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Moral justification of acts judged to be morally right and acts judged to be morally wrong

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In Kohlberg's approach the person's stage of moral development is inferred from the quality of the justifications offered for a moral choice regardless of which course of action is judged as the morally correct. This may imply that moral choice is independent of level of moral reasoning. The study under report suggests otherwise. When subjects offered justifications for alternative courses of action in a moral dilemma, these justifications were of a higher level of moral reasoning when the act was in accord with the subject's own choice than when it was not. This was obtained despite the fact that moral choice and moral reasoning appeared to be independent across individuals. This finding suggests that although moral choices may not evidence a developmental ordering similar to that found for moral reasoning, these choices are probably ranked for each individual in terms of the level of moral reasoning that can be marshalled in their support, and this ordering affects moral decision.

The cognitive approach to morality (Kohlberg, 197 *la;* Piaget, 1932) has focused on the study of moral reasoning not only because it is of interest in its own right, but also because moral reasoning is assumed to play a significant role in determining moral choice and moral behaviour (Blasi, 1980; Candee, 1976; Candee & Kohlberg, 1987). Nevertheless, in Kohlberg's approach the person's stage of moral development is inferred solely from the quality of the justifications offered for a moral choice, not from the nature of the choice itself. An important task of any theory of moral behaviour is to delineate the nature of the relationship between moral reasoning and moral choice.

One simple hypothesis is that moral choice depends on the relative quality of the moral arguments that a person can recruit in favour of each of the alternative courses of action available to him/her. This assumes that people possess some internal criterion for comparing the quality of different justifications.An appealing possibility is that this criterion is the very system of ordering embodied in Kohlberg's stage structure. Indeed, Rest, Turiel & Kohlberg (1969) showed that subjects rated higher-stage arguments as better and more convincing than arguments of lower stages, and Turiel & Rothman (1972) observed that Stage 4 children were more strongly influenced by Stage 5 than by

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Stage 3 arguments. These results suggest that the perceived attractiveness of moral arguments may be based on the consensually shared scheme of ordering as denned by Kohlberg's stage structure. Hence, our hypothesis is that people facing a moral dilemma will choose that alternative for which they can recruit justifications of the highest stage of moral reasoning.

Were moral choice to depend solely on moral reasoning, then people's moral decisions would have been entirely predictable from their moral stage structure. Although some systematic relationships have been reported between moral stage and moral choice (see Kohlberg & Candee, 1984), the correlation is far from being perfect, and does not hold for all moral dilemmas alike. Hence we have to introduce a second determinant of moral choice: moral content (see Nisan, 1984,2). Moral content includes such factors as social norms, values and beliefs, which are essential for the interpretation of a moral dilemma in a manner that allows moral choice. Since moral content is shaped by the person's cultural and individual experiences, different people may arrive at different moral decisions even when they rely on the same formal principles. The effects of moral content can be illustrated by Nisan's (1984£) study on distributive justice. City children in Israel distributed rewards with a partner according to production, whereas Kibbutz children (for whom equality is a central norm) tended to distribute rewards equally regardless of production. Verbal reports suggested that these differences derived not from the application of different moral principles, but from differences in the interpretation of the situation. Although both groups agreed that rewards should be distributed according to effort, city children inferred effort from production, whereas Kibbutz children assumed that all partners invested the same effort regardless of production.

Our proposal, then, is that moral choice depends conjointly on moral content and moral structure. Moral content determines the person's interpretation of a situation as one that calls for moral resolution. Once such interpretation is achieved, the formal principles of moral stage are applied to weigh the relative merits of the alternative courses of action. This proposal helps to resolve an apparent inconsistency in the cognitive approach to morality. Although this approach maintains that moral reasoning affects moral choice, it also assumes that moral choice and moral structure are conceptually independent. Thus, for example, for each of the Kohlbergian dilemmas, Kohlberg's scoring manual (see Colby & Kohlberg, 1987) lists examples of justifications that correspond to each and every stage of moral reasoning for *both* of the alternative choices. Our proposal implies indeed that moral choice may be independent of moral stage *across* individuals (because of the contribution of content variables). *Within* individuals, however, moral choice should covary with moral reasoning so that for each person moral choice should be generally dictated by the arguments of the highest stage of moral reasoning that he/she can recruit in terms of his/her particular interpretation of the dilemma.

This proposal does not deny the possibility of a cross-individual correlation between moral choice and stage of moral reasoning. In fact, several studies reported systematic differences between lower- and higher-stage subjects in social and political attitudes, social behaviour and moral decisions (see e.g. Blasi, 1980; Candee, 1976; Kohlberg & Candee, 1984; Kohlberg & Elfenbein, 1975; Martin, Shafto & Vandinse, 1977; Rest, 1976; de Vries & Walker, 1986). These differences were interpreted by some as supporting the causal dependence of moral choice on moral reasoning. These same differences, however, were taken by others to indicate that content and structure are not

sufficiently differentiated in Kohlberg's scoring system (see Emler, 1983; Shweder, 1982; Sullivan, 1977). These divergent interpretations illustrate the failure of Kohlberg to specify in what sense moral choice and moral reasoning are 'independent' and in what sense they are 'related'. In our view, moral choice may be independent of the person's stage of moral reasoning. However, the cross-individual correlation, as such, does not bear directly on the issue of how moral reasoning affects moral choice at the level of the specific individual and the specific dilemma. In order to tackle this issue we intend to show that, given the person's interpretation of a particular dilemma, his/her moral choice can be predicted from the relative stage of the justifications that he/she can marshall in favour of the alternative courses of action. This pattern should hold over and above the overall effects of moral structure and moral content. Thus, subjects may differ systematically in the type of content considerations that they bring to bear on a particular dilemma, and in their overall stage of moral reasoning. However, over and above these influences, each person applies the same principle of moral resolution: choosing that course of action that can be justified at the highest moral stage.

In the study reported, subjects were presented with moral dilemmas and asked to indicate for each which of two courses of action is morally correct. These dilemmas were presented once again a month later, but were now modified to indicate that the person facing the dilemma had chosen either the course of action preferred by the subject (congruent), or the alternative course (incongruent). The subject was asked to provide the best justification for the person's decision. A pilot study had demonstrated that choices were very stable over a one-month interval. We expect the arguments supporting the congruent choices to be of a higher level of moral reasoning than those supporting the incongruent choices. If this pattern is found to hold even for dilemmas that do not elicit different choices on the part of lower-stage and higher-stage subjects, it will provide further support for the contention that moral choice may depend on moral reasoning at the intra-individual level even when it is independent of moral stage structure across persons.

As an ancillary issue, we examined the possibility that the degree of independence of moral choice and moral reasoning may vary with such personality factors as dogmatism (Rokeach, I960), concreteness—abstractness of cognitive structure (Harvey, Hunt & Schroeder, 1961), and overall stage of moral reasoning.

Method

Subjects

Subjects were 49 middle-class high school pupils aged 16-17, about an equal number of boys and girls. Eight additional subjects were eliminated because they participated only in session 1.

Procedure

The experiment was conducted in two sessions which took place in class during regular classroom hours. In session 1 subjects were presented with 10 moral dilemmas, seven adopted from Kohlberg, and three created for the purpose of this study. A short description of the 10 dilemmas appears in the Appendix*. For each dilemma, subjects first indicated which of two courses of action is morally correct, and then rated on a five-point scale their degree of confidence in the decision reached, and the extent of deliberation experienced in making the choice.

* A copy of the English translation of the dilemmas used may be obtained from the authors.

On the basis of the subjects' responses in session 1, those eight dilemmas which yielded the sharpest divergence of opinion regarding the preferred choice were selected. Two sets of four dilemmas each were constructed, roughly matched in terms of mean confidence and deliberation ratings, and in terms of degree of inter-subject consensus in the choices made. These eight dilemmas were presented in session *2,* which took place four weeks after session 1. For this presentation the situations were modified to indicate that the person facing the moral dilemma had decided to choose one course of action rather than the other. Subjects were instructed to offer the best justification for the actor's decision.

The stories presented in session 2 were planned for each subject so that for one set of four dilemmas the hero was described as having chosen the same course of action as that indicated by the subject as morally correct in the first session (congruent), while in the other four dilemmas the hero chose the alternative not preferred by the subject (incongruent). The assignment of sets into the congruent and incongruent conditions was counterbalanced so that for half of the subjects (group 1) set A (dilemmas 1, 3, 4 and 6) appeared in the congruent condition, and set B (dilemmas 2, 5, 9 and 10) appeared in the incongruent condition, while the reverse was true for the remaining subjects (group 2). All materials were compiled in a booklet that was individually tailored to each subject, with the order of the dilemmas randomly determined for each subject. There were 23 subjects in group 1 and 26 in group 2.

Following these judgments, subjects were administered Hebrew versions of Rokeach's Dogmatism scale and the Paragraph Completion test developed by Schroeder, Driver and Streufert (1967).

Results

We first examine the results of session 1. Table 1 presents for each dilemma the number of subjects endorsing each of the two choices, as well as mean confidence and mean deliberation ratings (higher ratings on these scales indicated stronger confidence and

Table 1. Number of subjects endorsing each of the moral choices and mean confidence and deliberation ratings for each of the eight dilemmas (session 1)

Dilemma	Choice	Number of subjects	Mean confidence	Mean deliberation
Set A				
1	(*a*) Steal medicine	42	2.94	1.86
	(*b*) Be without	7		
3	(*a*) Send someone else	26	2.77	1.89
	(*b*) Go himself	23		
4	(*a*) Steal money	19	2.48	2.17
	(*b*) Lie to borrow	29		
6	(*a*) Tell truth	42	3.20	1.35
	(*b*) Change plaques	7		
Set B				
2	(*a*) Turn in	8	3.00	1.51
	(*b*) Keep quiet	41		
5	(*a*) Allow death	22	3.12	1.65
	(*b*) Deny request	27		
9	(*a*) Report to police	34	2.92	1.80
	(*b*) Escape quietly	15		
10	(*a*) Hated soldier	30	2.81	1.94
	(*b*) Wounded soldier	19		

greater deliberation). There was a substantial degree of inter-subject agreement in moral choice: the Pearson correlation between the proportion of subjects assigned to group 1 choosing a particular alternative and the proportion of those assigned to group 2 choosing that alternative was 0.88 *(P* < 0.005) across the eight dilemmas of Table 1, and 0.87 *(P* < 0.005) across all 10 dilemmas.

We shall turn next to the results of session two. Since three of the dilemmas were not Kohlbergian, we used a global scoring, based on a general description of the principles of each of the stages, rather than a dilemma-specific scoring. The moral justification protocols of session 2 were scored on the basis of Kohlberg's earlier manual for global scoring (Kohlberg, 197 \b) by two trained graduate students who showed acceptable levels of inter-judge reliability *(r* = 0.87). The judges were ignorant of the subjects' first choice and of the aims and hypotheses of the study. Of the 392 protocols, 12 were not recorded because subjects skipped a page, or because the handwriting was illegible. For the remaining protocols, disagreements between the raters were settled after a discussion.

Table 2. Mean and standard deviation (SD) of moral reasoning scores for the congruent and incongruent choices in groups 1 and 2

	Congruent	Incongruent	*t*
Group 1 (*n* = 23)	*Set A* 337.75 (SD = 48.3)	*Set B* 324.41 (SD = 39.7)	1.37
Group 2 (*n* = 26)	*Set B* 334.59 (SD = 49.7)	*Set A* 303.43 (SD = 52.70)	3.24*
All *(n* = 49)	336.08 (SD = 48.5)	313.27 (SD = 47.8)	3.30*

*** *P* < 0.005.**

Two scores were calculated for each subject, representing the average moral reasoning level for the congruent and incongruent dilemmas. The means of these scores appear in Table 2 for group 1 and group 2 separately. It can be seen that the expected pattern of higher moral reasoning scores for congruent than for incongruent situations was obtained for both groups. A two-way group (between subjects) X congruence (within subjects) analysis of variance (ANOVA) yielded $F = 10.49$, d.f. = 1, 47, $P < 0.005$ for congruence, and no significant effects for group or for the interaction. The difference between the two conditions was significant for group 2 alone and for the entire sample.

Table 3 presents mean moral judgment for each of the dilemmas, according to the alternative chosen by the subject as morally correct (in session 1) and the alternative he/she was asked to justify (in session 2). Note that in the 2 X 2 matrix of each dilemma, the congruent condition is represented by the diagonal cells where the justified choice accords with the subject's own choice.

The data of Table 3 suggest that level of moral reasoning in justifying a particular moral choice varies systematically as a function of three factors: *(a)* the nature of the dilemma in

Table 3. Mean moral judgment scores for each dilemma according to the alternative chosen by the subject in session 1 and the alternative he/she was asked to justify in session 2 (in parenthesis, number of subjects)

	Dilemma	Own choice	Choice justified (a)		Choice justified (b)	
Set A	1 *(a)*	Steal medicine	343.74	(19)	301.09	(23)
	(b)	Be without	377.333	(3)	322.00	(3)
	3 *(a}*	Send someone else	429.90	(10)	310.15	(13)
	(b)	Go himself	446. 50	(10)	380.41	(12)
	4 *(a)*	Steal money	277. 58	(12)	256.86	(7)
	(b)	Lie to borrow	257. 33	(18)	266.50	(10)
	6 *(a)*	Tell truth	348. 95	(19)	290.24	(21}
	(b)	Change plaques	300. 00	(3)	288.33	(3)
Set B	2 *(a)*	Turn in	366. 67	(3)	300.00	(5)
	(b)	Keep quiet	366.47	(17)	341.87	(23)
	5 *(a)*	Allow death	281. 55	(11)	327.00	(11)
	(b)	Deny request	299. 75	(12)	344.20	(12)
	9 *(a)*	Report to police	321. 35	(20)	249.64	(14)
	(b)	Escape quietly	344. 11	(9)	310.67	(6)
	10 *(a)*	Hated soldier	355. 27	(15)	353.69	(13)
	(b)	Wounded soldier	348.00	(9)	366.60	(10)

question; *(b)* the moral choice being justified; and *(c)* whether or not the actor's choice is congruent with the subject's own view.

Considering first the effects of the specific dilemma, the eight dilemmas differ markedly in the level of moral reasoning chat they afford. This may be seen in Fig. 1, which presents mean moral reasoning for the congruent and incongruent conditions for each of the dilemmas. Thus, the Pearson correlation, calculated over the eight dilemmas, between mean moral reasoning scores for the congruent and incongruent conditions was 0.78 ($F < 0.05$). This correlation remained high when the choices were classified regardless of the congruence with the subject's preference. These results indicate chat moral dilemmas differ reliably in the level of moral reasoning they afford regardless of which choice is to be justified. Perhaps the key to these differences is co be found in the nature of the alternative courses of action from which one must choose. For example, in dilemma 4, the dilemma with the lowest moral reasoning means, the choice is between two evils, stealing money and lying. The same seems to be true for dilemma 9- Perhaps for such dilemmas the strongest arguments in favour of the preferred choice are those which speak *against* the alternative choice. However, in attempting to justify their choices, subjects have been found to be more tuned coward arguments *for* than towards arguments *against* (Koriat, Lichtenstein & Fischhoff, 1980). Therefore, the mean moral reasoning scores associated with a dilemma are likely to vary with the extent to which each of the available courses of action can be justified *per se.* Since in genuine moral dilemmas the

available courses of action are generally of a similar degree of attractiveness in terms of common moral standards (i.e. both 'good' or both 'bad'), we may expect such dilemmas to differ systematically in terms of the level of moral justifications that they can afford for justifying *either* of the moral choices. These systematic differences may have both theoretical and methodological implications. Apart from being of interest in their own right, they constitute a nuisance factor that must be controlled in evaluating the effects of other variables, such as the congruence with one's choice.

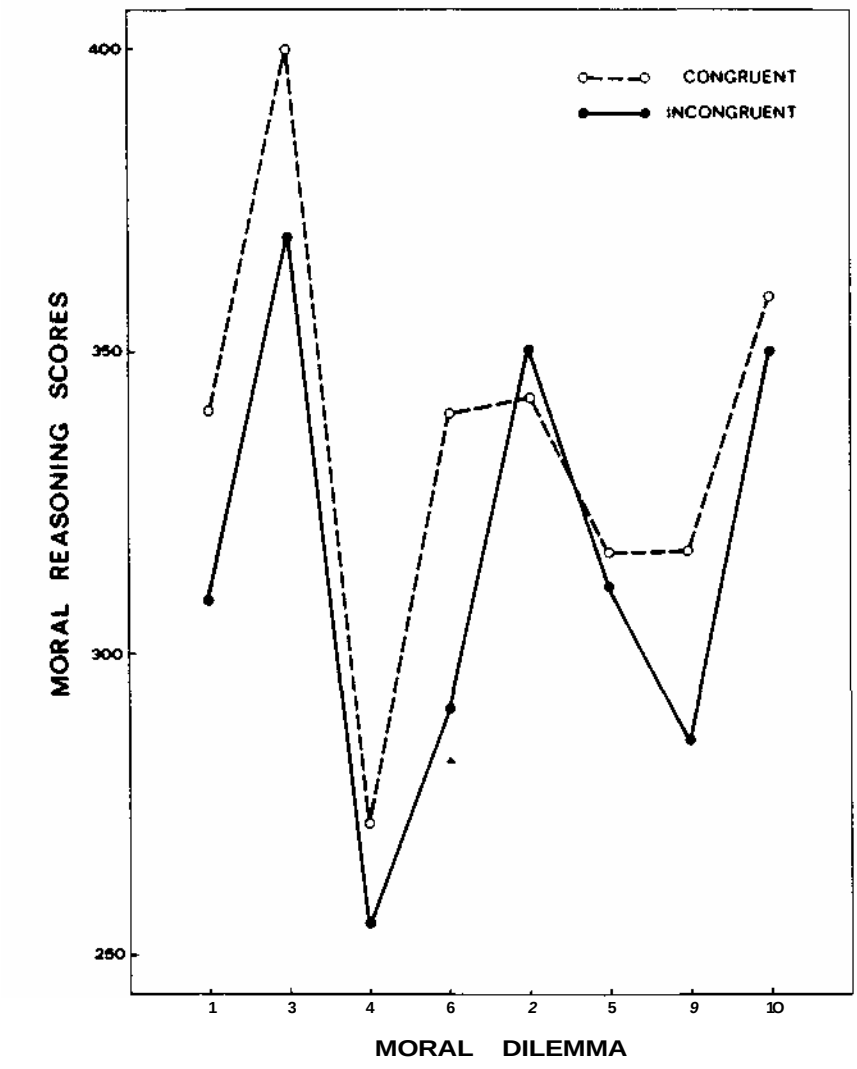

Figure 1. Mean level of moral reasoning scores for the congruent and incongruent conditions.

To control for the initial differences in moral reasoning scores among the eight dilemmas, we used the procedure recommended by Walker (1977). For each dilemma, the means for groups 1 and 2 were averaged (thus assigning equal weights to the congruent

and incongruent conditions regardless of number of subjects used in each condition) to obtain a dilemma mean. The scores of all subjects on each dilemma were then adjusted by adding or subtracting the difference between the dilemma mean and the grand average of all dilemma means. In this manner, the means of all adjusted scores were equal for all dilemmas.

Figure 2 presents the means of the adjusted scores for each of the dilemmas for the congruent and incongruent conditions. Mean adjusted moral reasoning for the congruent conditions was 336.24 compared to 3 15. 19 for the incongruent condition. The difference became significant for both group 1 (/ = 2. 13, d.f. = 23, $P < 0.05$) and group *2 ((* = 2.28, d.f. = 26, $P < 0.05$). As may be seen (Figs. 1 and 2), the expected difference was obtained for all dilemmas except dilemma 2.

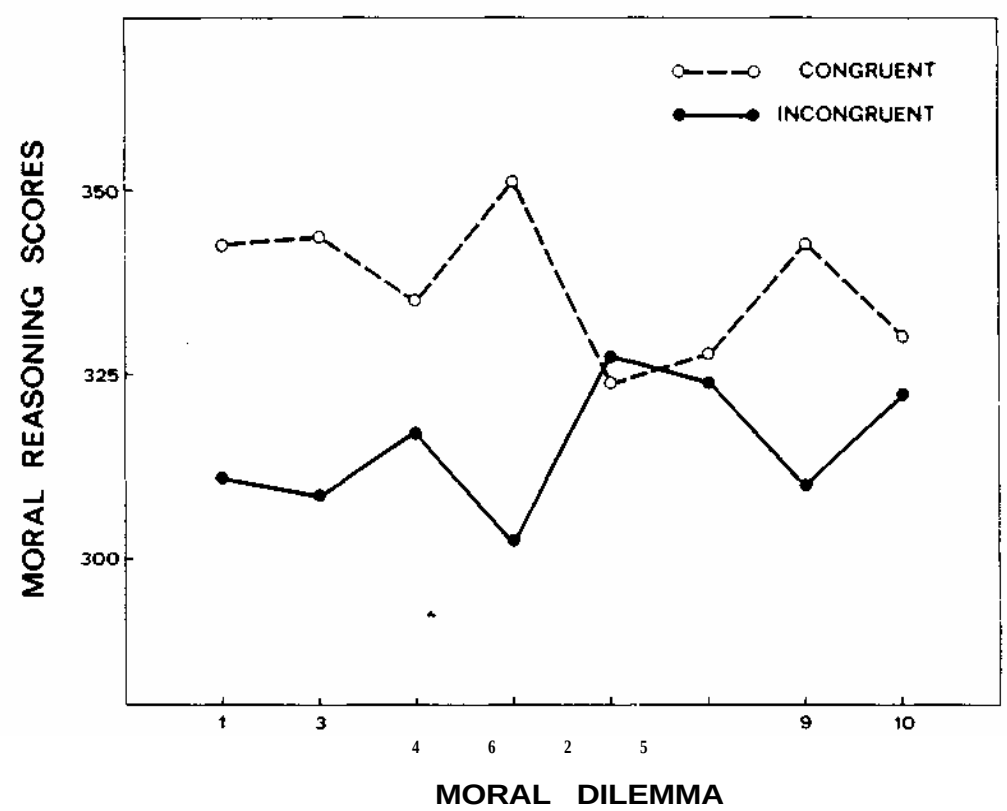

Figure 2. Mean dilemma-adjusted moral reasoning scores for the congruent and incongruent conditions.

Consider next the effects of moral choice. A recent study by de Vries & Walker (1986) yielded a peculiar effect: arguments that spoke against capital punishment were of a higher level of moral reasoning than those that spoke for it, and this was true even among supporters of capital punishment. The data of Table 3 suggest that this observation may be of greater generality: For *all* eight dilemmas, the choice with the highest moral reasoning mean in the congruent condition (i.e. when justified choice is same as own choice) is also the one with the highest moral reasoning mean in the incongruent condition (i.e. when justified choice differs from own choice). The probability of obtaining this

pattern by chance is less than 0.005. This indicates that for each dilemma one choice is consistently better justified than the other in terms of level of moral reasoning *regardless of its congruence with the subject's choice.* We examined the possibility that this choice is also the one preferred by the majority of subjects as the morally correct choice, but a comparison of the results for sessions 1 and 2 indicated that this was true for five dilemmas whereas for the remaining three it was the unpreferred choice that received the highest moral reasoning scores. Furthermore, across all eight dilemmas the better justified moral choice (in session 2) was endorsed, on the average, by 55 per cent of the subjects (in session 1). This figure is rather low considering the fact that there was a substantial degree of intersubject agreement in moral choice. Examination of the results does not suggest any simple principle that distinguishes the better justified choices from the alternative choices, except, perhaps, that the former entail a more active stand on the part of the person.

In sum, the results of session 1 indicate a remarkable consensus in the choice of the morally correct act. The results of session 2 also indicate that one choice is reliably justified at a higher level of moral reasoning than the other. Nevertheless, there was little correlation between the two aspects of moral behaviour, the proportion of subjects yielding preference for a particular choice, and the mean moral reasoning scores for that choice. Thus, in some sense, moral choice and moral reasoning are 'independent', although, as we have seen, they are nevertheless correlated within subjects.

The results of Table 3 illustrate how the systematic differences between moral choices may mask the possible effects of congruence, leading to the conclusion that moral choice is *not* dependent on moral reasoning. Thus, the peculiar pattern observed by de Vries & Walker (1986), that one choice is better justified than the other even among subjects who do not favour that choice, was obtained in the study under report *for five* of the eight dilemmas investigated (dilemmas 1, 2, 3, 6 and 9). For these dilemmas, among subjects who did not favour the better justified choice (i.e. the one associated with higher moral reasoning scores in the congruent and incongruent conditions), those who were asked to justify this (incongruent) choice produced *higher* level justifications than those asked to justify the alternative (congruent) choice. This finding underscores the importance of taking into account the systematic differences between different moral choices in evaluating the effects of congruence.

To complete the picture, we also examined whether the effects of congruence remain significant when the systematic differences among the moral choices are taken into account. A procedure similar to that used to adjust for differences among dilemmas was employed to adjust the scores for differences in choice means. The results of this analysis will not be reported, but we should note that the effects of congruence remained significant for the choice-adjusted moral reasoning scores.

Altogether, the results support the contention that moral choice and moral reasoning are correlated *within* individuals. The question is whether they are also correlated *across* individuals, that is, whether subjects who differ in moral development display divergent patterns of moral choices. To examine this question, we calculated a moral development score for each subject by averaging moral reasoning scores under the congruent and incongruent conditions. It should be noted that the correlation between the congruent and incongruent moral reasoning means was 0.50 ($P < 0.001$), indicating that individual differences in moral development scores were reliable despite the congruence manipula-

tion. We divided the subjects at the median of moral development scores, and compared the type of moral decisions made by the low and high groups in session 1. We used the method developed by Guthrie (1981) for linear modelling of repeated measures with dichotomous variables. When all 10 dilemmas were included in the analysis, the results yielded X^2 — 13.41, d.f. = 9, $P < 0.15$ for the group X response interaction. Similar results were obtained when only the eight dilemmas used in session 2 were included in the analysis. Thus, the high and low moral development groups do not seem to display significantly different patterns of moral decisions in the moral dilemmas included in this study.

We also compared the decisions of the two groups in each individual dilemma. Only in one out of the 10 dilemmas did the choices of the two groups differ significantly: for dilemma 4, the majority of the low moral development group (79 per cent) opted for lying to Mr Jones to get his money, whereas the majority of the high moral development group (58 per cent) preferred to steal the money ($\%^2 = 7.56$, $P < 0.01$).

Finally, as for the effects of the personality dimensions studied, we expected that subjects with higher moral development, higher abstractness and lower dogmatism should evidence a stronger dependence of moral choice on level of moral reasoning. The results did not support these expectations and will not be reported.

Discussion

The results obtained here yielded support for the hypothesis that moral choice and moral reasoning are correlated within individuals. This correlation appears to be masked by two effects that were observed. First, we found that moral dilemmas differ reliably in the level of moral reasoning they afford, irrespective of which of the alternative courses of action was justified. Second, over and above these differences, there were systematic choice effects so that for each dilemma one choice was justified at a higher level than the other, regardless of its congruence with the subject's own preference. A similar effect was reported by de Vries & Walker (1986) and by Martin *et al.* (1977).

The systematic effects of type of dilemma and type of choice indicate that the quality of moral justifications does not depend solely on the person's stage of moral development. These effects may be due, in part, to specific interactions between moral stage structure and moral content, which may differ«from culture to culture and from person to person. It should be stressed, however, that moral stage structure did exert a pervasive influence, since despite the systematic contribution of type of dilemma, type of choice, and congruence with the subject's view, there was a 0.50 correlation between the congruent and incongruent moral reasoning means.

The consistent differences in moral reasoning between dilemmas and between available alternatives represent one way in which moral choice and moral reasoning may be said to be independent. Two further examples of such independence were observed in the present study. First, the alternatives that were associated with higher moral reasoning scores were not chosen more often than those associated with lower scores. Second, for the moral dilemmas included in the present study, subjects who differed in overall level of moral reasoning were not found to differ in their moral choices. This latter observation suggests that the cross-individual correlations reported in previous studies between moral stage and moral choice may be specific to certain dilemmas, particularly those in which only one

decision is logically compatible with the highest stage of moral reasoning (see Kohlberg & Candee, 1984). For other dilemmas moral choice and stage of moral reasoning may be relatively independent, at least in the range of the conventional stages of moral reasoning.

From a methodological point of view, the fact that in the present study moral choice and moral reasoning were uncorrelated *across* individuals represents a convenient context for evaluating the hypothesis that they *are* correlated *within* individuals. Our results clearly indicated that subjects gave higher-stage moral justifications for behaviours they considered morally right than for behaviours they considered morally wrong. This effect was obtained over and above the consistent differences between individuals, dilemmas, and moral alternatives. In fact, it is easy to see how a failure to take into account these latter differences (e.g. the systematic effects of moral choice) can result in the faulty conclusion that moral choice is not affected by the level of moral reasoning. According to our interpretation, this within-individual relationship reflects the fact that in choosing between two alternative courses of action in a moral dilemma, people take into account the relative stage level of the arguments recruited in favour of each alternative. Thus, although the nature of these arguments may depend heavily on content factors such as norms, beliefs and values, their effect on moral choice depends on structural factors, i.e. their relative ordering in terms of the objective criteria of moral stage. The process by which moral resolution is reached may be conceived to involve two phases. In the first phase, the person forms an interpretation of the dilemma which defines the pertinent rules and considerations that are critical for reaching a moral decision. In order to achieve this interpretation, the data presented in the verbal description of the dilemma must be supplemented by substantive considerations which are brought to bear on the issue. In this process, the arguments favouring each of the alternative courses of action are articulated. In the second phase, the various arguments are weighed in terms of the objective, consensual criteria of moral structure, and the choice is determined by the arguments with the highest level of moral reasoning. This model assumes that there exists a decision rule which is shared by all or most people, but nevertheless different people, even those at the same stage of moral reasoning, may arrive at different resolutions of the same dilemma.

The finding that people give higher-level moral justifications for a choice that they consider morally right than for one that they consider morally wrong has important theoretical implications. Adherents of different types of internalization approaches to morality from Freudian-oriented scholars to social-learning theorists (see Lickona, 1976), would claim that moral decision is determined solely by social norms and standards. Our conception does make allowance for the effects of such factors, but relegates the decisive role to the cognitive structure underlying moral reasoning. Our results suggest that moral decision is sensitive to the adequacy of moral justifications as defined by Kohlberg's stages of moral development. This implies that moral decision is carried out in the context of a cognitive process that responds to the relative stage of the moral arguments available.

There are, of course, other possible interpretations of the relationship between moral choice and moral reasoning. We, as well as others (e.g. Candee & Kohlberg, 1987; Kohlberg & Candee, 1984), have interpreted it to indicate that moral reasoning affects moral choice. An alternative interpretation, however, is that subjects are motivated to provide better reasons for a choice that is congruent with theirs than for one that is not congruent with it. This interpretation, too, must assume that the person's criterion for

defining the quality of different reasons rests on the system of ordering embodied in Kohlberg's stages. At present, we cannot refute this interpretation, but we should note that if subjects respond to the relative stage of moral reasoning in *the post hoc* justification of their choice, they are also likely to be guided by the relative stage of the moral arguments in making this choice.

In conclusion, the results of the present study indicate that people at different stages of moral reasoning do not differ in their pattern of moral choice. Yet, a within-subject analysis suggests that moral choice *is* affected by moral reasoning. This pattern of results is consistent with the view of Kohlberg and his associates that moral choice and moral structure are independent, and yet moral choice is dictated by moral structure.

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Appendix: Short descriptions of the 10 dilemmas

(*dilemmas adapted from Kohlberg)

* 1. Should a husband steal an expensive drug, one that he cannot afford to buy, in order to save his wife's life?

* 2. Should a man, who recognises a benefactor of a hospital to be an escaped convict who had once stolen food to feed his children, turn him in?

* 3. Should a commander instruct one of his soldiers to carry out a dangerous mission, or do it himself?

* 4. Should a man in need of money, steal it, or ask for a loan with no intention of returning it?

* 5. Should a doctor agree to his fatally sick patient's request and put an end to her suffering and her life?

6. A donator is to have a forest named after him in recognition of his contributions, but there is no room left in his chosen location. Should he be deceived by temporarily hanging a plaque on an existing forest, or be told the truth at the risk that his important contribution be withheld?

7. A number of people escape from a death camp; among them are a baby and his father. The baby cries and endangers the group. Should the father gag the baby at a risk to its life?

8. A boy knows that his younger brother lied to their father, and withheld money for his school trip. Should he tell the father or keep the secret?

* 9. Should a man report the discovery of his enemy's corpse and risk being wrongly accused of the murder, or escape quietly?

*10. Who should be commanded to perform a dangerous mission to save prisoners-of-war: a sick man whose chances of survival are poor, or a healthy trouble-maker whom everyone hates?

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Age and social competence in preschoolers' decoding of facial expression. Pierre Philipot (Universite Catholique de Louvain, Faculte de Psychologic, 20 Voie du Roman Pays, 1348 Louvain-la-Neuve, Belgium) and Robert S. Feldman.

Altering thoughts and judgements through repeated association. David Kuykendall and John P. Keating (Department of Psychology, NI-25, University of Washington, Seattle, WA 98195, USA).

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Moral balance: The effect of prior behaviour on decision in moral conflict. Mordecai Nisan (School of Education, Hebrew University of Jerusalem, Mount Scopus, Jerusalem, Israel 91905).

Sex-role orientation and memory for gender-related terms: Another uncertain link. Barbara Krahe (Department of Psychology, University of Mainz, Postfach 3980, D-6500 Mainz, West Germany).