad one (3 men), or both: ($2c > 2o > 3o > 3c$, 9 subjects; $2c = 2o > 3o > 3c$, 4; $2c > 2o > 3o = 3c$, 1) and no subjects provided rankings consistent with the reverse effect (e.g., $2o > 2c > 3c > 3o$) ($p < .001$). As we pointed out earlier, this effect is consistent either with emotional amplification or with perceived differences in intention between omissions and commissions. (Note that the ranking $2c = 2o > 3o > 3c$ is also consistent with deprecation.)

Typical justifications given by those who consistently deprecated commissions mentioned causality or Sam's role (see Haidt, 1988): 'If I do nothing, it's not exactly *me* who *did* it. I might tell myself it is meant to happen.' '[*2c* is worse than *2o*] because it's as if he chooses who would die by switching.' 'In [ending] *2c*, Sam tries to prevent injury to three people but in the course causes two people to be injured.' Typical justifications for those who exaggerated commissions took inaction as a reference point with which the effects of action were compared: '*2c* is the best because he is saving a life. *3c* is the worst because he is needlessly killing an extra person.' Some subjects of both types criticized Sam's willingness to 'play God' in the commission cases.

In summary, we found a deprecation of harmful actions that cannot be the result of differences in perceived intentions. We also found evidence of exaggeration, which could result either from perceived differences in intention or from emotional amplification.

5 Experiment 4

In this experiment, we removed the influence of possible differences in intention in a different way, specifically, by putting subjects in the position of the actor. Subjects were given no information about intentions. Rather, they had to make a decision based on the expected consequences and the means for bringing them about. They could not excuse harmful omissions on the basis of different intentions, because there were no other intentions possible than the ones they imagined themselves to have in the situation.

In each case, the subject was given two options to rate. The options concerned the treatment of one or more sick patients, either doing nothing or ordering a medical procedure. Each patient had a 20% chance of permanent brain damage if nothing was done, and a 15% chance if the treatment was given. In a control condition, the probabilities were reversed. If, as we found in Experiment 3, harmful (20% risk) commissions are deprecated more than helpful (15% risk) commissions are commended, then the overall rating of omissions - across both risks - will be higher than the overall rating of commissions, whatever the effect of risk itself on the ratings.

The decision was made from three different perspectives: that of a physician treating a single patient, that of a patient making the decision on his or her own behalf, and that of a public health official making the decision on behalf of a number of similar patients. This experiment, like the train problem of Experiment 3, therefore looks for omission bias in situations that are not 'moral' in the narrow sense of the term. The public health official was included to test the possibility that the decision would change when the issue involved numbers of patients affected rather than probabilities of a single patient being affected. Subjects could take frequencies more seriously than probabilities, and therefore be less inclined to show omission bias for the public health official than for the physician.

We tested the tendency of subjects to take omissions as the reference point

by asking subjects to assign numbers to both options, using positive numbers from 0 to 100 for ‘good’ decisions and negative numbers from 0 to -100 for ‘bad’ ones. If subjects tend to take omissions as the reference point, they would assign zero to the omission more often than to the commission, across all cases. In addition, the average rating assigned to both options would be higher when the worse option is an omission than when it is a commission. This is because they would tend to assign the omission a number closer to zero.

Our main hypothesis is, of course, that the overall ratings of commissions will be lower than the overall ratings of omissions, across all cases (including those in which commissions are associated with 20% risk and those in which it is associated with 15% risk). A stronger hypothesis is that subjects will consider the commission worse than the omission even when the probability of harm from the commission is lower, more often than they will do the reverse.

5.1 Method

Subjects were told to assign numbers to each option. ‘The number is to represent the *overall goodness* of the decision from your point of view, assuming that you are trying to do your job as well as possible. By ‘overall goodness’ we mean that you would always prefer decisions with higher numbers to those with lower numbers. If you assign the same numbers to two different decisions, that means that you feel it is a toss-up between them.’ Subjects were also told to make sure that their numbers were comparable across cases as well as between options within each case. Subjects were told: ‘Use positive numbers between 0 and 100 for good decisions, negative numbers between 0 and -100 for bad decisions. 100 and -100 represent the best and worst decisions possible in this kind of situation. (If you use 100 and later want to use a higher number, or if you use -100 and later want to use a lower number, feel free to go beyond these limits.) 0 represents a decision that is neither good nor bad.’ Subjects were also told to explain the factors that influenced their rating of each option.

Case 1 read: ‘Imagine you are a physician making a decision on behalf of a patient who has left the matter up to you.

The patient has an unusual infection, which lasts for a short time. The infection has a 20% chance of causing permanent brain damage. You may undertake a procedure that will prevent the brain damage from the infection (with 100% probability). However, the procedure itself has a 15% chance of causing brain damage itself.’ Case 2 was from the patient’s perspective; case 3 was from that of a public health official making a choice for many patients. Cases 4-6 were identical except that 20% and 15% were reversed. Subjects were told to rate the omission and commission options separately for each of the six cases.

Twenty-four subjects were given the cases in this order, and another 24, the reverse order. Ten additional subjects were omitted for failing to rate both options, failing to provide justifications, or for adding additional assumptions in their justifications (the most common one being that treatment should be given for research purposes, to learn more about its effects and to try to improve it).

Table 1
Mean rating (and standard deviation) assigned to each option
in Experiment 4

Case	Decision maker	Option	Degree of damage	Mean rating	(s.d.)
1	Physician	Inaction	20\%	-38.0	(53.0)
		Treat	15\%	53.4	(48.9)
2	Patient	Inaction	20\%	-34.9	(55.2)
		Treat	15\%	48.8	(50.5)
3	Official	Inaction	20\%	-38.4	(55.6)
		Treat	15\%	45.6	(49.8)
4	Physician	Inaction	15\%	62.9	(42.9)
		Treat	20\%	-51.5	(55.0)
5	Patient	Inaction	15\%	60.5	(35.7)
		Treat	20\%	-51.9	(42.9)
6	Official	Inaction	15\%	62.1	(43.4)
		Treat	20\%	-68.1	(40.0)

5.2 Results

The mean ratings for each option in each of the six cases are shown in Table 1. These ratings were analyzed by an analysis of variance on the factors: risk (15% vs. 20%); action-inaction; perspective (physician, patient, official); and the between-subjects factor of order. Of most importance, the mean difference of 16 points (on a -100 to 100 scale) between actions and inactions was significant ($F_{1,46}=10.2$, $p < .005$). In the last three cases, where the commission led to greater harm, the more harmful option was rated worse and the less harmful option was rated better than in the first three cases, where the omission led to greater harm. Action-inaction did not interact significantly with order or perspective (mean difference, inaction minus action, of 11 for the physician, 14 for the patient, and 23 for the official). Omission bias therefore seems to occur for choices affecting the self, as a patient, ($t_{47}=1.89$, $p < .05$, one-tailed) as well as choices affecting others, and it occurs when the outcomes are expressed as frequencies as well as probabilities.³

In addition, 19 out of 144 comparisons (13%) in cases 1-3 favored the (more harmful) omission over the (less harmful) commission, but only 3 out of 144 comparisons (2%) in cases 4-6 favored the (more harmful) commission over the (less harmful) omission. The difference between cases 1-3 and cases 4-6 in the number of such anomalies per subject was significant by a Wilcoxon test ($p < .03$,

³The analysis of variance also revealed that the overall mean rating was significantly above 0 ($F_{1,46}=16.5$, $p < .001$). Low-risk options were rated higher than high-risk options ($F_{1,46}=37.4$, $p < .001$). Risk interacted with order ($F_{1,46}=9.0$, $p < .005$) and with perspective ($F_{2,45}=3.2$, $p=.05$). No other two-way interactions were significant.

two-tailed). Ten subjects showed more anomalies favoring omissions, and one subject showed more anomalies favoring commissions ($p < .02$, binomial test). Although the number of anomalies favoring omission was small, they indicate that some people are inclined to sacrifice lives or increase the probability of death in order to avoid an action that would replace one risk with a smaller risk. As in Experiment 1, perceived causality seemed important in justifications of such reversals, e.g., ‘There is slightly less chance with the second choice but the blame would be yours if brain damage occurred.’ Other justifications seemed to involve naturalism, e.g., ‘... there is something to be said for letting nature take its course.’ No subject mentioned the stress of the procedure itself as a relevant consideration (but one subject did mention the cost).⁴

To test the hypothesis that omissions were taken as the reference point, we first examined ratings of 0. Zero was assigned to the omission on 18 out of the 288 cases, and to the commission on 7 out of 288 cases (excluding the 9 cases in which 0 was assigned to both options within a given case). The difference in the number of 0 ratings assigned to omissions and commissions per subject was significant by a Wilcoxon test ($p < .04$, 1 tailed) and by a binomial test across subjects (8 with more zero ratings for omissions, 1 with more for commissions, $p < .02$).

We also compared the mean of all the ratings in cases 1-3, where the riskier option was an omission, with the mean of all the ratings in cases 4-6, where the riskier option was a commission. The mean rating was higher when the worse option was an omission than when it was a commission (difference, 3.7; $t_{47}=2.03$, $p < .025$). The correlation between this measure of the reference-point effect and the overall omission bias was .23, which was not quite significant.

Although we found some support for loss aversion with omissions taken as the reference point, this hypothesis cannot account for the relatively large number of anomalies in which a more harmful omission is preferred over a less harmful commission. This hypothesis, then, appears not to be the whole story, although it may well be part of the story.

In summary, this experiment revealed an omission bias in choices affecting the self as well as choices affecting others, and in choices in which the expected harm of an option is expressed in terms of the number of people harmed as well as in the probability of harm. Intended outcome was held constant by putting the subject in the position of the decision maker. A few subjects showed the anomaly of preferring a more harmful omission to a less harmful commission.

⁴Some responses that favored action over inaction were justified by the assertion that it was better to do something rather than await the epidemic passively. These responses suggest the existence of an intuition that action is better than inaction, rather than worse. Although the opposite intuition predominates in our experiments, this one might predominate in other situations, such as those in which some action is expected.

6 Experiment 5

The remaining experiments address further the question of why omission bias occurs. We examine the role of several factors that might distinguish omissions and commissions. We have already noted some of these factors: perceived difference in causality; differing degrees of ‘responsibility’; and the bald fact that one situation was a commission and the other situation was an omission.

We hypothesize that individuals distinguish between omissions and commissions because certain factors, which often distinguish them, affect judgments of morality. Some of the factors also serve to define what people think of as omissions or commissions. Drawing on the work of Bennett (1981, 1983) and Tooley (1974) and on subjects’ statements in earlier experiments, we examined a more complete list of factors than those we examined in Experiments 1-4. We assume that all the factors we examined are morally irrelevant except for responsibility. (We do not examine the role of intention and motive, which we also take to be relevant.) We examined the role of each factor both on its own (with other aspects of the omission-commission distinction held constant) and in the context of an obvious omission-commission distinction (where other factors also distinguish omissions and commissions).

The following seven factors were examined:

Movement. Although movement is a sign of greater intention, movement loses its moral relevance when intention is held constant. Subjects might still regard movement as relevant, however.

Detectability. Some subjects in earlier studies suggested that behavior was worse if the intention were detectable than if it were not. This is reminiscent of certain aspects of ‘pre-conventional’ thinking as described by Kohlberg (1963), although it could also result from a confusion between morality and legality.

Number of Ways. Bennett (1981) maintains that the only distinction between what he terms ‘positive and negative instrumentality’ is the number of possible ways that exist to bring about a harmful outcome. Compared to the number of ways we can commit an act, the number of ways we can ‘not do something’ is large: we can do almost anything.

Alternative Cause. According to the ‘causal discounting principle,’ the role of a particular cause in producing an outcome is discounted if other plausible causes are also present (Kelley, 1973). Subjects apply this principle when it is legitimate (Thibaut and Riecken, 1955). For example, when a person is forced to commit harm, we correctly believe that he is less responsible than someone who was not forced. Subjects might over-generalize this principle, judging a person less blameworthy because of an alternative cause even when they know that the same deed would be done even in the absence of the alternative cause. Omissions commonly involve a salient alternative cause while commissions usually do not.

Presence. Several subjects in unreported experiments argued that you could not be blamed for something if it would have occurred in your absence. Most omissions are in this category. Logically, this explanation is a subset of ‘Alternative cause,’ since occurrence in one’s absence requires another cause, but psychologically, the two kinds of arguments might differ, or alternative-cause

arguments might be limited to cases in which the actor is absent.

Repeatability. It is relatively rare to be able to intentionally harm an individual through an act of omission. However, it is fairly common to have the opportunity to harm someone through an act of commission. Martin Seligman (personal communication) has proposed that this could be a reason that individuals make a moral distinction between omissions and commissions.

Diffusion of Responsibility. According to the Diffusion of Responsibility theory, when an individual realizes that another person is in danger, he is less likely to intervene if he believes that other people are present (Latane and Darley, 1968). This is because the burden of responsibility does not fall on him alone. Commissions usually involve one person who is clearly responsible for the outcome. Omissions sometimes involve more than one person who could be held responsible for the outcome.

We designed one scenario to examine the relevance of each of the seven factors. Some endings of each scenario differed in the presence or absence of the factor of interest, holding constant other factors that would distinguish omissions and commissions. In most scenarios, other endings differed in several other factors that distinguish omissions and commissions but not in the factor of interest.

Method

Twenty-seven subjects were solicited as in previous studies.

What follows is a summary of each of the seven scenarios in the questionnaire (which is available from J.B.). The actor is always the subject herself, e.g., the first scenario begins, ‘You are returning one item and buying another in a department store.’

Movement. In ending A, the cashier in a department store credits the actor’s account (i.e., ‘your account’) with \$100 by mistake, and the actor says nothing. In B, the cashier places the \$100 on the counter and the actor reaches out and picks them up.

Detectability. A person in a grocery store checkout line notices \$20.00 of someone else’s change sitting on the counter. The three different endings describe different ways in which the person takes this money. In the first ending he takes the money in a way that is detectable to those around him who may be watching (a commission case). In the second and third endings (an omission and a commission, respectively), he takes the money in a way that is not detectable to anyone watching.

Number of Ways. A government official wants to protect a guilty friend who is being sued in court. The official has the opportunity to appoint one of ten people to be his friend’s prosecutor (a commission), or he can leave the person already assigned (an omission). In the first ending, ‘Nine of the assistants are new and inexperienced. If one of these is assigned to the case, the prosecution will probably fail. The tenth assistant is experienced and will probably succeed. The experienced person was assigned to the case by your predecessor. (Your predecessor did not know anything about which assistants were experienced

and which were not.) You take that person off the case and put on one of the others.’ In the second ending, 9 of the assistants are inexperienced, one of these was already assigned, and ‘you do nothing.’ In the third ending, one of the assistants is inexperienced, and ‘you’ assign this person to the case. In the fourth ending, the single inexperienced person is left on the case. In the third and fourth endings, a commission and omission, respectively, there is only one way to produce the bad outcome, as opposed to nine ways in the first two endings.

Alternative Cause. An angry man causes his neighbor’s parked car to roll down a hill. In two of the endings (one an omission involving failure to stop the car with a rock, and one a commission involving moving a rock out of the car’s path) there is alternative cause to the car’s rolling down the hill (faulty brakes). In the third case (a commission) there is no alternative cause; the man pushes the car himself.

Presence. A soldier prevents a radio message from being received that would have sent him on a difficult mission. In ending A, he (or she) knows that the antenna is pointed in the wrong direction, and he fails to change it. (Nobody else knows.) In B, he is blocking the antenna by standing next to it, and he fails to move. In C, the antenna (pointed the wrong way) works only when he is standing next to it, and he steps away. In D, he points the antenna in the wrong direction. C and D contain most of the factors that characterize commissions, but in A and C the outcome would occur in the soldier’s absence.

Repeatability. A student cheats on an exam in a way that he could either repeat as often as he likes, or in a way that he could never do again because it is allowed by the professor’s temporary absence (both commissions).

Diffusion of Responsibility. An individual witnesses a friend’s car accident. He then causes the wrong person to be charged in the accident either through lying to the police about what he saw (a commission) or through failing to correct the police when they charge the innocent party (an omission). In two of the endings (one omission and one commission) a third party also witnesses the accident and acts in the same way. In the other two endings (one omission and one commission) there are no other eyewitnesses to the accident.

For each ending of each scenario, subjects were asked to do two things: (1) to rate on a scale from 0 to -100 how immoral they believed the act to be (0 being not immoral and -100 being very immoral), and (2) to justify with written explanations any similar or dissimilar ratings that they gave.

Results

Table 2 shows, for each pair of endings, the number (and percent) of subjects who indicated that one ending was worse than another in the hypothesized direction (e.g., commission worse than omission, detectability worse than no detectability) and the number (and percent) of subjects who indicated that one ending was worse than the other in the opposite direction.

The comparisons between the omission and commission cases in Table 2 show that subjects often rated the commission cases as morally worse than the

Table 2
 Number (and percent) of subjects (out of 27) in Experiment 5
 who rated paired endings differently in each direction

Scenario	Comparison	Rated unequally as hypothesized	Rated unequally, not as hypothesized
Movement	*C/O	12 (44\%)	
Detectability	*C/C	4 (15\%)	
	C/O	8 (30\%)	1 (3\%)
Number of ways	*C/C	5 (19\%)	
	*O/O	9 (33\%)	
	C/O	13 (48\%)	
	*C/*O	13 (48\%)	
Alternative cause	*C/C	9 (33\%)	
	*C/*O	18 (67\%)	
Presence	*O/O	14 (52\%)	
	*C/C	14 (52\%)	
	C/O	18 (67\%)	
	*C/*O	10 (37\%)	1 (3\%)
Repeatability	*C/C	9 (33\%)	1 (3\%)
Responsibility	*C/C	4 (15\%)	1 (3\%)
	*O/O	3 (11\%)	
	*C/*O	14 (52\%)	
	C/O	16 (59\%)	

Note: * indicates the presence of the factor, and O and C indicate omission and commission, respectively.

omission cases. Only twice, however, did subjects rate the omission case as more immoral than the corresponding commission case. The data shown in Table 2 also suggest that subjects' morality judgments were affected by presence (52%), movement (44%), repeatability (37%), and alternative cause (33%).

E.M. and J.B. coded the justifications of the first nine subjects, and their ratings concurred 90% of the time. E.M. coded the remaining subjects' justifications. Subjects gave two justifications that were not among the original seven hypothesized. They are 'acts versus omissions,' and 'not their responsibility.' The 'diffusion of responsibility' factor was renamed 'responsibility' to include all justifications that fell under the explanation that it was not the subjects responsibility to prevent harm in a particular situation. Several extraneous factors were cited; for example, in the Movement scenario, some subjects said that it was easier for the store to discover the error in the ending in which the customer is given a credit.

The justifications that subjects cited most often for rating the endings unequally as predicted (which occurred in 193 comparisons) were: acts versus omissions (49 comparisons); alternative cause (35); and responsibility (34). Other justifications were cited, however, in comparisons designed to elicit them and elsewhere: movement was cited 3 times in the Movement scenario and 7 times in the Presence scenario; detectability was cited 10 times total in 6 different scenarios; number of ways was cited 10 times in the Number of Ways scenario; presence was cited 14 times in three different scenarios; and repeatability was cited 5 times in the Repeatability scenario.

7 Experiment 6

This experiment used the same scenarios and endings as Experiment 5, but it asked subjects for judgments of justifications that we gave rather than construction of their own. Subjects were provided with a list of factors and told to indicate which factors were relevant to each comparison. This method allows us to determine whether the pattern of justifications found in Experiment 5 was limited by the subjects inability to articulate their reasons. A new factor, which we called 'knowledge,' was included in the list of factors, but no new dilemma manipulated this factor. This factor is similar to 'presence,' but points to what the actor knew rather than where she was: in the case of omissions, the actor would have behaved in the same way if she had not known of the opportunity to affect the outcome through a commission.

Method

Thirty-two subjects were solicited as in previous experiments. Twelve of these subjects rated all endings as morally equal or gave extraneous reasons why they were not; these subjects are not considered further.

After each scenario, the subject was asked to compare critical pairs of endings: 'Which ending is more immoral, or are they equally immoral?' Next, the subject indicated the status of each factor that we thought distinguished the

two cases. For each factor listed, the subject indicated whether the factor was morally irrelevant or which ending it made worse. When it was relevant, scenarios included an ‘omission’ factor that referred simply to whether or not the actor ‘did anything.’

For example, in the comparison of endings A and B in the Presence scenario, subjects were told, ‘In A, if you were absent from the situation, the outcome would be the same,’ and they were asked to circle one of three alternatives: ‘Morally irrelevant’; ‘Makes A worse’; or ‘Makes B worse.’ In the comparison of endings A and C, subjects were asked about three different factors (knowledge, movement, and omission): ‘If you did not know about the antenna in A, you would have done the same thing as you did’; ‘You moved in C’; ‘In A you are not doing anything.’ Note that the wording of factors was adapted to the scenario when it seemed to increase clarity. The factors asked about for each scenario are shown in Table 3. The subject was asked to explain any additional factors that were morally relevant and not listed.

Results and discussion

Table 3 shows the numbers of subjects who thought the actor’s morality was different in the two endings. Many subjects thought that omissions and commissions (which always differed in several factors) were morally different (as indicated in the rows labeled ‘omission’ in Table 3). When only one factor distinguished the two endings being compared, only presence played a significant role (according to a binomial test based on unequal ratings in hypothesized direction versus not hypothesized). Differences in detectability, number, repeatability, and responsibility did not by themselves lead to perceptions of a moral difference. Movement did make some difference, but the comparison involving movement (the first scenario) was not a pure one; other factors also distinguished the endings. The cause factor mattered to four subjects, but this was not significant by a binomial test. The factor we call knowledge was not tested in any single comparison.

Table 4 shows the number of subjects who thought each factor was relevant in the hypothesized direction and in the opposite direction. (So far as we can determine from reading subjects’ additional comments, all of the responses in the opposite direction were the result of misunderstanding of the items’ wording.) In some cases, subjects said that a factor was relevant even though the subject did not think the endings differed in morality; we do not know why this discrepancy occurred. Very few subjects indicated the relevance of factors not mentioned.

The major factors are much the same as those found in Experiment 5: cause; presence; knowledge; and movement. These factors favored the hypothesis significantly (by a binomial test) in almost every case. Factors that played essentially no role were detectability, number, and repeatability. These factors were rarely mentioned spontaneously in Experiment 5, and they did not make a difference when they were the sole distinction between two endings. Subjects did think that the omission factor itself (i.e., the fact that the actor ‘did nothing’ in one ending) was relevant; we do not know whether they considered it to be redundant with the other factors listed or not.

Table 3

Number of subjects (out of 20 included) who said that the two endings in a given comparison differed morally in the hypothesized direction (e.g., commission ending worse) or the reverse direction (e.g., omission ending worse)

Scenario	Comparison	Rated unequally as hypothesized	Rated unequally, not as hypothesized
Movement	movement	5	0
Detectability	detectability	1	0
Number	omission	13,12	0,0
	number	1,0	0,1
Cause	cause	4	0
	omission	15	0
Presence	presence	7,7	0,0
	omission	5,7	1,1
Repeatability	repeatability	2	0
Responsibility	omission	13,13	0,0
	responsibility	1,1	2,2

Note: 'Comparison' refers to the factor that distinguished the items compared; 'omission' indicates several factors. For the detectability item, only the endings differing in detectability were analyzed, as the others did not bear on any questions. When a given scenario had two comparisons for a given factor, both are included.

Table 4

Number of subjects (out of 20 included) who said that factors were different and relevant in the hypothesized direction (+) or the reverse direction (-).

Scenario	Comparison	Factor	Different and relevant	
			+	-
Movement	movement	movement	5	0
		detect.	3	0
		omission	5	0
Detectability	detect.	detect.	3	0
Number	omission	detect.	3,4	0,0
		cause	10,10	0,1
		presence	9,10	1,2
		knowledge	8,8	1,2
		omission	11,10	0,0
	number	number	1,0	0,1
	Cause:	cause	cause	4
omission		detect.	3	0
		presence	12	1
		knowledge	12	1
		movement	15	0
		omission	14	1
Presence:	presence	presence	8,7	0,0
	omission	knowledge	3,6	0,0
		movement	7,7	0,0
		omission	6,7	1,0
Repeatability:	repeat.	repeat.	2	0
Responsibility:	omission	detect.	0,1	0,0
		respons.	9,9	1,1
		cause	10,10	0,0
		movement	13,11	0,0
		presence	10,9	0,0
		knowledge	8,8	1,0
		omission	12,11	0,0
		respons.	respons.	1,1

Note: 'Comparison' refers to the factor that distinguished the items compared; 'omission' indicates several factors. 'Omission' as a factor refers to 'not doing anything' in one of the endings. For the detectability item, only the endings differing in detectability were analyzed, as the others did not bear on any questions. When a given scenario had two comparisons for a given factor, both are included.

The factor called ‘responsibility’ was tested in only one scenario, but in two different comparisons. In the first comparison, in the omission endings, ‘The police are about to charge the [wrong] person’ with causing the accident, and ‘you say nothing.’ In the omission endings, ‘The police ... ask you who was at fault,’ and ‘you say it was the other driver.’ The factor is described as, ‘In [the omission ending], the police are responsible, not you.’ Nine subjects thought that this factor was relevant in the hypothesized direction in each ending. In the second comparison, the distinction is whether or not a friend of the actor sees the accident too. Only one subject thought this distinction was relevant (and two thought it was relevant in the opposite direction). These results suggest that subjects do not regard ‘diffusion of responsibility’ of the sort studied by Latan and Darley as morally relevant, but they do think it is relevant when those who are responsible by virtue of their role make a mistake.

In summary, the last two experiments have found certain factors to be relevant to moral judgments, most importantly: the actor’s physical movement; the subject’s judgment that an outcome has another cause aside from the actor; the fact that the same outcome would have occurred in the actor’s absence; and the fact that the same outcome would have occurred if the actor did not know that she could affect the outcome. These last three factors together probably contribute to the judgment that the actor caused the outcome in the case of commissions but not in the case of omission, and we found in Experiment 1 that this judgment was correlated with omission bias. These factors generally distinguish what are called omissions from what are called commissions, but subjects find each of these factors relevant even when it is not accompanied by the other factors that usually make up the distinction. (Other factors were not very often considered relevant: the detectability of the actor’s behavior; the number of ways in which an outcome could be brought about; the repeatability of the situation; or the fact that someone else was responsible.)

8 Discussion

Our experiments established a bias to favor omissions that cause harm. Ordinarily, harmful omissions are less blameworthy because the actor is less knowledgeable about the potential consequences, but knowledge was held constant in almost all our scenarios. Likewise, harmful omissions are typically less intentional than commissions, but this difference cannot explain our results either: In Experiment 2, we found that the bias was present even when intentions were judged to be the same. In the train story of Experiment 3 and the medical cases of Experiment 4, deprecation of harmful commissions was not accompanied by equal commendation of helpful commissions. Differences in perceived intention alone would not predict this finding. (Nor would an effect of perceived differences in effort, which would affect perceived intention.)

This finding also indicates that emotional amplification is not a sufficient account of the bias, although we also found evidence consistent with amplification in the train story of Experiment 3. The deprecation of harmful commissions

may sometimes be caused by loss aversion, coupled with a tendency to take omissions as the reference point, but this explanation, too, cannot be a complete account, for it fails to explain the anomalies (found in Experiments 3 and 4) in which an omission is preferred over a commission with a better outcome.

We also found evidence for some of the mechanisms that serve to cause or maintain this bias. In Experiment 1, we found that the effect was correlated with perceived differences in the causal role of omissions and commissions. Some subjects argued that the actor played no causal role at all if the outcome would have occurred in his absence. Subjects offered a variety of other reasons in support of the distinction. Some subjects said that an actor has a responsibility not to harm, for example, or that lying was worse than withholding the truth. These stated reasons, we suggest, are the embodiments of subjects' heuristics. These heuristics are learned because they are useful guides, which bring about the best outcomes or lead to the best judgment in most cases (Hare, 1981). They are maintained, even when they cannot be independently justified, by the absence of critical thinking about them, by other mechanisms of the sort we have been discussing, and by the fact that they are often self-serving.

All of these heuristics are asymmetric in that they treat omissions and commissions differently. Each asymmetric principle of judgment has a corresponding symmetric one, which is often adduced by subjects who do not show omission bias, e.g., the principle that withholding the truth is a form of lying and is therefore just as bad as any other lying, or the principle that others have a right to certain forms of help as well as a right not to be hurt. The asymmetric forms of these principles, which concern commissions only, could suffice to prevent the most insidious cases of intentional immorality. When we take the symmetric forms seriously, we have just as much obligation to help others - once we perceived that we can truly help - as to avoid harming others.

The last two experiments examined the justifications of the distinction in more detail. We considered the role of several factors that could distinguish omissions and commissions. The major factors - cause, presence, knowledge, and movement - were consistent with those found less formally in the other experiments. In particular, the idea that actors do not cause the outcomes of omissions may be related to the idea that the outcomes would occur even if the actor were absent or did not know of the possibility of making a decision. A heuristic of judging blame in terms of cause, and judging cause in terms of presence and knowledge, would yield our results. Of course, these considerations are not normatively relevant, because the actors in all our cases *did* know and *were* present. It is a fact of life that we are faced with consequential decisions.

Omission and commission are difficult to define. Bennett (1981) argued that the only difference between them is that there are more ways to bring about harm through omission than through commission, but some of our subjects (in their comments) seem to regard other properties as more crucial to the distinction. Establishing exactly how people define omission and commission is a task for future research.

Are subjects really biased? Should people learn to think differently about omissions and commissions? It does not follow from our results that they should.

The philosophical arguments we have cited imply that the omission-commission distinction is in itself *normatively* irrelevant, as an ideal, but people might make better moral judgments on the whole by honoring the distinction consistently than by trying to think normatively. (We cannot provide a plausible reason why this might be so, but it is possible in principle, as argued by Hare, 1981, and Baron, 1988a,b.) By this view, omission bias is not necessarily an error, and our studies concern the extent to which people are capable of normatively ideal thinking under favorable circumstances.

It is worthy of note in this context that most subjects in most experiments did *not* distinguish omissions and commissions. Some subjects strongly denied the relevance of the distinction, for example, ‘The opposite of love is not hate, but indifference; and indifference to evil is evil.’ If omission bias is prescriptively correct, then such subjects were not applying the best heuristics. We consider this unlikely, although it remains a matter for investigation.

An alternative view (Singer, 1979; Baron, 1986) is that omission bias in the moral sphere allows people to feel righteous by abstaining from sins of commission, even while they neglect (through omission) the suffering of others, which they could ameliorate at a small cost. In the sphere of personal decisions, omission bias helps people to avoid blaming themselves for their own misfortunes that they could have avoided through action. By this view, the distinction is usually not admirable but rather *convenient* for those who want to be irresponsible without guilt feelings or regret. If we accept this view, our studies are about whether people do the kind of reasoning we all ought to do, namely, reasoning in terms of the expected consequences of our choices rather than in terms of whether these choices involve action or not.

9 References

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