Moral judgment and concern about nuclear war

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MORAL JUDGMENT AND CONCERN ABOUT NUCLEAR WAR

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Concern about nuclear war is widespread among adolescents and adults, as is well documented in large-scale surveys conducted in the United States (Blackwell and Gessner, 1983; Kramer, Kelich, and Milburn, 1983) and further abroad (De Boer, 1981; Thompson, 1985: 10f). It appears that females, younger respondents, and minority groups such as blacks in the United States are more concerned about the nuclear threat than males, older people, and middle-class whites.

However, research on the psychological antecedents and consequences of concern about nuclear war has been relatively scarce. Although there is much speculation about "psychic numbing" (Lifton, 1982) and other psychiatric symptoms of growing up under the threat of the current nuclear arms race (Mack, 1984; Rapoport, 1984; Escalona, 1982; Schwebel, 1982), little is empirically known about its relationship with personality variables (Tizard, 1984).

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Tyler and McGraw (1983) conducted some exploratory research into the psychological differences between nuclear "activists," "survivalists," and a group of relatively unconcerned people. The attribution of causal and moral responsibility in case of the nuclear arms threat to the people instead of to the government surfaced as an important difference between activists and the other groups. The activists felt more personal responsibility for the threat nuclear arms might pose in the future.

Fiske, Pratto, and Pavelchak (1983) focused upon differences in mental representations ("images") of the nuclear threat between "activists" and "nonactivists." Nuclear activism seemed to be more dependent upon general political activism and upon a negative attitude toward nuclear war than upon the availability and emotionality of the nuclear "images." Only the concreteness of the image made an important difference. Among activists, more concrete images about personal and human consequences of nuclear war could be found.

Although the moral dimension of the nuclear arms race cannot be denied (Jaspers, 1963), no research has been done into either the relationship between moral development (Kohlberg, 1981) and concern about nuclear war, or the relationship between moral development and antinuclear activism. The relationship between moral development and political attitudes and activism in general has been established in several different research projects (Haan, Smith, and Block, 1986; Fishkin, Keniston, and Mackinnon, 1973; Fontana and Noel, 1973; Nassie, Abramowitz, and Youmans, 1983), but the unidirectional causal interpretation of this relationship has recently been criticized (Emler, 1983).

Here, two studies relating moral development to concern about nuclear war and to antinuclear activism are reported. It is hypothesized that stage of moral judgment as assessed by solutions to two classical Kohlberg dilemmas is related to the attitude toward nuclear arms, and to the level of antinuclear activism. The higher the level of moral judgment, the more concern there appears to be about nuclear arms. This hypoth-

esis was tested independently in two Dutch samples: One sample consisted of 93 university students; the second sample consisted of 92 students from a vocational high school. A detailed Dutch report on these studies can be found in Van IJzendoorn (1986a).

STUDY 1

METHOD

Subjects. The sample consisted of 93 first- and second-year education students studying at the University of Leiden in the Netherlands. The questionnaire, containing short instructions for respondents as well as some examples of questions and answers, was completed during introductory courses in (developmental) psychology given in 1984. The mean duration for completing the questionnaire was one hour. All of the students took part in the study. The mean age of the sample was 23.5 years (minimum age—18 years, maximum age—47 years; SD = 6.3). Since among education students, females are overrepresented at all universities in the Netherlands, 80% of the sample was female. The socioeconomic status of the respondents' fathers was 4.5 (SD = 1.4) on a scale ranging from unskilled labor (1) to academic professions (6) (see Van Westerlaak, Kropman, and Collaris, 1975).

PROCEDURES

The questionnaire contained three clusters of questions. The first cluster was derived from the Sociomoral Reflection Objective Measure (SROM; see Gibbs et al., 1984). The SROM is a paper-and-pencil multiple-choice test used to assess the level of moral judgment operating with respect to two classical Kohlberg dilemmas: the Heinz-dilemma and the father and son dilemma. The second cluster was a Dutch

version of the Inventory of Nuclear War Attitudes (INWA; Grueneich, Weldon, and Zecker, 1983). This attitude scale was developed in the United States to measure concern about the nuclear arms race. The scale consists of 24 items with a nine-point scale ranging from strong approval to strong disapproval of the content of the items. The third cluster contains questions about background variables such as age, sex, socioeconomic status, and asks the respondents their political party preference, religion, and opinion on the issue of stationing cruise missiles in the Netherlands.

The Sociomoral Reflection Objective Measure (SROM). The SROM developed by Gibbs et al. (1984) presents judgments, each at one of five stages of moral development, about different aspects of the two moral dilemmas. A sixth alternative does not represent any moral judgment stage, but is a pleasant pseudoargument used to control for social desirability. For each argument, the respondents had to indicate whether it does or does not come close to their own opinion. The respondents then were asked to indicate which of the arguments (including the pseudoargument) comes closest to their own opinion. One of the dilemmas is the well-known story about a man—Heinz—who must decide whether to break the law and steal an exorbitantly priced drug in order to save his dying wife's life. Subjects respond to 16 multiple-choice arrays about different aspects of the two moral dilemmas. Each array consists of six arguments. Except for the pseudoargument, they are derived from the classical Kohlberg Moral Judgment Interviews and represent each of the five moral judgment levels. These five levels are (1) heteronomous morality: "right" is to avoid breaking rules backed by punishment; (2) individualism, instrumental purpose, and exchange: "right" is acting to meet one's own interests and needs and letting others do the same; (3) mutual interpersonal expectations, relationships, and interpersonal conformity: "right" is to live up to what is expected by people close to you or what people generally expect of people in the role of son, brother, friend, and so on; (4) social system

and conscience: "right" is to fulfill the actual duties to which you have agreed and to contribute to society, the group, or the institution; (5) social contract or utility and individual rights: "right" is to be aware that most values are relative to your group, but that these relative values usually should be upheld in the interest of impartiality and the social contract (Kohlberg, 1984: 174).

Overall ratings for the SROM represent the mean stage level of the 16 options selected as "close" and the 16 options selected as "closest" from among the question arrays. The score ranges from 100 to 500 and, divided by 100, this score roughly corresponds the moral stages 1 to 5. The SROM takes the recent developments in the Kohlberg theory into account. For example, stage 6 was eliminated from the measures of moral judgment (Kohlberg, Levine, and Hewer, 1983). Gibbs et al. (1984) established rather good test-retest reliability (.82) and alpha reliability (.84). The concurrent validity with the results of the original Moral Judgment Interview was $r(21) = .66$.

Two qualified translators translated the SROM into Dutch independently, differences in translation being solved by agreement. Thereafter, a highly qualified English translator translated the Dutch version back into English. Differences between the original and translated English version were minor and led to some correction being made in Dutch translation. Alpha reliability of the Dutch SROM was .67 and the mean score was 397 (SD = 28). The rather low reliability figure could have been caused by restriction of range and by horizontal *décalage:* Mean scores for parts of the SROM sometimes differed more than 100 scale-points. However, the alpha reliability is acceptable for fundamental research (Nunnally, 1978). Because of social desirability, 11 protocols had to be excluded from the analyses. No significant relationships were found between SROM and sex, age, or SES. The correlation between the SROM score and position on a political left-right scale was not significant ($r = -.20$; $n = 82$; n.s.). Subjects were asked to indicate their own political position on a scale from (1) "left" to (7) "right." The respondents were also asked to choose

their preferred political party from an exhaustive list of Dutch parties. After combining a few small parties, a one-way analysis of variance of SROM score on political party preference indicated no significant relationship ($F(3,58) = .90$; n.s.).

Inventory of Nuclear War Attitudes (INWA). In translating the INWA into Dutch, the same procedure was followed as described above. Some examples of items are

—The threat of nuclear war has had very little impact on my daily life.
—A nuclear war is likely to happen sometime in the next ten years.

The respondents were instructed to indicate the extent of agreement or disagreement with each of the 24 statements on a nine-point Likert scale. The options ranged from disagreeing very strongly to agreeing very strongly. In American studies using the INWA, alpha reliability appeared to be satisfactory (.83 for a student sample; .72 for a high school sample). In this study, alpha reliability was .79 after eliminating three items with a low item-total correlation, and the mean score on the INWA (scale from 0 to 8) was 5.1 (SD = .8). The concurrent validity of the INWA was confirmed through the critical attitude of respondents with a high score on the INWA toward stationing cruise missiles in the Netherlands ($F(2,87) = 21.68$; $p < .00$; $\eta^2 = .33$). Those with more experience with demonstrating against the nuclear arms race usually attained a high score on the INWA ($F(1,91) = 26.15$; $p < 00$;$\eta^2 = .22$), as did those with a firmer expression of the wish to participate in future demonstrations ($F(1,90) = 25.49$; $p < .00$;$\eta^2 = .22$). A high score on the INWA does not imply the view of a minor role of the Warsaw pact in the nuclear arms race ($F(1,86) = 1.29$; n.s.) or the view of a very low probability of NATO's stationing of cruise missiles in the Netherlands ($F(1,88) = .07$; n.s.).

The Effect of the Sequence of the Scales. One can imagine that confrontation with two moral dilemmas could have some effects upon the expression of an attitude toward nuclear arms issues. To test this potential sequence effect,a random half of the sample had to complete a questionnaire with the reversed sequence. One-way analyses of variance showed that sequence did not have a significant effect on the INWA score ($F(1,80) = 3.60$; n.s.). Instead, the sequence seemed to have a significant effect on the SROM score ($F(1,80) = 6.0$; $p = .02$). Completing the SROM first resulted in a somewhat higher mean score ($x = 405$) compared to completing the INWA first ($\overline{x} = 390$). This result restricts, of course, the validity of the SROM, which should not be liable to situational aspects. In other studies, however, the sequence-effect could not be replicated (see Study 2 below; Van IJzendoorn, 1985, 1986b). Furthermore, the effect does not seem to be very large. The sequence effect will be controlled for in the multivariate regressions (see below).

RESULTS

Concern About Nuclear War Among University Students. In Table 1, an overview has been given of the means and standard deviations of the scores on the items of the INWA. There are a few statements nobody liked to agree with, for example, item 24: If a large scale nuclear war ever occurs, I will have a good chance of surviving it unharmed.

The respondents seem to have a rather "realistic" view of the consequences of a large-scale nuclear war (see also item 7), but they also seem rather optimistic about the chances of preventing a nuclear war. They do not find it odd to raise children under the threat of a nuclear war (item 6), and they think humankind could do something to prevent nuclear war (item 8). Furthermore, they are rather skeptical about winning a nuclear war (items 10 and 20) or maintaining peace through nuclear arms (item 12). Almost every respondent agrees with

TABLE 1

Mean and Standard Deviation of the Items of the Scale Measuring Attitude Toward Nuclear War in Four Samples

Sample	Dutch university students (n=93)	Dutch vocational school students (n=92)
Item	X (SD)	X (SD)
1. Most people are not as informed as they should be about the potential dangers of nuclear war	5 9 (2.0)	6.2 (2 4)
2. As long as nuclear weapons exist, someone will eventually make use of them.	6 1 (2.1)	5.8 (2 0)
3. There is no reason for a country to reduce its supply of nuclear weapons unless its enemies do the same	3.5 (2 4)	5.3 (2.5)
4 I worry more about being in an automobile accident than in a nuclear war	4.9 (2 3)	5.6 (2.5)
5. If a country has reliable information that an enemy intends to launch a nuclear attack upon us, than they should release their nuclear weapons first	3 0 (2 0)	4.1 (2 1)
6 The threat of nuclear war makes it foolish to bring children in this world.	2 9 (1.9)	3.4 (2 3)
7 A large scale nuclear war would completely destroy civilization as we know it.	8.2 (1 2)	7.1 (2.2)
8. There is nothing that humankind can do to prevent the possibility of nuclear war	2.1 (1 5)	3.7 (2.5)
9. The threat of nuclear war has had very little impact on my daily life.	5.6 (2.1)	6.5 (2.1)
10. If we were losing a non-nuclear war, we should use our nuclear weapons to defeat our enemy.	2.2 (1.4)	3.9 (2 4)
11. It is important to discuss the issue of nuclear war with family and friends.	7.0 (1.5)	5.2 (2.0)
12. The best way to maintain peace in the world is through military strength in nuclear weaponry.	2.9 (2 0)	4.0 (2.3)
13. The posibility of nuclear war is the most important problem that humanity now faces.	5.2 (2.2)	5.4 (2.0)
14. It is possible to devise plans or procedures that will allow people to survive a nuclear war unharmed.	3.1 (1.9)	4.4 (2.4)
15. The possibility of nuclear war makes me depressed.	4.7 (2.0)	4.3 (2.4)
16. Every country in the world should immediately get rid of its supply of nuclear weapons.	7.8 (2.0)	7.3 (2.2)
17. There are things that I or my friends can do to reduce the possibility of nuclear war.	5.3 (2.2)	4.0 (2 1)
18. At the present time, the world powers need to possess at least some nuclear weapons for self-defence.	3.6 (2.2)	4.6 (2.2)
19. It is possible to have nuclear war on limited scale.	3.0 (2.2)	4.0 (2.1)
20. The major world powers have no moral right to carry the struggle against opposing political ideologies to the point of risking the destruction of the human race.	8.0 (1.6)	6.0 (1.9)
21. The possibility of nuclear war does not worry me at all.	3.3 (1.9)	5.0 (2.5)
22. A nuclear war is likely to happen sometime in the next ten years.	4.5 (1.5)	4 2 (1.8)
23. It is not likely that a nuclear war will occur within my own lifetime.	4.8 (1.6)	5.3 (1.8)
24. If a large scale nuclear war ever occurs, I will have a good chance of surviving it unharmed.	1.8 (1.3)	2.8 (2.9)

NOTE: The scale for measuring attitudes toward nuclear war is derived from Grueneich, Weldon, and Zecker (1983). The mean scores of the items are computed on the basis of a scale from 1 to 9.

the statement that every country should destroy its nuclear arms immediately (item 16). The respondents are much less in agreement about the other items.

Moral Judgment and Concern About Nuclear War. Neither the respondents with a high nor those with a low score on the SROM reacted differently to the question of whether or not it is true that the Warsaw pact's participation in the nuclear arms race is steadily increasing ($F(1,76) = .03$; n.s.). They also do not differ in their expectations concerning the stationing of cruise missiles in the Netherlands ($F(1,78) = 1.10$; n.s.). Furthermore, there is no significant difference in SROM scores between those respondents who find it good, those who find it a pity, and those who find it bad if, after debates in the Dutch House, it were decided to station cruise missiles in the Netherlands. Most respondents indicated that they would find it a pity or bad if the cruise missiles were stationed in the Netherlands. About one-third of the respondents did not believe it necessary to have a military counterforce in Western Europe against Russia and the other Warsaw pact countries. These respondents did score significantly higher on the SROM ($x = 410$ versus $\bar{x} = 390$; $F(1,79) = 9.20$; $p = .003$). This critical attitude toward the arms race seems to have led those respondents with a high SROM score to participate in nuclear war demonstrations more often than those with a low SROM score (see Table 2). However, there is no significant difference in SROM scores between respondents who would like to participate in future activities against nuclear war and those who do not express this wish ($F(1,79) = 1.28$; n.s.). The Pearson correlation between SROM, and INWA is $r(82) = .35$ ($p < .001$). The higher the score on the SROM, the more concerned the respondents are about nuclear war. It is notable that one-quarter of the sample thinks the Netherlands should not remain a member of NATO, and that this group scores relatively high on the SROM ($\bar{x} = 411$ versus $\bar{x} = 393$; $F(1,78) = 6.56$; $p = .01$). Although this mean score of 411 is within the range of the fourth stage in Kohlberg's developmental hierarchy, it seems to be mixed with elements from post-conventional morality to such an extent that it is compatible with a critical stance toward government discussions.

TABLE 2
Experience with Antinuclear Activities and Moral Judgment (SROM)

	Moral Judgment (SROM)			
Anti-nuclear activities	X	SD	n	
1. yes	404	29	48	F=5.5 p=.02
2. no	389	27	34	η^2=.06
Total	397	28	82	

To get an overview of the network of variables related to concern about nuclear war, a hierarchical multiple regression was carried out. First, background variables such as age, sex, sequence of scales, and SES were included in the analysis. No significant part of the variance in concern about nuclear war could be explained by these variables. The four most relevant predictors were selected: "political position," "attitude toward NATO" membership, experience with "activities against the nuclear arms race," and SROM score. The results of the multiple regression with background variables in the first block and the four predictors in the second block are shown in Table 3. From Table 3 it can be derived that a large part of the variance in the INWA, namely, 42%, is explained by four predictors. "Attitude toward NATO" and "political position" are the most important predictors, but regardless of "political position," the SROM score appears to play a significant role too: The higher the SROM score, the more concerned respondents are about nuclear war.

STUDY 2

METHOD

Subjects. The subjects in the second study were 92 students attending a vocational high school. The questionnaire was

TABLE 3
Regression on "Concern About Nuclear War" as Criterion, and "Political Position," "Attitude Toward NATO," "Antinuclear Activism," and "Moral Judgment" as Predictors (university students)

	Concern about nuclear war (INWA)			
Predictors	Bèta	R^2	T	P
Block 1:				
1. Sequence	-.19		-1.7	ns
2. Age	.06		.5	ns
3. SES	-.15		-1.3	ns
4. Sex	.07		.6	ns
Subtotal		.06		F(4,74)=1.2;p=.31
Block 2:				
5. Activism	-.20		-1.9	.06
6. Moral judgment	.19		2.0	.05
7. NATO	.20		2.0	.05
8. Political Position	-.34		-3.2	.00
Total		.48		F(8,70)=9.8;p=.0000

NOTE: Minimum pairwise η of the hierarchical regression is 79.

completed during school hours. The teachers were instructed to act as research assistants. The completion of the questionnaire lasted about one hour. All of the students participated in the study. Their mean age was 17.6 years (minimum age—14 years; maximum age—20 years; SD = 1.1). Of the sample, 47% was male, 53% female. Socioeconomic status (SES) was 3.0 (SD = 1.5; n = 87), on a scale ranging from 1 (unskilled labor) to 6 (academic professions).

PROCEDURES

The same test and scales were used in the second study as in the first study.

The SROM. Alpha reliability of the SROM was .81 (n = 56), and the mean score was 316 (SD = 40). Of the protocols, 26 could not be scored because of too many "psuedo answers", and in 10, too few responses to the items prevented scoring of the SROM. The subjects from this age group, and from the rather low-socioeconomic-status groups, appeared to find the

test rather difficult. Therefore, not all items could be answered and socially desirable answers seemed to be preferred more often than in the student sample. Respondents whose SROM score could not be computed because pseudo- or missing answers did not differ from the rest in respect to "age" ($F(1,90) = .03$; n.s.); "SES" ($F(1,90) = .25$; n.s.); "political position" ($F(1,90) = .86$; n.s.); "concern about nuclear war" ($F(1,90) = .000$; n.s.); or sex ($\chi^2(92) = 2.4$; n.s.). As in the first study, the correlation between SROM and "political position" was not significant ($r(56) = -.14$). The same is true for the correlations between SROM and age, sex, and SES. Because only 23 respondents indicated a clear political party preference, it was not possible to test the relationship between SROM and political party preference.

The INWA. After removing two items from the scale, the alpha reliability of the INWA became .77 (n = 92). The mean score was 4.35 (SD = .8) on a scale from 0 to 8. The concurrent validity of the INWA is confirmed by the relation between the INWA and the attitude toward stationing of cruise missiles in the Netherlands ($F(2,84) = 4.47$; $p = .01$; $\eta^2 = .10$). Furthermore, respondents with experience in demonstrating against nuclear arms scored significantly higher on the INWA than respondents without such experience ($F(1,89) = 18.06$; $p < .001$; $\eta^2 = .17$). This relationship holds even more strongly between those respondents with and those without the wish to participate in future demonstrations ($F(1,86) = 38.97$;; $p < .001$; $\eta^2 = .31$). However, a high score on the INWA does not mean that respondents do have the view of a minor role the Warsaw pact would be playing in the nuclear arms race ($F(1,84) = .70$; n.s.), or that they do have the view of a very low probability of cruise missile stationing in the Netherlands in the near future ($F(1,88) = 2.37$; n.s.).

The Effect of the Sequence. Contrary to study 1, no significant effect of the sequence of tests and scales in the questionnaire on the SROM and INWA scores could be found.

RESULTS

Concern About Nuclear War Among Vocational School Students. The vocational school students seem to be somewhat less concerned about nuclear war than the university students. The first group has a mean score of 4.35 (SD = .8), and the second group a mean of 5.1 (SD = .8). Differences are mainly restricted to political and military issues, such as the question of whether a country should decrease its number of nuclear arms in case the enemy does the same, or the question of whether nuclear arms should be used if a conventional war is lost (see Table 1). The vocational school students appear to find nuclear arms stationing more necessary than the university students, but at the same time, vocational school students are somewhat more pessimistic about the prevention of nuclear war.

Moral Judgment and Concern About Nuclear War. As in the first study, the SROM is not related to how the Warsaw pact's participation in the nuclear arms race is perceived ($F(1,48) = .32$; n.s.). Respondents who expect the cruise missiles to be stationed in the Netherlands do not differ in moral judgment from those who are of a different opinion ($F(1,53) = 2.36$; n.s.). Respondents who find it either good, a pity, or bad if the cruise missiles were to be stationed in the Netherlands after debates in the Dutch House do not differ in moral judgment ($F(2,51) = 1.19$; n.s.). About 65% of the subjects would find it a pity or bad. Contrary to study 1, no differences in moral judgment exist between respondents who think a counterforce in Western Europe is necessary against the threat of the Warsaw pact, and those who are of a different opinion. However, there is a tendency for respondents with experience in activities against nuclear arms to have a higher SROM score ($\bar{x} = 336$; $n = 5$) compared to respondents without such experience ($\bar{x} = 312$; $n = 50$). But due to the small number of respndents with experience in antinuclear protest, the tendency is not significant ($F(1,53) = 1.35$; n.s.). The same

nonsignificant tendency holds for those with and those without the wish to participate in future antinuclear activities ($F(1,52) = 1.04$; n.s.). The critical attitude toward the nuclear arms race of respondents with higher SROM scores can be derived from the correlation between SROM and INWA: $r(56) = .38$ ($p < .01$). A relationship between moral judgment and attitude toward the Netherland's membership in NATO does not exist in this study ($F(1,48) = 1.85$; n.s.), although the small group who are against continuing this membership have a higher mean score on the SROM ($\bar{x} = 339$; $n = 5$) than those with a more favorable attitude ($\bar{x} = 312$, $n = 45$).

In the second study, the same regression analysis was performed with background variables like sex, age, SES, and sequence, and with theoretically relevant variables like "political position," "attitude toward NATO," "experience with antinuclear activities," and "moral judgment." It can be seen from Table 4 that 36% of the variance in the INWA is predicted by four variables. Among these predictors, "political position" does not seem to be relevant. Viewed independently, the other variables do have a significant share in determining the "concern about nuclear war," with beta's around .30. Respondents who are very critical of Dutch membership in NATO, who do have experience with antinuclear activities, and who have higher scores on the SROM appear to be more concerned about nuclear war than subjects showing the opposite response pattern.

DISCUSSION AND CONCLUSION

The two studies lead to the same conclusion: Moral judgment and concern about nuclear war are significantly correlated. Respondents with a higher SROM score do not have less realistic views of the participation of East and West in the nuclear arms race, but they do have more experience in antinuclear protest, and have a more critical attitude toward NATO. Their concern about nuclear war is greater than that of

TABLE 4
Regression on "Concern About Nuclear War" as Criterion, and "Political Position," "Attitude Toward NATO," "Antinuclear Activism," and "Moral Judgment" as Predictors (vocational school students)

	Concern about nuclear war (INWA)			
Predictors	Bèta	R^2	T	P
Block 1:				
1. Sequence	.06		.4	ns
2. Sex	.09		.6	ns
3. SES	-.10		-.7	ns
4. Age	.02		.1	ns
Subtotal		.02		F(4,45)=.25;p=.91
Block 2:				
5. NATO	.29		2.1	.04
6. Political Position	-.27		-1.9	.07
7. Moral judgment	-.05		-.3	.73
8. Activism	.32		2.3	.02
Total		.38		F(8,41)=3.10;p=.008

NOTE: Minimum pairwise η of the hierarchical regression is 50.

respondents with low SROM scores. The SROM score, however, is not related to the subject's position on the political left-right scale or their political party preference. This result was replicated in two other independent studies among law students (Van IJzendoorn, 1985) and among high school students (Van IJzendoorn, 1986b). The "apolitical" character of moral judgment does not, of course, imply that moral judgment would not be related to political ideology concerning specific topics such as the nuclear arms race (Van IJzendoorn, 1980).

Contrary to this "apolitical" character of moral judgment, "concern about nuclear war" is correlated with political party preference and political position in general. The more leftist the respondent, the more he or she is concerned about nuclear arms. The same relationship determines the respondents' attitude toward NATO as well. Regardless of political position, the SROM also explains a significant part of the variance in concern about nuclear war in both studies. It can thus be said that the moral dimension of this political issue appears to be

established. Of course, concern about nuclear war does not depend only on a person's moral judgment and his or her politics. More than half of the variance in the INWA could not be explained. Maybe factual knowledge and influences from peers and parents also play an important role in the development of concern about nuclear war. Future research should test this supposition.

Aside from a good deal of conformity between the results, the outcomes of the two studies do also differ in some respects. There is a substantial difference in the moral judgment level of the subjects. On average, the younger vocational school students reason about moral dilemmas in terms of stage 3, whereas the university students reason mainly in terms of stage 4. Furthermore, the two samples differ in respect to the respondents' concern about nuclear war. Few vocational school students had ever participated in antinuclear protest, and they appeared to be less concerned about the threat of nuclear war. It is, therefore, remarkable that the hypothesis of a significant correlation between SROM and INWA could be confirmed in both studies.

Recently, Emler (1983) and Emler, Renwick, and Mulone (1983) suggested that results from past research into the relationships between moral judgment and political attitudes were incorrectly interpreted as causal relationships, in which moral judgment determines or "causes" the occurrence of a specific attitude. Emler et al. (1983) try to give some evidence to support their precept that political views may well have a greater influence on moral developments rather than the other way around. They point out that there is insufficient evidence for the hierarchical sequence of the last three stages (4, 5, and 6), and assume that these stages could better be considered as equivalent endings of development in young adulthood. Which ending is going to be chosen, for instance, 4, 5, or 6, would depend, among other factors, on the political opinions the young adults have acquired. A person with more conservative political views would choose stage 4 as the moral complement of his or her political persuasions, and someone with more

progressive attitudes would tend to reason on a post-conventional level. Therefore, no ethical superiority could be claimed for the post-conventional stage.

Although the studies reported here cannot establish causal links between moral judgment and political attitudes, the results seem to point in a somewhat different direction. The studies show that moral judgment level is not correlated with political position on the left-right scale or with political party preference. A significant relationship exists, however, with concern about nuclear arms and concern for the stationing of cruise missiles in the Netherlands. Contrary to Emler et al. (1983), political position or political party preference does not seem to determine moral judgment level. However, political issues such as the nuclear arms race often do have a moral dimension and regardless of political position or political party preference, different moral judgment levels correlate with or lead to a different evaluation of this dimension.

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