

# THE ROLE OF EMPATHY AND MORAL REASONING IN ADOLESCENTS' PROSOCIAL BEHAVIOUR

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UDK 17.022-053.6

Izvorni znanstveni rad

Primljeno: 30. 9. 1997.

**T**he purpose of the present study was to determine the relationship between adolescents' empathy and maturity of moral reasoning with their self-reported prosocial behaviour. Fourteen-year-old adolescents (N=311) were administered scales measuring emotional empathy, fantasy and prosocial behaviour. Kohlberg's structured moral dilemmas were used to measure moral judgement maturity. Data were analysed by means of a hierarchical regression analysis with emotional empathy, fantasy and moral reasoning and their interactions as predictors and prosocial behavior as a criterion variable. Intelligence, social desirability tendencies and sex of subjects were taken as control variables. The results showed that higher prosocial behaviour could be best explained by higher emotional empathy. Moral reasoning was not related to prosocial behaviour. Significant interaction of moral maturity and emotional empathy was found showing that the correlation of empathy and prosocial behaviour was stronger at higher levels of moral reasoning. Significant sex differences in prosocial behaviour were also found. Additional analysis indicated that girls were found to be more altruistic than boys due to their higher emotional empathy. The implications of these findings are discussed in the context of the current debate on the role of moral cognitions and moral affects in determining moral behaviour.

## INTRODUCTION

Prosocial behaviour is generally defined as voluntary and intentional behaviour which has positive consequences for the well-being of other persons (Eisenberg & Miller, 1987a; Staub, 1978). Prosocial acts that are not motivated by the expectation of obtaining external rewards are considered to be altruistic (Macauley & Berkowitz, 1970).

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Various processes underlying or mediating the development of prosocial and moral behaviour have been proposed. The capacity for empathy is generally considered a major mediator of prosocial action. Empathy has been conceptualized and assessed as a cognitive or emotional response (see Chlopan, McCain, Carbonell & Hagen, 1985; Strayer, 1987; Wispé, 1986). Cognitive and affective aspects of empathy may have different functions in prosocial behaviour. Many authors have suggested that the affective component of empathy, i.e. vicarious affective arousal resulting from an identification with the emotional state of another person, provides a primary motivation to act in a prosocial manner (Aronfreed, 1970; Batson & Coke, 1981; Batson, Fultz & Schoenrade, 1987; see Eisenberg & Strayer, 1987; Hoffman, 1981, 1987). It is proposed that cognitive processes, such as role-taking or taking another person's perspective, should increase the likelihood of prosocial behaviour through their effects on the empathic emotion in response to that person's distress (Coke, Batson & McDavis, 1978; Davis, 1987; Krebs, 1975; Stotland, 1969). Hoffman's stage theory of empathy (Hoffman, 1981; 1987) highlights the interaction of affect and cognition. Role-taking is a necessary skill in empathy, which is of crucial importance in the development of prosocial behaviour. Cognitive processes affecting empathic expression operate at levels consistent with normal cognitive developmental processes, thus becoming more sophisticated with age. Measures of general perspective taking skills have been positively correlated with children's prosocial behaviour, but their relationship is most evident in older children (Underwood & Moore, 1982). However, affect and cognition have been difficult to dissociate in empirical attempts to measure individual differences in empathy (see Bryant, 1987). Davis (1983) has developed a multidimensional measure of empathy that consists of two affective subscales that assess empathic concern and personal distress in response to others' emotions and two cognitive subscales that assess perspective taking and imaginal involvement or fantasy.

The capacity for affective empathy is consistently positively related to a broad range of prosocial behaviours: helping, volunteering, donating, cooperation, and altruism (Eisenberg & Miller, 1987a; Mehrabian, Young & Sato, 1988). The evidence for a link between empathy and altruism is stronger for adults than for children and adolescents (Eisenberg & Miller, 1987b). In addition to enhancing prosocial behaviour, heightened levels of empathy may have important consequences for inhibiting antisocial behaviour (Miller & Eisenberg, 1988).

The first purpose of this study was to examine the relation of affective empathy and fantasy, as a cognitive component of empathy, with adolescent's prosocial behaviour. It was hypothesized that subjects' affective empathic tendencies would be positively related to their prosocial behaviour. The Fantasy Scale is the one least grounded in previous empathy theorising and fewer predictions regarding its relationship with other measures, such as prosocial behaviour, were offered. Imagining the feelings and actions of unfortunate others

had been shown to influence emotional reactions to others (Stotland, 1969). In Davis' study (1983) the Fantasy Scale correlated more highly with the affective subscales than with another cognitive subscale. Therefore, the measure of fantasy was included in this study for exploratory purpose, in order to check whether prosocial behaviour could be explained by the joint influence of subjects' affective responsiveness and tendency to become imaginatively involved with others.

Another major variable that has been assumed to be related to prosocial behaviour is the ability to reason morally and to weigh the needs of others in one's motivational and behavioural hierarchies. Theories and research following the cognitive-developmental approach have examined the role of rational moral principles and social-cognitive skills such as perspective-taking in moral reasoning and behaviour (see Blasi, 1980; Krebs, 1978; Underwood & Moore, 1982). According to Kohlberg, the development of moral reasoning proceeds through five stages, with each stage more adequate than the previous one. These moral stages also reflect a sequence of successive stages in role-taking ability. The ability to take another person's perspective is seen as having special significance in the transition from pre-conventional to conventional morality (Kohlberg, 1969; 1973). Although the theory is not concerned with the prediction of behaviour, moral judgement is presumed to be somewhat positively associated with the quantity and quality of prosocial behaviour (Bar-Tal, Korenfeld & Raviv, 1985; Krebs, 1978). There is evidence of a generally low to moderate positive relationship between reasoning about issues of justice and morality and moral behaviour (Rest, 1983). In contrast to the relationship between empathy, defined primarily in affective terms, and prosocial behaviour, the association between moral judgement and prosocial behaviour is less consistent. Empirical support is strongest for the hypothesis that moral reasoning differs between delinquents and nondelinquents and less clear for the hypothesis that higher moral stage individuals tend to be more honest and more altruistic (Blasi, 1980). The second purpose of this work was to examine the interrelation of moral judgement and prosocial behaviour at the early adolescence age. We hypothesized that the maturity of moral reasoning would be positively related to prosocial behaviour. However, no firm prediction regarding the strength of this association was made.

Kohlberg moral dilemmas deal with the reasoning about justice and fairness. Nancy Eisenberg and her colleagues assessed children's judgements about prosocial issues by proposing dilemmas to children in which self interest is set against the possibility of helping some other person. Cross-sectional (Eisenberg-Berg, 1979) and longitudinal research (Eisenberg, Lennon & Roth, 1983) suggests that the role of empathic reasoning in prosocial moral judgement increases with age, while reasoning reflecting hedonistic concerns decreases with age. As children mature, their motives for prosocial behaviour also change. The motives for prosocial behaviour of older children are more altruistic, internalized and sympathetic (Bar-Tal, Sharabany & Raviv, 1982; Bar-Tal & Nissim,

1984). Perspective-taking has been viewed as the cognitive basis for mature moral judgement or prosocial moral judgement (Bar-Tal et al., 1982, 1985; Eisenberg-Berg, 1979; Kohlberg, 1969, 1973).

The association between affective empathy and moral judgement has seldom been examined. Some research has shown that high empathic tendency was positively associated with moral judgement assessed by Kohlberg dilemmas (Kalliopuska, 1983), while other found no relationship between moral judgement maturity and affective and cognitive aspects of empathy (Lee & Prentice, 1988). In a longitudinal study conducted by Eisenberg and her colleagues, empathy was positively related to a general level of prosocial reasoning at the age of 9-10, and to needs-oriented reasoning at the age of 11-12. This finding suggests that sympathetic responsiveness might enhance the development of moral reasoning based on prosocial values. (Eisenberg, Shell, Pasternack, Lennon, Beller & Mathy, 1987). In addition, the more costly prosocial behaviour (donating) tended to be positively related to other-oriented moral reasoning and empathy among older children. There is also some evidence that children exhibiting higher prosocial behaviour are those children high in both other-oriented moral cognitions and sympathy (Knight, Johnson, Carlo & Eisenberg, 1994; Miller, Eisenberg, Fabes & Shell, 1996).

Kohlberg maintains that moral principles and behaviour engendered by such principles are based on rational processes and are influenced little by emotion (Kohlberg, 1972; 1973). His theory postulates no motive for moral action and has been criticized as being cold and rationalistic (Gibbs & Schnell, 1985; Hoffman, 1988). The ability to empathize may provide the link in the reasoning/behaviour chain. Hoffman (1987) has attempted to develop a comprehensive theory of altruism that links his theory of the development of empathy-based affects to the moral-cognitive domain. His theory of morality suggests that empathic response might stimulate the development of internalized moral principles that reflect a concern for other's welfare. According to Hoffman (1988), many moral encounters and dilemmas involve victims and potential victims and consequently evoke empathic affects. Empathic affects are congruent with the moral principles and therefore capable of activating them in moral encounters. The resulting co-occurrence of empathic affect and moral principle may create a bond between them. In this way moral principles may gain an affective charge and take the characteristics of 'hot cognitions'. This implies that the motivation to perform prosocial act will be stronger in such a situation. Staub (1978; 1987) debates similarly on the co-occurrence of cognition and emotions, although he states that moral principles are an inherently motivational force and they evoke congruent affects.

Moral judgement, prosocial behaviour and empathic responsiveness are related in theoretically important ways. In spite of this, researchers have mainly examined separate effects of cognitive and affective aspects of morality on prosocial behaviour, not their joint effects or interaction. Since empathic feel-

ings and internalized moral norms are aspects of personality, adequacies of these motivational constructs can be studied measuring individual differences in empathy, moral reasoning and altruistic behaviour. According to Rushton (1981), altruistic persons are more motivated to behave prosocially. Such persons have internalized more mature modes of moral reasoning and/or are more empathic for feelings and suffering of other people. Considering theoretical analyses on the role of affect and cognition in moral behaviour we hypothesized that, apart from their isolated effects, prosocial behaviour could also be explained by the joint influence or interaction of moral judgement maturity and capacity for affective empathy.

In summary, this paper focuses on those aspects of children's cognitive and emotional domain that have been theoretically viewed as antecedents of prosocial behaviour: empathy and moral maturity. The main purpose of the current study was to examine the interrelations of the maturity of adolescent's moral reasoning, their empathic abilities and tendencies to behave prosocially in everyday life situations. Specifically, we have tried to determine whether prosocial behaviour could be best explained by emotional and cognitive aspects of empathy, moral judgement maturity or by the joint influence of these factors.

## **METHOD**

### **Subjects**

The sample comprised 311 fourteen-year-old adolescents. There were 174 girls and 137 boys attending 8th (last) grade of various primary schools.

### **Instruments**

Prosocial behaviour was measured by the Altruism Scale that was developed in my previous research (Raboteg-Šarić, 1993). It is a 17 item scale that has an easy-to-administer, self-report format. The response format is very similar to the Rushton's Self-Report Altruism Scale (Rushton, Chrisjohn & Fekken, 1981). Respondents are instructed to rate the frequency with which they have engaged in the prosocial behaviours using the categories 'never' (0), 'once' (1), 'a few times' (2), 'often' (3) and 'very often' (4). Scores can range from 0 to 68. Items describe instances of self-initiated help towards peers, neighbours and strangers and helping others or sharing with others in situations requiring at least a small amount of self-sacrifice. These are all low-cost, everyday prosocial behaviours such as: offering help to neighbours, borrowing classnotes to a friend, sharing a sandwich with someone in the group when hungry, etc. The internal consistency of the scale (Cronbach alpha) from the sample of subjects who participated in this study was 0.79.

The measures of empathy were developed in my previous research with adolescents (Raboteg-Šarić, 1991; 1993). In preliminary investigations a larger pool of items was applied to a sample of 251 sixteen-year-old adolescents. Items were mainly adapted from the Questionnaire Measure of Emotional Empathy (Mehrabian & Epstein, 1972) and the Interpersonal Reactivity Index (Davis, 1983). Item analytic procedure was used to reduce an initial pool of 57 five-point Likert scale items. The reduced set of 37 items was applied to the sample of 235 fourteen year old adolescents. Based on principal component factor analysis results and item analyses results, two scales measuring separate aspects of empathy were developed: the Emotional Empathy Scale and the Fantasy Scale. Although the initial pool included the items measuring perspective-taking, they did not emerge as a separate factor in these studies. Therefore, the Fantasy Scale was used as a measure of cognitive empathy for the purpose of this study.

The Emotional Empathy Scale consists of 19 five-point Likert scale items with response options ranging from 0 ('does not describe me well') to 4 ('describes me very well'). It measures affective responsiveness in a variety of situations. Items (such as 'I feel sorry when I see someone being helpless', 'Other people's misfortune disturbs me a great deal', 'I could be described as a soft-hearted person') describe susceptibility to emotional contagion, emotional responsiveness to others' unpleasant experiences, understanding of the feelings of friends and familiar others, and feelings of concern and sympathy.

The Fantasy Scale is a short, 6-item scale that consists of items adapted from the Interpersonal Reactivity Index (Davis, 1983). It taps respondents' tendencies to transpose themselves imaginatively into the feelings and actions of fictitious characters in books movies and plays, like: 'While reading a good story or novel, I imagine how I would feel if the events were happening to me'.

Cronbach alphas of the Emotional Empathy Scale and the Fantasy Scale were 0.78 and 0.64, respectively.

Moral reasoning was measured using the Moral Judgement Interview – Form A (Kohlberg, Colby, Gibbs & Speicher-Dubin, 1978). Three dilemmas were presented to the subjects in written form. They involve the choice between these conflicting moral issues or values: life and law, punishment and conscience and contract and authority. Each dilemma is followed by a set of probe questions designed to provoke subjects' moral judgements. The 311 protocols were coded according to the Standard Form Scoring Manual (Colby, Gibbs, Kohlberg, Speicher-Dubin & Candee, 1983). Two types of overall scores were derived: the global score (a stage score ranging from 1 to 5) and the moral maturity score (MMS), a quantitative index of an overall performance on the Moral Judgement Interview. The minimum possible score is 100, representing pure stage 1 moral reasoning, and the maximum score is 500, corresponding to the exclusive use of stage 5 reasoning. All of the protocols were blindly scored by

one rater trained in the theory and application of the Kohlberg's system for measuring moral reasoning. To assess reliability of scoring, a random subsample of 75 protocols was independently scored by a second rater. The percentage of global score agreement  $\pm$  one third of stage was 89%. The second estimate of interrater reliability, that is the correlation between the moral maturity scores of 75 subjects, was 0.77 (Pearson  $r$ ).

Research has shown that the maturity of moral reasoning of the individual (Colby et al. 1979; Kohlberg, 1973) and the scores on the Fantasy Scale (Davis, 1983) are positively related to intellectual ability. Therefore, an intelligence test, named the Problem Test, was also administered in this study, in order to control for the relationship between moral reasoning, intelligence and cognitive empathy (fantasy). The Problem Test (Bujas, Stipetić & Kolesarić, 1966) has been standardized for the Croatian population and it has been used in selection and vocational counseling. It measures 'sensitivity to problems' and 'ability to manipulate verbal symbols'.

A 13-item form of the Marlowe-Crowne Social Desirability Scale developed by Reynolds (1982) was also applied since social desirability, as a response tendency, may confound self-report measures. The internal consistency (Cronbach alpha) of this scale in the present study was 0.59.

## **Procedure**

The data were collected during a one-month period while the pupils visited the Vocational Guidance Office at the end of primary school. Subjects (usually in groups of ten) were administered various psychological tests as a part of a regular vocational counselling procedure. Instruments used for the purpose of this study were also applied.

## **RESULTS**

### **Descriptive analysis**

Means and standard deviations of all the variables for samples of girls and boys, and significance of sex differences is presented in Table 1.

The Moral Maturity Score was used for subsequent statistical analysis as the index of an overall performance on the MJJ. The mean MMS of all the subjects was 284.08 (SD=38.12) which shows that the majority of subjects had reached the conventional (stage 3) level of moral reasoning. Girls showed a higher maturity of reasoning than boys ( $t(309)=1.99$ ,  $p=.05$ ). A qualitative index of moral reasoning, that is the global stage score, was also calculated and it indicated that conventional level judgements were largely restricted to pure stage 3 reasoning (47% of subjects) or to major stage 3 and substage 2 (21%) or 4 (13%) reasoning.

**Table 1**  
Means and standard deviations of all the variables  
for the whole sample and samples of girls and boys

VARIABLE	GIRLS (N=174)		BOYS (N=137)		TOTAL (N=311)	
	M	SD	M	SD	M	SD
Altruism	47.17	7.73**	43.85	9.27	45.71	8.58
Emotional Empathy	56.28	7.27**	49.75	10.00	53.41	9.16
Fantasy	15.26	4.80**	11.97	4.75	13.81	5.04
Moral Reasoning	287.89	31.61*	279.25	44.72	284.08	38.12
Social Desirability	7.80	2.65	8.16	2.56	7.96	2.61
Intelligence (Problem Test)	35.14	10.84	32.74	11.91	34.08	11.37

\*\* Difference between sexes is significant at the  $p < 0.001$  level

\* Difference between sexes is significant at the  $p = 0.05$  level

Significant sex differences existed for the Emotional Empathy Scale ( $t(309) = 6.66$ ,  $p < .001$ ), the Fantasy Scale ( $t(309) = 6.04$ ,  $p < .001$ ) and the Altruism Scale ( $t(309) = 3.43$ ,  $p = .001$ ) with girls scoring higher than boys.

## Interrelations of the main variables

In initial correlational analysis, the interrelations of the main variables were examined. Since the pattern of findings was the same for boys and girls, zero-order correlations are presented for the whole sample as well as partial correlations, controlling for sex (Table 2). All the measures are coded in such a direction that a higher result means higher empathy, altruism, fantasy and the tendency to present oneself in a socially desirable manner. Sex is coded in such a way that a positive correlation denotes higher results for female subjects.

**Table 2**  
Correlations between self-reported altruism scores (A) and measures of emotional empathy (E), fantasy (F), moral reasoning (MR), social desirability (SD) and intelligence (I)

VARIABLE	A	MR	F	EE	SD	I(PT)
A	-	.02	.05	.42***	.25***	-.03
MR	.04	-	.12*	.11	-.10	.33***
F	.11	.15**	-	.25***	-.17**	.17**
EE	.45***	.14*	.33***	-	.16**	.08
SD	.23***	-.11	-.18**	.12*	-	-.21***
I (PT)	-.01	.34***	.20***	.113*	-.21***	-
S	.19**	.113*	.33***	.36***	-.07	.10

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ ; a) Below the diagonal: cross-correlations; b) Above the diagonal: partial correlations, controlling for sex (S)

The self-reported altruism was found to be positively and significantly related to emotional empathy and social desirability scores, and not related to moral maturity and fantasy scores.

Further correlational analysis revealed that, overall, moral reasoning was not related to measures of empathy. The correlation between moral maturity and emotional empathy scores, controlling for sex, was not significant. Positive relationship of moral reasoning and fantasy, with sex partialled out, remained significant (Table 2). Since both measures were also significantly positively related to intelligence, partial correlation between moral maturity and fantasy scores, controlling for intelligence,  $r_{p(308)} = .09$ ,  $p > .05$ , was also calculated and it was not significant.

Empathy measures were significantly positively related, but their relations with other selected measures differed. The correlation between the results on the Fantasy Scale and the Problem Test was significant, while emotional empathy scores were not related to intelligence. In addition, an interesting pattern of findings emerged for the relationship between empathy measures and social desirability. Social desirability scores were positively related to the ratings of emotional empathy and negatively to intelligence and fantasy scores (Table 2). The correlation between fantasy and intelligence, controlling for social desirability,  $r_{p(308)} = .16$ ,  $p < .01$ , remained significant. Similarly, fantasy was significantly negatively related to social desirability, with intelligence partialled out,  $r_{p(308)} = -.15$ ,  $p < .01$ .

### **Predicting prosocial behaviour: hierarchical regression analyses**

Prosocial behaviour was significantly positively related to emotional empathy, while no relationships with moral maturity and fantasy scores were found. The results were further analysed by different models of hierarchical regression analyses to check whether additional variance in the criterion variable could be explained by joint influence of moral reasoning and cognitive and affective aspects of empathy. The results were first analysed applying a model that included sets of all of the variables and their interactions (Table 3).

The first set (A) was made up of three variables (sex, intelligence and social desirability) entered as covariates. Emotional empathy, fantasy and moral reasoning were entered into regression equation simultaneously after set A as a set of main research factors (set B). At this stage, the proportion of the variance explained in the criterion variable, with set A statistically controlled, significantly improved. The only significant effect was that of emotional empathy, while the proportion of variance explained by moral reasoning or fantasy alone was zero. Hierarchical multiple regression analysis proceeded with interactions of independent variables with a covariate set (AxB), in order to test the

assumption that the regression of altruism on any of the covariates is the same for all the levels of the main factors. Since the assumption of regression homogeneity was met, this set was dropped out from the analysis. Finally variables carrying interactions of main effects were entered (set C). At this stage it had been shown that significant increase in the proportion of variance explained in the criterion variable occurred due to significant effect of the interaction of MR and EE.<sup>1</sup>

**Table 3.**  
Summary results of the setwise hierarchical multiple regression of self-reported altruism scores: The model including sets of all the control and predictor variables and their interactions

SETS	PREDICTORS	Significant Effects
A	Sex (S), Intelligence (I), Social Desirability (SD)	S,SD
B	Emotional Empathy (EE), Fantasy (F), Moral Reasoning (MR)	EE
(AxB)	SxEE, SxF, SxMR, IxEE, IxF, IxMR, SDxEE, SDxF, SDxMR	n.s.
C	EExF, FxMR, EExMR	EExMR

The final model for the prediction of prosocial behaviour included only emotional empathy and moral reasoning as the main research factors, since neither the main effect nor any of the interactions of fantasy with other variables was found. Table 4. provides the results of the hierarchical regression analysis.

**Table 4.**  
Hierarchical regression analysis on self-reported altruism scores

PREDICTORS	R	R <sup>2</sup>	R <sup>2</sup> change	F change	df	p
(I) Sex (S), Social Desirability (SD)	.309	.0956	.0956	16.28	2,308	.000
(II) Emotional Empathy (EE), Moral Reasoning (MR)	.487	.2370	.1414	28.36	2,306	.000
(III) EE x MR	.502	.2523	.0153	6.25	1,305	.013

(I) Sex and social desirability were included as covariates in the final analysis since significant sex differences were found for the results on the Altruism Scale and the Emotional Empathy Scale, and both scales showed positive cor-

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The magnitude of the interaction effect was the same whether it was entered into regression equation immediately after the main effects or as the last variable, after all control, main and interaction variables. Similarly, the results were the same when hierarchical regression analyses were performed with models including only one (S or SD) or two covariates (S and SD) and all the research factors and interactions entered either alone at each step or as set of variables. Three-way interactions were also tested and neither was significant.

relations with the social desirability scores. These two variables were entered simultaneously into regression equation at the first step. Partial correlation between social desirability and altruism scores, with sex differences statistically controlled, was highly significant ( $r_p = .25$ ,  $F(1,308) = 20.03$ ,  $p < .001$ ). Sex differences in prosocial behaviour remained significant when social desirability scores were partialled out ( $r_p = .21$ ,  $F(1,308) = 14.73$ ,  $p < .001$ ).

(II) Emotional empathy and moral reasoning were entered simultaneously into regression equation as main research variables. The two variables accounted for additional 14,14% of the variance in the dependent variable, when their relationship with covariates was partialled out. This effect could be attributed to emotional empathy alone ( $r_p = .393$ ,  $F(1,306) = 55.951$ ,  $p < .001$ ), since moral maturity and altruism scores were not related ( $r_p = -.004$ ,  $F(1,306) = .006$ ).

(III) Finally, the variable EExMR, carrying interaction of main effects, was entered at the last step. At this stage it had been shown that adding the interaction of emotional empathy and moral reasoning improved the proportion of the variance explained in the dependent variable. The change of the coefficient of multiple determination was small, but significant. Positive partial correlation of the interaction variable with altruism,  $r_p = .142$  showed that subjects with higher emotional empathy and more mature moral reasoning exhibited higher frequency of prosocial behaviour in their everyday social encounters.

### **The interaction of emotional empathy and moral reasoning in predicting prosocial behaviour**

The nature of the interaction was examined using the procedure described by Cohen & Cohen (1975). Predicted values of altruism ( $Y'$ ), based on emotional empathy scores (EE), were calculated with the effects of sex and social desirability partialled out. The regression equations were calculated for the low ( $M-1SD$ ), the medium (M) and the high value ( $M+1SD$ ) of moral maturity scores ( $Y' = 0.29 EE + 29.4$ ,  $Y' = 0.39 EE + 24.4$  and  $Y' = 0.49 EE + 19.4$ , respectively). The slope of regression of altruism on emotional empathy was greater, the greater the level of moral reasoning, and hence the validity of predicting altruism, based on empathy scores.

The nature of the interaction was also examined using a 'forced dichotomy' procedure (Zuckerman et al., 1988). Correlations between emotional empathy and altruism, with sex and social desirability scores partialled out, were calculated for groups of subjects formed by median split on EE and MR variable (Table 5).

The significance of the difference between partial correlation coefficients (prs) from different groups was determined by applying the Fisher  $z'$  transformation to a partial correlation. The only significant difference ( $z = 2.78$ ;  $p < .01$ , two-tailed) was found between prs from the HE-HMR group,  $r_p(86) = .43$ ,  $p < .001$ , and the

LE-LMR group,  $r_p(76) = .02$ . The difference between prs from the HE-LMR group and the LE-LMR group was marginally significant ( $z = 1.88$ ,  $p < .06$ , two-tailed). Overall, the relationship between emotional empathy and altruism scores, controlling for sex and social desirability, was stronger ( $z = 1.77$ ;  $p < 0.08$ , two-tailed) at the higher level of moral reasoning,  $r_p(151) = .49$ ,  $p < .001$ , than at the lower level of moral reasoning,  $r_p(150) = .32$ ,  $p < .01$ . This pattern of findings also confirmed that differential regression of altruism on empathy was dependent not only on empathy as such, but rather on interaction of emotional empathy and moral maturity. The main effect of emotional empathy on prosocial behaviour was moderated by subjects' moral maturity.

Table 5

Partial correlations (controlling for sex and social desirability) between emotional empathy and altruism at different levels of emotional empathy and moral reasoning

Emotional Empathy	Moral Reasoning	
	HIGH (HMR)	LOW (LMR)
HIGH (HE)	.43*** (N=90)	.32** (n=75)
LOW (LE)	.21 <sup>a</sup> (n=66)	.02 (n=80)
Emotional Empathy (All)	.49*** (N=156)	.32** (n=155)

Note: a  $p < .10$ , \*\* $p < .01$ , \*\*\* $p < .001$

## DISCUSSION

The main purpose of this study was to examine the interrelations of cognitive and affective factors in explaining prosocial behaviour. Our findings confirm the prediction that subjects' emotional empathic tendencies would be significantly positively related to their prosocial behaviour. Fantasy, as a more cognitive aspect of empathy, was not associated with prosocial behaviour. Significant gender differences in prosocial behaviour were found, with girls scoring higher than boys. In addition to gender differences in prosocial tendencies, the data confirm the findings of earlier studies that revealed that girls show more empathy than boys (Eisenberg & Lennon, 1983). Partial correlations analysis showed that gender differences in prosocial behaviour were no longer significant,  $r_p(308) = .04$ , when differences between the results of boys and girls on the Emotional Empathy Scale were controlled. The relationship between subjects' sex and empathy, controlling for altruism,  $r_p(308) = .31$ ,  $p < .001$ , remained highly significant. Similarly, the magnitude of the correlation between empathy and altruism did not change when gender differences on these measures were controlled,  $r_p(308) = .42$ ,  $p < .001$ . This pattern of findings indicates that gender differences in altruistic behaviour could be explained by girls' higher tendencies to experience affective empathy. Gender differences in empathy favour-

ing females may be due to biases in the self-report measures, i.e. both males and females may respond in ways consistent with sex-role stereotypes. It is also possible that, owing to different patterns of socialization females are actually more likely to experience emotional contagion than are boys (Lennon & Eisenberg, 1987). The data from this study showed that positive association between emotional empathy and prosocial behaviour, controlling for social desirability scores,  $r(308) = .42, p < .001$ , was highly significant. Therefore, it is more likely that gender differences in emotional empathic tendencies may be attributable to the greater emphasis on nurturance and training for expressive functions in the socialization of girls.

Higher social desirability scores were significantly positively related to prosocial behaviour. This finding is consistent with the notion that the Social Desirability Scale measures the need to obtain approval from others. Regression analyses and examination of partial correlations showed that the association of altruism scores with other related measures and their interactions was not confounded by social desirability tendencies.

Significant positive correlation was found between the results on the Emotional Empathy Scale and the Fantasy Scale, but they showed a different pattern of relationship with other selected measures. In interpreting these findings, it should be taken into account that the large size of the sample resulted in significant correlations as low as 0.12. However, the pattern of findings, as well as the magnitude of correlations, was very similar to the one found in Davis' (1983) study. Davis examined the relationship of the Interpersonal reactivity Index subscales with personality and intelligence measures. The Empathic Concern Scale was significantly positively related with the Fantasy Scale, and significant sex differences favouring females were found on both scales. Scores on the Fantasy Scale were positively, and in the case of the verbal measures significantly related to intelligence. In addition, high fantasizers showed modest tendency towards shyness, loneliness and social anxiety. The Empathic Concern Scale was strongly related to measures of other-oriented sensitivity, while no significant relationship with intelligence was found. Our findings indicated a similar pattern of association of emotional empathy and fantasy with prosocial behaviour and intelligence. In addition, an interesting pattern of findings emerged for the relationship between empathy measures and social desirability. Social desirability scores were positively related to the ratings of emotional empathy and negatively to fantasy scores. According to Aronoff and Wilson (1985), need for approval, emotional empathy and altruism are part of affiliative or other-directed dimension of social behaviour. An approval-oriented person is expected to exhibit high levels of friendliness, social sensitivity and empathy. An underlying need for affiliation will lead individuals to be strongly concerned with behaving as 'good' group members who seek to occupy supportive roles in many situations. Fantasy might be less related to behaviour in real social settings and associated with a lower need to gain approval from others. In this research, a significant negative relationship was al-

so found between intelligence and social desirability scores. As Alice Heim (1975) noted, scales measuring response style can constitute a short test of intelligence rather than honesty, since intelligent subjects are more capable of answering similar items 'honestly'.

Another purpose of this study was to examine whether subjects' moral judgement maturity is associated with a higher tendency to exhibit prosocial behaviour. Contrary to expectations, moral maturity scores were not at all related to the results on the Altruism scale. Moral judgement, as measured by Kohlberg dilemmas, might be less related to prosocial behaviour than judgements about prosocial issues and dilemmas. Furthermore, moral judgement maturity might be more related to a high-cost real life prosocial behaviour than to general tendencies to exhibit low-cost, common prosocial acts. The majority of subjects in our study have reached stage 3 moral reasoning. The mean moral maturity score was like the one found in other studies at the early adolescence age (Kohlberg & Turiel, 1971; Snarey, Reiner & Kohlberg, 1985). Perhaps a more reliable relationship between moral maturity and moral emotions and behaviour could be established if the sample included different age groups, varying in moral reasoning maturity.

Moral maturity scores were not related to emotional empathy. Social perspective-taking is seen as crucial in the transition from pre-conventional to conventional morality, and this aspect of empathy might be more related to moral judgement maturity than emotional empathy or fantasy. Since the stages of moral development and moral judgement maturity reflect qualitative differences in moral reasoning, the relationship between moral reasoning and affective empathy might be better understood if measures of developmental levels of empathy were available.

One of the central issues of this investigation was to establish whether prosocial behaviour can be explained by the joint influence of affective empathy and moral reasoning maturity. The results of the hierarchical regression analysis had shown that subjects' tendency to behave altruistically in a variety of everyday life situations could be best explained by their higher emotional empathy or the tendency to experience emotions that are congruent with another's affective state. Moral reasoning was not related to altruistic behaviour. However, the interaction of moral reasoning and emotional empathy accounted for a significant proportion of variance in the self-reported altruism scores indicating that the effects of emotional empathy on prosocial behaviour were moderated by subjects' moral judgement maturity. A positive relationship between empathy and moral reasoning was stronger at higher levels of moral reasoning maturity. In this case 'high' moral maturity score means conventional level reasoning (predominantly global stage score 3 or in some cases stage 3 including substage 4 reasoning). The strongest association of empathy with prosocial behaviour was found for subjects high in empathy and moral reasoning. Moral reasoning at the conventional level focuses on the needs of the group

and shared relations, so it is reasonable to believe that the conventional morality, associated with higher emotional empathy results in higher prosocial behaviour. In this case higher emotional empathy is congruent with the quality and level of subjects' moral reasoning. It could be hypothesized, as Hoffman (1987) noted, that the co-occurrence of empathic affects and moral principles had strengthened a bond between them and, as a result, moral principles had acquired an affective charge. Therefore, more mature subjects who have higher capacity for emotional empathy might be more motivated to act in accordance with moral principles. These are only tentative hypotheses and more empirical tests are needed to explain the exact nature of the interrelations between empathic affects, moral cognitions and prosocial behaviour.

The cognitive developmental perspective is concerned with pattern or organisation of response rather than the rate or intensity of response. According to a cognitive developmental view, the quality, not the quantity, of prosocial action is believed to change as the individual develops the capacity for higher level moral judgement. Consequently, the ideas of altruism change as children move towards higher stages of moral reasoning. At stage 2, for example, to behave altruistically means to reciprocate, help those who help us. The concern for issues about altruism is especially expressed at stage 3 (Krebs, 1978). The social perspective at stage 3 conventional level is that of the individual in relationship to the other individuals. Shared feelings, agreements, and expectations take primacy over individual interests. What is right at this stage is defined as playing a good role, being concerned about other people and their feelings, keeping mutual relationships, and being motivated to follow rules and expectations (Kohlberg, 1969). The main findings of this study are in accordance with the description of altruistic behaviour of persons at the conventional level of moral development. Higher need for approval and higher emotional empathy are associated with stronger tendencies to behave prosocially in everyday social encounters.

In conclusion, our findings indicate that individual differences in adolescents' prosocial behaviour in everyday social encounters could be best explained by their higher emotional empathy or the tendency to experience emotions that are congruent with another's affective state. Higher altruistic behaviour of girls could be attributed to their higher tendency to experience emotional empathy. Although moral judgement maturity does not predict altruism well, it can help us understand the behaviour of subjects at a certain developmental level. Moreover, moral behaviour could be better explained and understood, if the interaction of moral affects and cognitions is taken into consideration.

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## **ULOGA EMPATIJE I MORALNOG RASUĐIVANJA U PROSOCIJALNOM PONAŠANJU ADOLESCENATA**

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Osnovni cilj ovog rada bio je utvrditi uolikoj mjeri empatičnost i razina zrelosti moralnih prosudbi određuju prosocijalno ponašanje adolescenata. U istraživanju je sudjelovalo 311 učenika završnih razreda osnovne škole koji su ispunjavali upitnike za mjerenje prosocijalnog ponašanja, emocionalne empatije i mašte. Razina zrelosti moralnog rasuđivanja utvrđena je u skladu s Kohlbergovom teorijom i instrumentarijem za mjerenje moralnog razvoja. Podaci su analizirani u sklopu modela hijerarhijskih regresijskih analiza koje uključuju emocionalnu empatiju, maštu, moralno rasuđivanje i njihove uzajamne interakcije, kao glavne prediktore prosocijalnog ponašanja, te spol ispitanika, inteligenciju i sklonost odgovaranju na društveno prihvatljiv način, kao kovarijate. Rezultati su pokazali da se prosocijalno ponašanje najbolje može predvidjeti na temelju emocionalne empatije, dok moralno rasuđivanje nije bilo povezano s prosocijalnim ponašanjem. Utvrđena je značajna interakcija emocionalne empatije i zrelosti moralnih prosudbi koja pokazuje da je veza empatije i prosocijalnog ponašanja jača na višim razinama zrelosti moralnog rasuđivanja. Dobivene su i značajne razlike u prosocijalnom ponašanju ispitanika različitog spola. Dodatne analize podataka pokazale su da se češće prosocijalno ponašanje djevojaka u velikoj mjeri može pripisati njihovoj izraženijoj tendenciji empatiziranja. Glavni nalazi ovog istraživanja razmatraju se s obzirom na suvremene teorijske pristupe koji ističu različitu ulogu emocionalnih i kognitivnih čimbenika u određivanju moralnog ponašanja.

## **DIE ROLLE VON EMPATHIE UND MORALISCHEM URTEILSVERMÖGEN IM PROSOZIALEN VERHALTEN VON ADOLESCENTEN**

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**Z**iel dieser Arbeit war zu ermitteln, inwiefern Empathie und moralische Reife prosoziales Verhalten von Adoleszenten bewirken können. An der Untersuchung nahmen 311 kroatische Schüler des 8. Schuljahrs teil, denen Fragebogen zur Ermittlung von prosozialem Verhalten, emotionaler Empathie und Vorstellungsvermögen ausgeteilt wurden. Die Reife des moralischen Urteilsvermögens wurde anhand des von Kohlberg erarbeiteten Instrumentariums zur Messung des moralischen Entwicklungsstands ermittelt. Die Ergebnisse wurden nach dem Modell hierarchischer Regressionsanalysen bearbeitet, in denen emotionale Empathie, Phantasie, moralisches Urteilsvermögen sowie die Interaktion dieser Faktoren als die Hauptprädiktoren prosozialen Verhaltens mit eingeschlossen sind; die hierarchischen Regressionsanalysen umfassen ferner als Kovarianten Geschlecht, Intelligenz sowie die Neigung des Befragten, auf gesellschaftlich anerkannte Weise zu reagieren. Die Ergebnisse haben gezeigt, daß prosoziales Verhalten am ehesten aufgrund emotionaler Empathie prognostiziert werden kann, während moralisches Urteilsvermögen keinerlei Bezug zu prosozialem Verhalten aufwies. Bedeutende Interaktion besteht nachweislich zwischen emotionaler Empathie und moralischem Urteilsvermögen, was darauf verweist, daß der Bezug zwischen Empathie und prosozialem Verhalten um so stärker ist, je reifer das moralische Urteilsvermögen des einzelnen ist. Des weiteren stellte man bedeutende, durch die Geschlechtszugehörigkeit bedingte Unterschiede im prosozialem Verhalten der Befragten fest. Zusätzliche Analysen haben ergeben, daß prosoziales Verhalten unter Mädchen häufiger und größtenteils auf die ausgeprägtere Tendenz des Mitfühlens mit anderen zurückzuführen ist. Die wichtigsten Befunde dieser Untersuchung werden vor dem Hintergrund zeitgenössischer Theorien untersucht, welche die Rolle emotionaler und kognitiver Faktoren im moralischem Verhalten hervorheben.