

ED 393 595

PS 024 120

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 TITLE Separating Judicial and Legislative Reasoning in Studies of the Development of Moral Reasoning Using Dilemma Interviews.  
 PUB DATE Apr 96  
 NOTE 33p.; Paper presented at the Australian Human Development Association Conference (Perth, Western Australia, Australia, April 8-12, 1996).  
 PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)  
 EDRS PRICE MF01/PC02 Plus Postage.  
 DESCRIPTORS Children; Decision Making; \*Decision Making Skills; \*Evaluative Thinking; \*Moral Development; Moral Values; Research Methodology; \*Research Problems; Students; Thinking Skills  
 IDENTIFIERS \*Judicial Reasoning; Kohlberg (Lawrence); Kohlberg Moral Dilemmas; Kohlberg Moral Judgment Interview; \*Legislative Reasoning; Piaget (Jean)

## ABSTRACT

Failure to separate judicial reasoning (the application of rules) from legislative reasoning (the justification of rules) in earlier studies is claimed to invalidate most previous developmental research using moral dilemma interviews. Two studies used a novel method of scoring moral dilemma interviews that separates judicial from legislative reasoning. Two conceptually defined categories were identified: one that used authority in legislative reasoning (Piaget's heteronomous reasoning); and another that used group interests, harmony, and reciprocity (Piaget's autonomous reasoning). In the first experiment, subjects--ages 8-9, 12-13, 15-16, and 19-21--in the "middle range of ability," were interviewed using Kohlberg's short form interview. The second experiment was a non-Kohlbergian moral dilemma interview which was scored using weakly interpretive methods. The second experiment involved subjects and procedures similar to experiment one and was conducted in order to confirm the main findings from the first study. It was found that the Murphy adaptations (1937, 1947, 1972) of Piaget, based on progress from sociocentrism to autonomy, gave a more adequate interpretation of developmental findings from this and other studies than either Piaget or Kohlberg. (Contains approximately 40 references.) (AJH)

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Separating Judicial and Legislative Reasoning in Studies of the Development of Moral  
Reasoning Using Dilemma Interviews

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A paper to be given to the 1996 conference of the Australian Human development  
Association, April 8th-12th, Perth

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## Abstract

Unlike previous studies of the development of reasoning about moral dilemmas, the two studies reported separated judicial reasoning (the application of rules) from legislative reasoning (the justification of rules), as well as attending to other aspects of context, using a modification of the weakly interpretive scoring method of Langford and D'Cruz (1989). This assigns justifications to relatively simple conceptually defined categories. Two systems of thinking were identified: one uses authority in legislative reasoning (Piaget's heteronomous reasoning), the other uses group interests, harmony and reciprocity (Piaget's autonomous reasoning). The Murphys' adaptation of Piaget, based on progress from sociocentrism to autonomy, gives a more adequate interpretation of developmental findings from this and other studies than either Piaget (1932) or Kohlberg (1976).

### Context, Presupposition and the Development of Moral Reasoning in Dilemma Interviews

Kohlberg's story of Heinz provides an example of a moral dilemma used in interviews. Heinz had to decide whether to steal a drug he could not afford, that might save his dying wife; the interviewer then asks what Heinz should do and repeatedly asks why. There are two kinds of context in such interviews.

One is created by the sequence of requests for justification. Thus, the first query comes after the decision and is therefore about why the decision was made. The reply often says which of the relevant criteria for making the decision was judged to weigh most heavily; in the case of Heinz, this might be the norm against stealing or the interests of Heinz's wife. Such discussion is judicial, being concerned with the application of rules to particular situations (Forrester, 1989, 1995). Once an initial criterion has been declared preponderant and the interviewer goes on to ask why, this may be interpreted as a legislative question. If, for instance, the criterion is a norm, the question may be interpreted as asking why this norm is acceptable in general.

A second kind of context is created by the interview scenario. This may be about a situation that involves only two or three people or about one that involves many people, and may vary in other ways. Langford and D'Cruz (1989) showed that dilemma interviews in which the dilemmas involved larger groups of people than the conventional Kohlbergian interview elicited more abstract replies, probably due to an influence of this sort.

Presuppositions may be linked to context in at least three ways. Judicial and legislative talk may arouse different presuppositions; as may subdivisions of these departments; the pragmatic maxim of relevance will interact with both kinds of context discussed above (Grice, 1975; Levinson, 1983).

There has been wide-ranging debate as to whether such presuppositions are in general logical

or pragmatic, and as to the nature of pragmatic presuppositions (see especially Apel, 1987; Collingwood, 1933; Forrester, 1989; Habermas, 1990; Peters, 1974). Discussion here will be limited to identification of the content of presuppositions.

Beginning with legislative presuppositions, according to Habermas (1990, p.197) discourse ethics replaces Kant's categorical imperative with a principle and a rule of argumentation: 'Only those norms may claim to be valid that could meet with the consent of all affected in their role as participants in a practical discourse' and 'For a norm to be valid, the consequences and side effects of its general observance must be acceptable to all.' These stipulations represent a good distillation of the tradition summarised by Habermas, and are also close to the suggestions of Forrester (1989).

Habermas (1990) views Kohlberg's stages as specifications of the presuppositions governing legislative discourse at different points in development. He admits that verification of this account awaits firmer linkage between Kohlberg's stages and empirical evidence for them. Each of Kohlberg's (1976) stages is based on a sociomoral point of view that involves such a presupposition. The point of view of the first stage is that what is right is what promotes the welfare of the speaker (egocentrism). That of the second is that the speaker expects to advance their egocentric interests by reciprocal exchange with those immediately around them (local reciprocity). The assumption of the third stage is that harmony, trust and relationships within local groups like the family and school should be fostered. At the fourth stage, the focus is the promotion of harmony, trust and relationships within wider groups like society. At the fifth stage, the speaker expects to advance their interests by reciprocal exchange with those in the wider society (wider reciprocity).

There are two key difficulties with Kohlberg's analysis of legislative presuppositions. The first is that neither Kohlberg nor anyone else has adequately distinguished legislative from

judicial talk within the Kohlberg interview, invalidating much current analysis. The second is that, even when we focus only on legislative talk, it is often not clear what presuppositions should be attributed to a particular statement (see below).

Forrester (1989) has addressed judicial presuppositions for deontic, including moral, discourse in more detail than other writers. They include his first rule of manner, which states that a person should where possible make decisions in accord with general rules. These maxims are quite general and may need supplementation with more particular submaxims; one that seems important is 'Weigh up relevant criteria'. Many replies in Kohlbergian interviews on judicial questions require this to be comprehensible, as they state only a criterion that was significant in making the decision, leaving the listener to infer that this was considered the most weighty of the relevant criteria.

Three approaches to the development of moral reasoning based on interview evidence will be considered. The work of Piaget and Kohlberg is covered as they have had an overwhelming influence on the literature. Some recent work using the interview scoring method of Langford and D'Cruz (1989) is also covered. This uses a methodological tactic that was also followed here, which is that of weakly interpretive scoring, which assigns all justifications to categories with relatively simple and immediate conceptual definitions. The only other significant body of work using weakly interpretive scoring techniques, which is substantial, is that using the method of Davidson, Turiel and Black (1983) (for reviews see Helwig, Tisak & Turiel, 1990; Turiel & Davidson, 1986; Turiel, Hildebrandt & Wainryb, 1991). The reason for concentrating on the former is that the Davidson et al. method was designed mainly to investigate differences between types of reasoning, such as moral, conventional and personal, rather than developmental issues (Saltzstein, 1991; Langford, 1995). The method of Langford and D'Cruz (1989) is more detailed and more suited to

developmental work.

Piaget (1932) proposed four stages in the development of moral reasoning that included both the rules used in reasoning and the way such rules are justified: premoral (roughly before age 4 years); egocentrism (4-7 years); admiration for authority (7-11 years); autonomy and the expectation of reciprocal consideration for and from others (11 years on). Criticism of this view has focussed on five main areas. First, the selectivity involved in Piaget's use of interview evidence (see especially Langford, 1995). Second, the strong focus on the rules of marbles, which Turiel (1983; Turiel et al., 1991) has rightly pointed out are conventional rather than moral rules, as well as being more complex than many other moral rules. Third, Piaget's claim that children do not use the intentionality of an action as a criterion for a moral judgement until the 7-11 year period appears to have been unduly pessimistic, with a majority of five-year-olds able to do this with easier questions (Ferguson & Rule, 1982; Shultz, Wright & Schieffer, 1986). Fourth, the finding by a number of investigators that understanding rules and justifications for them are not as tightly linked as Piaget suggests (for reviews see Langford, 1992; Tomlinson, 1980). Fifth, his tendency to concentrate on children of 12 and below made it plausible for Kohlberg (1958, 1984) to suggest that his own studies on older subjects revealed a complex process of development after this.

These problems can be alleviated by amendments. First, we can restrict the theory to justifications for moral rules, which are less problematic than the rules. Second, we can ignore Piaget's work on the rules of marbles, at least in thinking about moral reasoning. Third, we can take a more elastic view of the ages mentioned, concentrating on the ordering of the stages. Fourth, to counteract Piaget's selective use of interview evidence, we can admit that the third stage involves a mixture of the notions of local reciprocal exchange between equals and heteronomy (Langford, 1995). Fifth, we can follow the lead of Gibbs (1979) in

adding a fifth stage to Piaget's account that involves highly integrated and metaethical reasoning (for alternative views of how this might be achieved see Langford, 1991, 1995; Trainer, 1982). The strength of this amended theory is that it incorporates Piaget's studies of attitudes to rules, especially that prohibiting lying, which asked direct, legislative questions, rather than the mixture of judicial and legislative questions involved in the Kohlbergian interview.

Kohlberg's theory of stages has been supported with evidence from the method of scoring interviews described by Colby and Kohlberg (1987b) (Colby & Kohlberg, 1987a). This is a strongly interpretive method, using an underlying descriptive method that identifies conceptually defined norms and other elements of justification solely for the purpose of assigning replies to stages and half stages. The numbers, proportions and inter-relationships of replies falling into the categories established by the underlying descriptive system are not reported by the investigator, who reports only the proportions of replies falling into stages.

There are at least three disadvantages to this method. First, the conceptual relationship between the underlying descriptive system and its mapping onto stages is obscure, mainly because no overview of the principles governing the mapping is given, with assignment of categories to stages often based on arbitrary interpretations (Langford, 1995). Second, much interesting information is destroyed, as the larger number of underlying descriptive categories is mapped onto the substantially smaller number of stages and half stages. Third, the scoring method provides no account of the logical structure of reasoning as evidenced by the logical moves made by the speaker, because only individual justifications are scored, not logical connections between justifications.

Colby and Kohlberg (1987a, 1987b) offer empirical support for the theory by a demonstration that if one maps justifications onto stages using their coding manual, stage



scores exhibit an orderly longitudinal and cross-sectional development with age. However, this only shows there is a developmental sequence within justifications. A high proportion of replies can be assigned by the theory to a range of stages, as they can be interpreted as expressions of a range of presuppositions. The scoring manual assigns replies unambiguously to stages, not the theory; this means that evidence for a developmental sequence in replies when assigned by the scoring manual can equally be used to support a range of other theories.

The main broad categories identified by the scoring method of Langford and D'Cruz (1989) are as follows. Norm-based replies use a first order moral norm such as 'You should not lie, cheat, steal or murder' as justification; belief-based replies use human belief, whether of an individual or a group. Punishment replies use punishment in this way. Inevitable behaviour replies argue that an action would inevitably happen as a justification for it. Interest-based replies use the promotion of certain human interests as justification; social harmony replies invoke the maintenance of harmony, trust and relationships. Reciprocity replies appeal to the idea that, in return for aiding others, the individual will receive reciprocal consideration. Religious replies give a religious justification.

Belief and interest replies may vary in abstraction, referring to an individual, a local group, like the family or peer group, or to a wider group, such as 'society'. It is often useful to further subdivide the individual and local belief categories into those of authorities, of equals or of the self. Social harmony and reciprocity replies may either refer to a local group or to a wider group, usually society. Norm-based replies are separated into those that state the norm is a right and those that do not. In studies where rules that are not norms are involved, these are allocated a separate scoring category, though this is not usually needed for Kohlberg's interviews, as these focus on norms.

In the period 7-21 years there are a number of established developmental trends: interest-

based, social harmony and reciprocity replies all become more abstract with age; punishment and authority belief replies decline with age; general social belief replies peak in mid-adolescence (Langford, 1995).

Such findings are at present difficult to fully interpret, as studies have not attempted to separate judicial from legislative talk, nor to address the other issues about context and presupposition outlined above. The present studies aimed to do this using a particular methodological tactic, which was to score the uses as well as the content of justifications; this permits inferences to be drawn about the structure of reasoning.

The research strategy in the first study was: to draw up a descriptive survey of phenomena obtained using the method just outlined applied to Kohlbergian interviews; to use this to throw light on the general issues outlined. This was preferred to the testing of specific hypotheses, in view of the lack of previous studies of this kind.

Level 1  
Experiment 1

Level 2  
Method

Design, Subjects and Procedure.- Existing transcripts from Kohlberg's Form A (short form) interview, administered to 40 subjects in each of the age ranges 12-13 years, 15-16 years and 19-21 years, were available from Study 2 of Langford and D'Cruz (1989). Data collection aimed to fill out this data set, by doubling the numbers of subjects at each age range and adding data on 80 subjects from a 7-8 year age group. To match the transcripts already available, subjects were recruited in a similar way to Langford and D'Cruz (1989), being selected by their teachers as 'in the middle range of ability', with half at each age range male and half female. Form A (short form) comprises a short form of Colby's and Kohlberg's (1987b) Dilemmas I and III.

Scoring.- Interviews were tape recorded and transcribed for analysis. Each transcript was

scored by two raters, who were trained by an initial explanation and reading of scoring manuals that explained the scoring methods used in each of the two rounds of analysis. Half the transcripts at each combination of age and sex were scored by one pair of raters and half by a second.

The first round of scoring aimed at identification of the uses of discourse elements by relating each justification to its use (the object of justification). Where this is not the interviewee's previous statement, it is usually indicated by the context. Justifying elements were scored according to the method of Langford and D'Cruz (1989), with all elements of a reply scored. An additional category was created for replies explaining the principle of the social contract, as this has theoretical significance. Justified elements (objects of justification) were scored by the same method if they were themselves justifications, or as decisions.

Training of raters for the first round of analysis involved reading and discussion of the scoring manual, followed by trial scoring of a section of transcript not belonging to the study and feedback, repeated until proficiency was achieved. The extent of each scorable item of justification was marked on transcripts by the chief investigator.

Examination of transcripts scored in this way suggested some common types of chains of reply, described in the results section. Once raters' attention was directed to the nature of typical chains, significantly greater agreement could be reached about them. In the second round of analysis, transcripts were re-rated for the presence of typical chains. Provision was made for the rater to score a sequence as an untypical chain and list it separately. This may have shifted raters somewhat towards typical chains, but results from it show that the principles organising chains may be stricter than appeared from the first round of analysis.

Chains of reasoning were defined as beginning with the announcement of a decision, with each link referring back to a previous one, though not necessarily the preceding one. Chains

often begin with several justifications for the initial decision; if the chain then moves on to comment on justifications rather than on the decision and subsequently moves back to further comment on the initial decision, this is considered to begin a new chain. In a few cases, interviewees interjected asides in the middle of chains. The logical continuity of such chains was first identified by the chief investigator, then verified by both raters.

The first round of analysis showed that almost all replies containing multiple elements of meaning can be grouped into five cases, which were dealt with separately in the second round. The first involves individual belief replies, when these are those of the interviewee or of equals among the story characters. These are found inserted into all the common chains at most of the possible points. Their role seems to be to offer the comment 'X approves of the way I have played the game we are playing'. In the second round, such replies were not scored. The second case involves weighing replies, which occur when several criteria are weighed against one another in judicial talk about the initial decision. In such cases all criteria were scored. In the third case, several criteria are declared jointly predominant in reaching a decision. Here again all criteria were scored. In the fourth case, a reply includes first an explanation of an object taken from a previous statement and then goes on to take this explanation as the object for a second explanation. Such cases were scored as two replies. The fifth case is explained in the results section.

## Results

Reporting of results is in three parts: the structure of chains of reasoning; developmental changes in reasoning; analysis of variance findings. Inter-rater agreements on assignment of replies to categories (considering each combination of justifying and justified categories as a single scored item) in the first round of analysis were 81% and 84% for the two pairs of raters, which are within the usual range for the method used.

Most chains can be summarised by a three level ordering of categories within two spheres (Table 1). Both spheres begin from a moral decision; selection of a sphere occurs when either a first order norm or a second order rule is used as the basis for a decision. A first order norm is one that is not usually used to justify other norms, such as those against lying or stealing. A second order rule is a rule, which may be a norm, that is often used to justify norms; such as the rule that you should consider the interests of groups to which you belong, or the norm that you should consider human interests in general.

- Table 1 -

Chains in the first order sphere begin at the first level with the use of one or more norms to justify a moral decision (N). This may be justified at a second level by appealing to one or more of: wider interests (IW), wider social harmony (SHW), wider belief (BW), punishment (P), or the beliefs of authority (BA). IW and SHW replies may be justified at a third level by a wider reciprocity reply (RW). The use of reciprocity explanations sometimes skips the second level, with wider reciprocity replies used to justify norms directly. The first order sphere thus involves second order rules at the second and third levels, but not at the first level. More than one reply often appears at a level.

In the second order sphere, first level justifications use one or more of the following: the interests of an individual story character (II), the local interests of a group of such characters (IL), the idea that the action is inevitable (BH), preservation of local social harmony (SHL), the possibility of punishment for the action (P), or the beliefs of authority (BA). Such replies seem to result from attempts to apply second order rules to the situation being judged, though in many cases it is not clear which rule is being used. II, IL and SHL replies are considerably more common than P, BA or BH, except at the 7-8 year age range, where P and BA replies are also common. Where more than one such reply is given in relation to a single decision,

the various factors may either be explicitly weighed against one another in a single justification (weighing replies), or a number mentioned as relevant to the decision in consecutive justifications, or both.

II and IL replies may in turn be justified at a second level by a local social harmony reply; this may be justified at a third level by a local reciprocity reply. The use of the second and third levels is again optional. The use of reciprocity justifications again sometimes skips the second level, with a local reciprocity reply used directly to justify a first level justification. Again we often find more than one reply at a level.

A wide variety of less common chains were also observed, that begin with one or more replies with a local context and then shift to one or more with a wider one (shifting chains). The rules for ordering within both contexts are the same as those within the local context just given. The wide variety of these types appears result from shifts in the point at which the interviewee moves from a local to a wider context.

The great majority of replies belonging to the second order sphere that mention either local reciprocity or local social harmony come from prompts i), ii) and vi), that emphasise trust and friendship between family members and friends (97% averaging across both raters from the first round of analysis). Replies mentioning wider social harmony and reciprocity in the first order sphere are less clearly tied to particular contexts, though they are more common in dilemmas that encourage the use of first order norms as decision criteria.

In the second round of analysis, chains were classified into the types listed in Table 1. Inter-rater agreements were 86% and 84%. Percentages of types of chain found at each age, collapsed into combinations of spheres and levels and averaged across raters, are shown in Table 2. Level 2/1 indicates at least one level 2 reply used to justify at least one level 1 reply; and correspondingly for other uses of this notation.

## - Table 2 -

The fifth case of multiple elements of reply will now be outlined. A reply at the second level in the wider sphere may mention more than one of the five possible elements at this level. In this case, all were scored in the second round of analysis.

Developmental trends can be divided into: those that involve a shift in emphasis on levels within spheres or in the way context is dealt with; and trends in the use of categories of reply. The proportion of subjects showing at least one chain containing a first order sphere reply at 7-8 years was somewhat less than that showing at least one at 12-13 years, though this difference was not statistically significant. Older subjects tended to move into level 2 discussions about issues arising from first order norms more often than younger subjects (see Table 2). There was also a non-significant increase in the proportion of individuals showing chains shifting from a local to a wider context within the second order sphere over the same period (Table 2).

A number of developmental trends observed in previous studies were confirmed: (1) an increase in the proportion of individual belief replies with age; (2) a tendency for wider belief replies to peak around 15-16 years; (3) a decrease in the proportion of individual interest replies with age; (4 and 5) increases in the proportions of local interest and wider interest replies with age; (6 and 7) tendencies for both social harmony and reciprocity replies to shift from local to wider with age; (8 and 9) decreases in the proportion of punishment and authority belief replies with age (Langford, 1995). These trends were tested by assessing the predicted order of mean scores against the null hypothesis that ordering is random, by calculating the probability that a given number of raters from four would exhibit the predicted ranking under this null hypothesis. All trends were significant: trends 1, 3, 5 and 8,  $p < .001$ ; trends 2, 6 and 9,  $p < .01$ ; trends 4 and 7,  $p < .05$ .

Social contract replies were only found at the 19-21 year age range. Three of the five scored by at least one rater were given by those who also gave wider reciprocity replies. They always appeared at the end of chains of reasoning.

Proportions of replies within the interest, belief and first order norms categories and lengths of chains of reasons (all derived from the first round of analysis) were used as dependent variables in univariate analyses of variance with age, sex and interviewer as independent variables. There were no significant interactions; the only significant main effects were of age and interviewer on length of chains of reasons,  $F(3,288) = 5.24, 6.91, ps < .01$ . The mean length of chains of reasons increased with age, being 2.27 at 7-8 years, 2.41 at 12-13 years, 2.53 at 15-16 years, and 2.61 at 19-21 years. The linear trend for this variable with respect to age was also significant,  $F(1,288) = 6.81, p < .01$ .

### Discussion

Interpretations for the main developmental trends are considered first; then the explanation of other developmental trends. Two interpretations of the first kind of trend will be given, the first relying more on the interpretive style of Piaget (1932), the second more on that of Colby and Kohlberg (1987a, 1987b).

The first separates two systems of thinking. One is authority-based and comprises, in the first instance, all replies that: either use authority belief or punishment to justify the use of first order norms as decision criteria within the first order sphere; or use authority belief or punishment as criteria for decisions within the second order sphere. Some norms that are not explicitly justified by authority probably also belong to this system (see below). The other system is based on group interest, group harmony and reciprocity and comprises all other replies.

Within the authority system, first level comments within both spheres (norms, punishment



and authority belief replies) are judicial and assume the presupposition 'Weigh up relevant criteria'. They usually say which criterion was judged preponderant, occasionally also commenting on why it was judged to outweigh competing criteria. Second level punishment and authority belief replies commenting on norms are legislative and say that authority approves of the norms.

Within the interest/reciprocity system a distinction can be drawn between two kinds of legislative justification. First, those that justify at the group level (group-legislative), saying why a group, conceived as an entity, would think something good. Second, those that justify at the individual level (individual-legislative), saying why individuals would think something good. Conceptually, only reciprocity justifications are of the second type, while all others belong to the first.

In the first order sphere of the interest/reciprocity system, the first items in the chain always mention norms and justify the decision. Such statements are judicial and usually just mention a norm as the favoured criterion, sometimes saying why it was favoured, often as part of weighing replies. Most second level talk within this sphere appears to be legislative, either offering direct comment on preceding first level criteria (norms), or secondary comment on such statements. This answers the question 'Why is this criterion acceptable to the group?' The third level in this sphere involves only wider reciprocity replies, which say why the criterion is acceptable to individuals.

The second order sphere is harder to interpret. The function of third level (reciprocity) replies, is again, on conceptual grounds, to provide legislative replies acceptable to individuals. A plausible interpretation of levels 1 and 2 is as follows. The initial decision is taken by using either of the rules 'Pay attention to local group interests' or 'Pay attention to human interests in general'. Both these rules will lead to replies announcing that either

individual or local interests are judged to be the preponderant decision criterion, though it is not usually clear which rule has been used. The application of one of these second order rules to the scenario suggested in the dilemma triggers attention to the (local) context. In the majority of cases, this context remains the focus for further discussion. The first legislative interpretation of requests to explain judicial criteria is thus 'Why would those people discussed in the story accept this rule applied to this context?' This creates a bias towards face-to-face acceptability within the group, leading to an emphasis on local social harmony explanations.

Local social harmony replies categorised at level 1 on the basis of the chaining criteria are not judicial but legislative. The interviewee assumes it is obvious the interests of one or more story characters are favoured by the suggested decision, so they omit to mention this, moving on directly to justify this by a social harmony reply. This is supported by the fact that there are fewer level 2 replies within the second order sphere than we would expect if proportions found in the various level combinations paralleled those found in the first order sphere, which in other respects they do for the older three age groups. The discrepancy at the youngest age group is due to the tendency for younger children to access levels 2 and 3 in the first order sphere less frequently than older interviewees (Table 2).

Within both spheres, reciprocity replies are used to justify group-legislative replies, but not vice versa; and reciprocity replies are considerably less common than group-legislative replies. This suggests that the group-legislative presupposition is more central to moral discourse in Western societies in this age range than the individual-legislative presupposition. Individual-legislative talk appears in a conversational emergency, in which one partner appears to question the goal of promoting group interests. The repeated questioning of the interviewer provokes such an emergency; interviewees are then unwilling to move from

individual-legislative back to group-legislative talk, as repeated requests for reasons continue.

To summarise conclusions about presuppositions, both authority and reciprocity systems begin from questions interpreted as meaning 'Why this decision?' (because asked after a decision). This triggers the presupposition 'Weigh up relevant criteria', producing the further interpretation 'Which criteria weighed most heavily in this decision?' Within the authority system, there is some ambiguity about how further questions are interpreted. They may be interpreted as for the interest/reciprocity system and mean 'Why is this criterion acceptable to the group in the relevant context?' (see below). It is then assumed that the group sees the opinions or punishments of authority as relevant and these are mentioned. In favour of this is the argument, expanded below, that most children in contemporary Western societies never show a preponderance of authority-based thinking; thus it is more natural to think that a single interpretation of the question suffices for both systems. The alternative is that the initial interpretation of the question is 'Why is this criterion acceptable to authority in the relevant context?' This is closer to the view of Piaget (1932).

In the interest/reciprocity system, questions after a criterion are interpreted as meaning 'Why is this criterion acceptable to the group?' This stems from the presupposition 'Be acceptable to group'. This is amplified by the conversational maxim 'Be relevant to the context', leading to the question 'Why is this criterion acceptable to the group in the relevant context?' Further questions may be interpreted as meaning 'Why is this criterion acceptable to the individual?' (the emergency interpretation). The maxim of relevance then leads to 'Why is this criterion acceptable to individuals in the relevant context?'

Interviewees sometimes interpret legislative questions that do not arise from an emergency as implying the third kind of question, producing Level 3/1 chains (Table 2). This is probably because they are used to running through the sequence of levels, both in the interview and

in everyday life, and anticipate this.

The presuppositions for the second and third kinds of question specify relevance to the context. This is set by the criterion or criteria previously chosen in response to judicial questions; first order norms set a wider context, second order rules set a local context. The reason seems to be that such second order rules as 'Pay attention to the general interest', when used in judicial reasoning, are applied to a context and used to calculate such things as relevant human interests. First order norms are not used to calculate anything about the situation presented and thus set the wider context of the varied situations to which they could apply.

Developmental status under this interpretation can be assessed by the proportion of replies of the (heteronomous) authority-based type. Twenty three per cent of all chains mentioned punishment or authority belief at 7-8 years, 16% at 12-13 years, 8% at 15-16 years and 6% at 19-21 years (averaging across both raters from the second round of analysis). Two qualifications should be considered. First, it is reasonable to partition chains comprising only norms proportionally between the heteronomous and autonomous types, producing figures of 32%, 21%, 10% and 8% for heteronomous morality at the above ages. At the same time, interviewees probably sometimes mention the views of authority figures in the stories, such as the father in Dilemma I, when they do not have the fact that they are authority figures in mind, slightly inflating these revised figures.

It is not clear that there is ever a stage at which heteronomous morality predominates in most children, especially if we take account of the variations that have been found in children's attitudes to authority in judging moral issues from one situation to another (Laupa & Turiel, 1986, 1993). It is more likely that in the contemporary Western, relatively democratic, family the child is inducted into a mix of the heteronomous and autonomous viewpoints that

gradually shifts as the child grows older and is given greater autonomy and responsibility in the organisation of social life.

There may be a change in the content of reasoning that is not evident from these data, as the typical terms used by interviewees to talk about wider groups are ambiguous. If a seven-year-old justifies a first order norm by saying 'Everyone is better off' or 'It helps everyone', they are probably referring just to people they know; if a university student uses these expressions they are likely to mean people in general. We can probably conclude that children in the 5-8 year range have a considerably more restricted understanding of 'everyone' than older children. Thus development in the period studied moves from a mix of heteronomous and interest/harmony/reciprocity content that is local in its intended reference to reasoning dominated by intent to refer to wider interest/harmony/reciprocity content. The parallel with a suggested modification of Piaget due to the Murphys is striking (Lee, 1989; Murphy, 1947; Murphy & Kovach, 1972; Murphy, Murphy & Newcomb, 1937). In the age range studied, this suggests there should be a shift from sociocentrism, comprising a situationally determined mix of heteronomy and local group egalitarianism, to abstract autonomy.

It may be that children younger than those studied exhibit Piaget's (1932) stage 2, egocentrism. Subsequent research suggests that in many areas egocentrism predominates at a younger age than he originally suggested (for reviews see Astington, Harris & Olson, 1988; Dias & Harris, 1990; Donaldson, 1992; Flavell, 1985; Langford, 1987).

The Kohlberg-style interpretation is considerably amended from Kohlberg's own theory, as the difficulties of the original theory are multiplied by the present findings. In particular, it fails to explain the most striking finding, which is that the breadth of interests, harmony and reciprocity considered is primarily controlled by the context set by initial choice of criterion, rather than by developmental level. The possibility of nonetheless applying Kohlberg's style

of interpretation is particularly suggested by Kohlberg's (1963) contrast between his way of interpreting punishment replies and that of Piaget. For Piaget they indicated admiration for authority, while Kohlberg suggested that they indicate an egocentric desire to avoid punishment. This view can also be applied to authority belief replies to make these a further index of egocentrism. Thus, in a revised Kohlbergian approach development shifts from a first stage of egocentrism (indicated by punishment and authority belief replies, similar to Kohlberg's stage 1), to a second stage (based on local social harmony and reciprocity, combining Kohlberg's stages 2 and 3) to a third stage (wider social harmony and reciprocity, combining Kohlberg's stages 4 and 5). The main difficulty for this view is that it is not clear that replies indicating the first stage (authority belief and punishment) are ever predominant in contemporary Western childhood (Langford, 1995).

Possible reasons for more specific developmental trends are now considered. Individual belief and beliefs of equals replies might show a developmental increase due to the rising social status of the interviewee (Langford & Claydon, 1989). Alternatively, greater skill in the various phases of the linguistic game and additional available processing capacity might be responsible. Individual interest replies decline, local interest replies increase with age, probably due to increased ability with age to extract and integrate information about the interests of more than one character from the story scenario.

The tendency for wider interest, wider social harmony and wider reciprocity replies to increase and for local social harmony and reciprocity replies to decrease with age is probably a joint product of two tendencies: for there to be some increase in legislative discussion within the first order sphere with age; and for discussion within the first order sphere to shift to a wider context more often with age. Reliance on wider social belief in legislative discussions within the first order sphere peaks in mid-adolescence, probably due to the

general tendency to focus on peer opinion in this age range (Langford and Claydon, 1989).

level 1  
**Experiment 2**

Non-Kohlbergian moral dilemma interviews, scored using weakly interpretive methods, differ quantitatively rather than qualitatively from Kohlbergian dilemmas, the most notable differences being in abstraction of replies (Langford, 1995). Experiment 2 used Interviews E and L from Langford and D'Cruz (1989), which involve situations such that, if a human interest criterion is chosen to make the initial judgement, local or wider interests are more likely to be involved as criteria than in Kohlberg's Form A. The study had four aims. First, to confirm that the structure of common chains of reasoning would be similar to that found in the first experiment. Second, to show that judicial discussion within the second order sphere would appeal to wider interests in Interviews E and L than in Kohlberg's Form A. Third, to confirm the main findings on developmental trends found in the previous study. Fourth, to confirm and extend analysis of variance findings from that study, including the prediction that, as Langford and D'Cruz (1989) found that interview E resulted in more use of first order norms to justify judgements than interview L, there should be greater use of first order sphere replies in E than L.

The experiment used the same tactic as Experiment 1 of supplementing an available set of interviews from 40 subjects in the 11-12, 15-16 and 19-21 year age ranges, obtained by Langford and D'Cruz (1989), with 40 further interviews at these ages and 80 at 7-8 years. Subjects and procedures were similar to those of Experiment 1. Interviews E and L deal with issues surrounding the fair division of earnings and the value of human life, respectively. Both begin with non-dilemma questions and then proceed to a number of dilemma questions involving actions whose results impact on local and wider groups; only replies from the dilemma questions were included in the analysis.

Findings on types of chains, based on the second round of analysis, are shown in Tables 3 and 4. These are broadly similar to those from Experiment 1. The prediction that the interests mentioned at level 1 when a second order criterion is chosen should be wider in these interviews than in Kohlberg's Form A was tested by pairing each subject in Experiment 1 with one from Experiment 2 and applying sign tests to each age group. These were significant,  $p < .05$  at the 7-8 year age group and  $p < .01$  at the others.

- Tables 3 and 4 -

Developmental trends were similar to those observed previously. Trends 1-10 were significant, using the same test as before: trends 1 and 9,  $p < .001$ ; trends 2, 3, 5, 6 and 10,  $p < .01$ ; trends 4 and 7,  $p < .05$ . Proportions of replies within the interest, belief and first order norms categories, as well as proportions of chains in the first order sphere and lengths of chains of reasons were used as dependent variables in analysis of variance with age, sex, interviewer and interview as independent variables. All the dependent variables were derived from the first round of analysis, except the third, derived from the second. The analyses showed effects of age and interviewer on lengths of chains of reasons, as well as of interview on belief replies, first order norms and proportion of chains in the first order sphere,  $F(3,288) = 4.96, 6.53, ps < .01$ ;  $F(1,288) = 3.94, 4.36, 5.12, ps < .05$ . The last of these findings verifies the specific prediction made about first order chains. The linear trend for length of chains of reasons with respect to age was also significant,  $F(1,288) = 5.89, p < .01$ .

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**First Order Sphere**

Level 1: First order norms

Level 2: Wider interests, Wider social harmony, Wider belief, Punishment,  
Beliefs of authority

Level 3: Wider reciprocity

**Second Order Sphere**

Level 1: Individual interests, Local interests, Inevitable behaviour,  
Local social harmony, Punishment, Beliefs of authority

Level 2: Local social harmony

Level 3: Local reciprocity

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Table 1. Content of spheres and levels for chains that do not shift context

Age Group		7-8	12-13	16-17	19-21
First Order	Level 1	19	18	16	17
	Level 2/1	2	5	7	6
	Level 3/2/1	0	1	3	2
	Level 3/1	0	1	1	0
Second Order	Level 1	61	57	58	57
	Level 2/1	3	2	1	1
	Level 3/2/1	8	7	5	7
	Level 3/1	0	1	2	1
	Shifting	0	1	2	2
Unclassified		4	3	4	4

Table 2. Chains of reasoning in Form A broken down by type (in percentages at each age)

Age Group		7-8	12-13	16-17	19-21
First Order	Level 1	27	23	24	22
	Level 2/1	2	6	8	7
	Level 3/2/1	0	1	2	3
	Level 3/1	0	1	0	1
Second Order	Level 1	56	52	51	51
	Level 2/1	2	3	1	1
	Level 3/2/1	7	5	4	5
	Level 3/1	0	1	2	2
	Shifting	0	1	2	1
Unclassified	5	4	3	4	

Table 3. Chains of reasoning in interview E broken down by type (in percentages at each age)

Age Group		7-8	12-13	16-17	19-21
First Order	Level 1	19	20	17	16
	Level 2/1	2	4	6	6
	Level 3/2/1	0	1	2	3
	Level 3/1	0	1	0	1
Firsr Order	Level 1	59	57	57	57
	Level 2/1	4	2	1	0
	Level 3/2/1	8	6	5	8
	Level 3/1	0	2	2	1
	Shifting	0	1	1	2
Unclassified		5	5	6	4

Table 4. Chains of reasoning in interview L broken down by type (in percentages at each age)



Brief statement of what the paper will tell the readership of the journal

The two studies used a novel method of scoring moral dilemma interviews that separates judicial justifications, that justify the application of rules, from legislative justifications, that justify the adoption of rules, as well as attending to other aspects of context. Failure to separate these two kinds of reasoning in previous studies is claimed to invalidate most previous developmental research using moral dilemma interviews. Findings supported the Murphys' adaptation of Piaget (1932), rather than the views of Kohlberg (1976).