

Religiosity, moral attitudes and moral competence: A critical investigation of the religiosity–morality relation

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The present study investigates the relation between the religiosity dimensions which Wulff (1991) described (Exclusion versus Inclusion of Transcendence and Literal versus Symbolic) and both moral attitudes and moral competence. The Post-Critical Belief Scale (Duriez, Fontaine, & Hutsebaut, 2000) was used as a measure of Wulff's religiosity dimensions, and the Moral Judgment Test (Lind, 1998) was used to measure both moral attitudes and moral competence. Results from a middle adolescent sample ($N = 338$), a university sample ($N = 336$) and an adult sample ($N = 336$) suggest that whereas the Literal versus Symbolic dimension shows substantial relations with moral attitudes and moral competence, the Exclusion versus Inclusion of Transcendence dimension is unrelated to both of them. This suggests that, although there is no intrinsic relationship between religiosity and morality, the way people process religious contents is predictive of the way they deal with moral issues.

Introduction

According to Rest (1983), moral behavior is the result of at least four component processes: (1) identifying a situation as a moral problem, (2) figuring out what one ought to do and evaluating possible plans of action, (3) evaluating how the various courses of action serve moral and nonmoral values and deciding which action will be pursued, and (4) executing the plan of action. Most of the research and theorizing on moral development has focused on the second component: the phase in which one needs to figure out what ought to be done, given the fact that a situation is perceived as a moral problem. As Thoma, Rest, and Davison (1991) have noted, there are several interpretive systems by which moral action choices can be generated. People may rely on justice reasoning or so-called moral reasoning (Kohlberg, 1976), but they may also rely on concepts of care (Gilligan, 1977), social norms and conventions (Nisan, 1984; Turiel, 1983), or religious prescriptions (Lawrence, 1979). This article will focus on the relation between moral reasoning and religiosity.

Kohlberg (1981) has argued that religiosity and moral reasoning are inherently unrelated because they constitute two distinct areas of human concern: Whereas moral decision making is grounded in rational arguments of justice and is influenced by level of cognitive development (e.g., education) and exposure to socio-moral experiences (e.g., role-taking opportunities), religious reasoning is based on revelations by religious authorities. Whereas the primary function of morality is to resolve competing claims among individuals, the primary function of religion is to affirm morality. In other words, whereas moral reasoning provides moral prescriptions, religious reasoning affirms moral judgment as meaningful (Fernhout & Boyd, 1985). In spite of Kohlberg's arguments, several researchers have attempted to relate both concepts and have concluded that religiosity and morality are not unrelated

at all (e.g., Deka & Broota, 1988; Siegmund, 1979; Wakenhut, 1981). However, other researchers (e.g., Wahrman, 1981) have argued that the apparent religiosity–morality relation can probably be explained by cognitive processes such as dogmatism. In the present study, we will examine whether differences in the processing of religious contents can indeed explain the supposed religiosity–morality relation.

Recent theorizing in the psychology of religion makes a distinction between being religious or not and the way in which religious contents are processed (e.g., Wulff, 1991). Usually, both dimensions are tightly intertwined in religiosity measures. However, Fontaine, Duriez, Luyten, and Hutsebaut (2003) have shown that the two religiosity dimensions that Wulff (1991) described (Exclusion versus Inclusion of Transcendence and Literal versus Symbolic) can be discerned by the Post-Critical Belief Scale (Duriez, Fontaine, & Hutsebaut, 2000). In this way, the effect of being religious as such can be separated from the effect of the way people process religious contents. This allows for a nuanced study of the religiosity–morality issue. First, the theory of Wulff is summarized, followed by a presentation of the Post-Critical Belief Scale. Second, the difference between moral attitudes and moral competence is highlighted, followed by a presentation of the Moral Judgment Test (Lind, 1998), which allows for the separation of both aspects. Third, research on the religiosity–morality relation is summarized. Finally, the aim of the present study is outlined and hypotheses regarding the relation between the religiosity dimensions and both moral attitudes and moral competence are formulated.

The theory of Wulff

According to Wulff (1991), all possible approaches to religion can be located in a two-dimensional space along two orthogonal bipolar dimensions. The vertical axis in this space, the

Exclusion versus Inclusion of Transcendence dimension, specifies to what extent people accept the existence of God or some other transcendent reality, and refers to the distinctions between being religious or not and being spiritual or not. The horizontal axis, the Literal versus Symbolic dimension, is situated at the level of social cognitions and refers to the way religious contents are processed, namely either in a literal or symbolic way. In this way, four attitudes towards religion are defined (see Figure 1). *Literal Affirmation* represents a position in which the literal existence of the religious realm is affirmed. This position is most clearly embodied by religious fundamentalists. *Literal Disaffirmation* represents a position in which the existence of the religious realm is rejected and in which the possibility is lost out of sight that religious language has a symbolic meaning. Religious language is also understood in a literal way, but this time religion is rejected. *Symbolic Disaffirmation* represents a position in which the existence of the religious realm is rejected, but in which the possibility is taken into account that religious contents might refer to a hidden symbolic meaning. *Symbolic Affirmation* represents a position in which the existence of the religious realm is affirmed, and in which one tries to encompass and transcend reductive interpretations in order to find a symbolic meaning in the religious language which has personal relevance.

Building on Wulff's theory, Hutsebaut and his colleagues (Duriez & Hutsebaut, 2000; Hutsebaut, 1996) constructed the Post-Critical Belief Scale, which captures four approaches to

Christian religion: Orthodoxy, External Critique, Relativism and Second Naiveté. These four approaches were considered equivalent to Literal Affirmation, Literal Disaffirmation, Symbolic Disaffirmation and Symbolic Affirmation, respectively (see Figure 1). Only recently, however, have thorough assessments of the construct validity of the Post-Critical Belief Scale been made. Duriez et al. (2000) have shown that its four subscales provide accurate measures of Wulff's four approaches to religion, and Fontaine, Duriez, Luyten, and Hutsebaut (2003) have shown that, when differences in acquiescence are corrected for, two components are sufficient to explain the empirical relations among the items and that these two components can be interpreted in terms of the dimensions Exclusion versus Inclusion of Transcendence and Literal versus Symbolic. Both dimensions have recently been shown to result largely from the identity style that people develop during adolescence, and hence can be said to be susceptible to developmental influences (Duriez & Soenens, in press; Duriez, Soenens, & Beyers, 2004).

Moral attitudes versus moral competence

Within the Kohlbergian tradition (e.g., Colby et al., 1983, 1987; Kohlberg, 1969, 1976, 1981, 1984; Rest, 1974, 1997), moral reasoning is defined as the individual's socio-moral perspective: the characteristic point of view from which the individual formulates moral judgments. In this line of research,

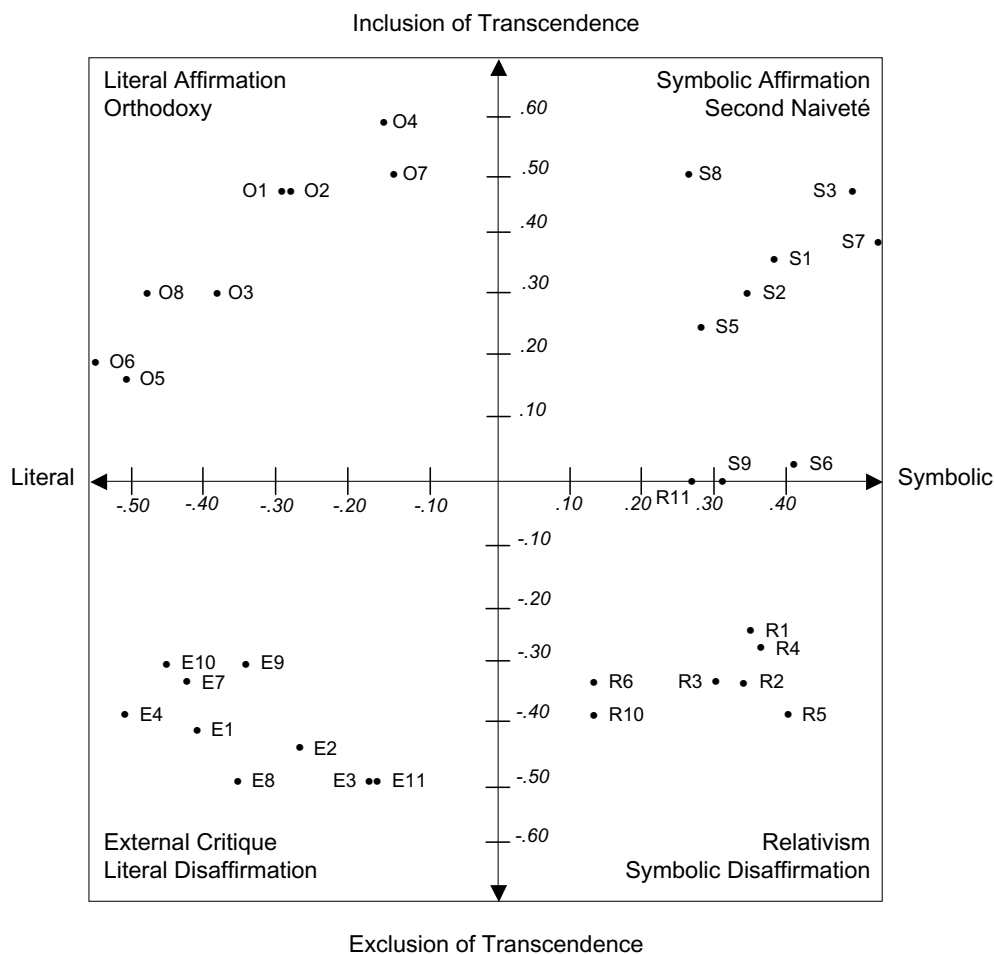


Figure 1. Integration of the average structure of the Post-Critical Belief Scale items in Wulff's (1991) theoretical model.

participants are usually offered moral dilemmas in which there is a conflict between different moral principles, and in which each possible solution is doomed to conflict with some moral principles. Participants are asked to argue, either freely (as is the case in Kohlberg's Moral Judgment Interview) or via forced choice (as is the case in Rest's Defining Issues Test), why it is justified to choose a certain outcome. On the basis of this kind of research, and drawing on Piagetian assumptions concerning stagewise cognitive development, Kohlberg (1984) proposed a six stage model to describe moral development. These six stages are divided, two by two, in three distinctive levels. The pre-conventional level has been described as a self-perspective. Social norms are either not comprehended or ignored, and hence fail to enter into the process of moral reasoning. The guiding moral principle is to avoid punishment (stage 1) and to satisfy one's needs (stage 2). In the conventional level, social norms guide the moral reasoning process. Of central importance are being a nice person (stage 3) and conforming to as well as trying to maintain the social order (stage 4). Finally, in the post-conventional level, one no longer relies upon the social norms, but rather on the moral principles upon which these norms are based. There is a focus on the legal viewpoint, including the possibility to change the law when at odds with rational considerations of social utility (stage 5) and on abstract ethical principles, such as equality and respect for the dignity of human beings (stage 6). When there is a conflict between conventions and moral principles, a conventional reasoner will judge by convention rather than by moral principle, whereas a post-conventional reasoner will judge by principle rather than by convention. However, this does not imply that individuals at the post-conventional level are also more moral.

In this respect, Wagner (1990) notes that a higher level of moral development is not defined by the "correctness" of one's moral conclusions, but by the concepts and reasons employed in arriving at these conclusions. Individuals who have reached higher moral development levels have a repertoire of concepts and justifications which allows them to comprehend the moral reasoning of persons at lower levels. Conversely, persons at lower moral development levels are unable to understand fully the justifications used by those who have reached higher moral development levels. The Kohlbergian tradition thus presupposes an affective-cognitive parallelism (e.g., Kohlberg, 1969, p. 349): A preference for higher stages (the affective component) should develop simultaneously with the ability to use the underlying perspective in a consistent and differentiated manner (the cognitive component).

As Lind (1985) has noted, although this affective-cognitive parallelism is one of the core assumptions of Kohlberg's theory, this hypothesis had not been dealt with adequately in the design of research methods and, hence, was never empirically assessed. To test this hypothesis, a new research design was needed. For this purpose, Lind (1978, 1995, 1998; Lind & Wakenhut, 1985) constructed the Moral Judgment Test which allows the investigation of this supposed affective-cognitive parallelism. According to Lind (1995), it is insufficient and theoretically invalid to focus exclusively on the moral principles someone pursues or, in other words, on his/her moral attitudes (i.e., the affective aspect). One should also look at how competently or how consistently a person applies these principles in the decision-making process (i.e., the cognitive aspect). A child may hold high moral principles, such as justice and keeping one's promises, but will lack the competence to apply them in a consistent but differentiated manner to everyday decision-

making. Thus, according to Lind (1995), a consistent moral judgment can only be expected in highly morally developed subjects. But this consistency must be defined with respect to a well-reasoned criterion. The criterion Lind puts forward is that people should appreciate a moral principle independently of whether the resulting arguments are in line with personal opinion on a particular issue. Now, how does this work?

The Moral Judgment Test confronts people with two moral dilemmas. For each dilemma, a person has to indicate to what degree he/she agrees with the solution chosen by the main character(s). Next, this person is confronted with six arguments pro and six arguments contra his/her opinion on how to solve each of the dilemmas. Each argument represents one of Kohlberg's (1958, 1984) stages of moral reasoning. The sum of the scores a person obtains for the arguments referring to the same stage indicates the degree to which this person reasons according to the underlying perspective. In addition, the Moral Judgment Test measures the degree to which judgments about these pro and contra arguments are consistent. A highly morally consistent or competent person will appreciate all arguments referring to a certain socio-moral perspective, irrespective of whether it is a pro or contra argument. A person with low moral competence will appreciate the pro arguments only. And although the C-index is obviously logically independent of the moral principles someone pursues, a strongly positive relation between the C-index and a preference for the highest stages of Kohlberg's model has been reported (Lind, 1985). Thus, in general, people obtaining the highest moral competence levels are also the ones preferring the most advanced socio-moral perspectives. These results support Kohlberg's presupposed affective-cognitive parallelism.

Religiosity and morality

Although Kohlberg (1981) argued that religiosity and moral reasoning are inherently unrelated, research has reported that religiously affiliated persons exhibit increased preference for Kohlberg's conventional level (Siegmund, 1979; Wakenhut, 1981) and decreased preference for the principled reasoning that is exhibited in stages 5 and 6 (Deka & Broota, 1988). Moral reasoning was also reported to be negatively related to Allport and Ross's (1967) intrinsic and extrinsic religiosity (Sapp & Gladding, 1989), and positively to Batson's (1976) quest dimension (Glover, 1997; Sapp & Gladding, 1989). Following Kohlberg's assumption of affective-cognitive parallelism, these findings suggest that religious persons exhibit limited moral development because they lack the cognitive capacity for principled reasoning. However, Ernsberger and Manaster (1981) and Glover (1997) have argued that the moral reasoning of religious persons depends on the seriousness of their religious commitment and on the moral stage which is normative for their religious community. In a religious community whose teachings include principled reasoning, highly religious individuals are likely to show increased preference for this kind of reasoning. In contrast, in a community whose teachings do not include principled reasoning, highly religious individuals are likely to exhibit decreased preference for this kind of reasoning. The theological superiority of the conventional moral arguments would then overrule the logical superiority of the post-conventional arguments. In a similar vein, Wahrman (1981) argued that the apparent religiosity-morality relation can probably be explained by cognitive processes such as dogmatism.

The present study

In the present study, both the Post-Critical Belief Scale and the Moral Judgment Test were used. The Post-Critical Belief Scale allowed separating differences in religiosity (Exclusion versus Inclusion of Transcendence) from differences in the way people process religious contents (Literal versus Symbolic). The Moral Judgment Test yielded measures of both moral attitudes and moral competence. Given the fact that the Literal versus Symbolic dimension relates to empathy, perspective taking, authoritarianism and racism (Duriez, 2004a, 2004b) – all of which have been shown to relate to moral development (e.g., Duriez & Van Hiel, 2002; Ernsberger & Manaster, 1981; Kohlberg, 1976), as well as to concepts that are closely related to dogmatism such as dualism, intolerance of ambiguity and closed-mindedness (Desimpelaere et al., 1999; Duriez, 2003a) – we expected this dimension to relate negatively to preference for lower moral stages and positively to preference for higher moral stages and moral competence. We expected the Exclusion versus Inclusion of Transcendence dimension to be unrelated to moral attitudes and moral competence once the Literal versus Symbolic dimension is considered.

Although the main aim of this study was to look at the religiosity–morality relation, we also looked at how age and education related to moral competence. Research has shown that level of education is a more important determinant of moral competence than age, and that education can stimulate moral competence (Lind, 1993, 1995, 2003; Oser, 1986; Rest, 1986). Therefore, looking at the relations between moral competence and age and education allowed us to test the validity of the Moral Judgment Test. In line with previous research, we expected moral competence to be unrelated to age and to be positively related to level of education. To rule out the possibility that the relationships between moral competence and the religiosity dimensions that are derived from the Post-Critical Belief Scale (i.e., Exclusion versus Inclusion of Transcendence and Literal versus Symbolic) can be reduced to educational differences, we checked whether these relations between moral competence and the religiosity dimensions remain intact after taking educational differences into account. In addition, to rule out the possibility that the relations between moral competence and the religiosity dimensions vary by level of education, we tested the moderating role of education. It was expected that, despite potential mean (educational) differences in the study variables, the relationships among the constructs would hold across level of education.

Method

Samples

Dutch-speaking Belgian educational science students ($N = 171$) of the Katholieke Universiteit Leuven were asked to complete a questionnaire, and to distribute five questionnaires to other people, including both their parents (or, when impossible, adults of the same age, gender and educational level), a fellow college student of the opposite gender, and a male and a female high school student. Because participants received course credit, response rates were very high ($> 98\%$). This procedure resulted in a sample of adolescents (Sample 1; $N = 338$; 50% male ranging in age from 14 to 20 years with a mean of 16 years), university students (Sample 2; $N = 336$; 50%

male ranging in age from 18 to 24 years with a mean of 20 years), and adults (Sample 3; $N = 336$; 50% male ranging in age from 30 to 70 years with a mean of 48 years). Of the participants in Sample 3, the highest obtained degree was a primary school degree (10%), a high school degree (26%), a non-university higher education degree (41%), or a university degree (23%). Given our data collection procedure, this distribution can be assumed to resemble the educational distribution of the parents of the participants in Samples 1 and 2. In Belgium, Roman Catholicism is the dominant religion, and although only 10% of Belgians attend church services regularly, about 90% are baptized as Roman Catholic (Office of Church Statistics, Brussels), so all participants had a fair knowledge of Roman Catholic doctrines and customs. Participants having missing values on the Moral Judgment Test or having over three missing values on the Post-Critical Belief Scale were excluded from the analyses, resulting in sample sizes of 314 (Sample 1), 320 (Sample 2) and 318 (Sample 3). Missing values on the Post-Critical Belief Scale (24 in Sample 1, 18 in Sample 2 and 18 in Sample 3) were replaced by the sample-specific mean of the item.

Measures

Religiosity. Participants completed the 33-item Post-Critical Belief Scale (Duriez et al., 2000). All items were scored on a 7-point Likert scale. As in Fontaine et al. (2003), a level of acquiescence estimation was subtracted from the raw scores. A Principal Component Analysis (PCA) was then performed on these corrected scores. A scree test pointed to a two-componential solution for all three samples. In all samples, after orthogonal Procrustes rotation towards the average structure reported by Fontaine et al. (2003; see Figure 1), these components could be interpreted in terms of Exclusion versus Inclusion of Transcendence and Literal versus Symbolic. In all samples, Tucker's Phi indices were above .90 for both components, suggesting good congruence (Van de Vijver & Leung, 1997). Estimates of internal consistency (theta; Armor, 1974) were .87, .88 and .89 for Exclusion versus Inclusion of Transcendence and .80, .83 and .84 for Literal versus Symbolic in Samples 1 to 3 respectively. A high score on Exclusion versus Inclusion of Transcendence indicates a tendency to include transcendence. A high score on Literal versus Symbolic indicates a tendency to deal with religion in a symbolic way.

Morality. Participants completed the Moral Judgment Test (Lind, 1998), which consists of a workers' dilemma and a mercy-killing dilemma. For each dilemma, a person has to indicate to what degree he/she agrees with the solution chosen by the main character. Next, this person is confronted with six arguments pro and six arguments contra his/her opinion on how to solve the dilemma. The person then indicates, on a 9-point scale ranging from -4 to +4, to what degree these arguments are (un)acceptable. The mean score a person obtains for the arguments referring to the same stage indicates the degree to which this person reasons according to the underlying socio-moral perspectives. In addition, the C-index measures the degree to which a person's judgments about these pro and contra arguments are consistent. A detailed description of how to compute this index can be found in Lind (1998). The Dutch version was validated by Duriez and De Marez (2000) according to the prescriptions of Lind (1998).

Table 1
Means and standard deviations of the scores on the Moral Judgment Test

	Sample 1		Sample 2		Sample 3	
	M	SD	M	SD	M	SD
Stage 1	-2.83c	4.77	-5.63a	4.53	-4.47b	5.23
Stage 2	-1.44c	4.62	-4.70a	4.63	-2.42b	5.02
Stage 3	-0.73c	4.68	-3.35a	4.49	-2.04b	5.13
Stage 4	2.52b	3.69	1.22a	4.23	0.56a	3.93
Stage 5	3.23a	3.74	3.92a	3.78	3.47a	3.46
Stage 6	3.20a	3.50	3.13a	3.50	2.89a	3.84
C-Index	23.66a	17.55	33.48b	18.22	21.43a	17.19

Mean levels with different superscript are significantly different at the .01 level.

Results

Validity analyses

The means and standard deviation of the scores on the Moral Judgment Test are presented in Table 1. For the Post-Critical Belief Scale, means and standard deviations are not included in this table, because, due to the procedure that was described in the measures section, the mean always equals zero, and the standard deviation always equals 1. Table 1 shows that there was no significant difference between the samples with respect to the higher levels of Kohlberg's model. In each of the samples, equal importance was attached to the arguments of stages 5 and 6, $F(2, 943) = 2.83$ and 0.62 , ns, respectively. In contrast, important differences were found with respect to the arguments of stages 1, 2, 3 and 4, $F(2, 943) = 26.65$, 39.31 , 23.77 and 19.87 , $p < .001$, respectively, as well as with respect to the C-index, $F(2, 942) = 41.79$, $p < .001$. Post-hoc Tukey comparisons revealed that participants in Sample 1 attached significantly more importance to arguments of stages 1, 2, 3 and 4 than participants in Samples 2 and 3. In addition, participants in Sample 2 attached significantly less importance to arguments of stages 1, 2 and 3 than participants in Sample 3. These results suggest that university students (Sample 2) make the sharpest distinction between moral arguments of the lower stages of Kohlberg's model and moral arguments of the higher stages, followed by adults (Sample 3) and middle adolescents (Sample 1). Finally, participants in Sample 2 obtained significantly higher scores than participants in Samples 1 and 3 for the C-index. The latter results are in line with previous research that has shown that education is a more important determinant of moral competence than age (the participants in Sample 3 are older than the participants in Sample 2, but Sample 2 is clearly the best educated group). These results receive further support from the finding that, within Sample 3, important differences in the C-index were found with respect to level of education, $F(3, 304) = 6.03$, $p < .001$, but not with respect to age, $F(3, 308) = 2.81$, ns. For this purpose, Sample 3 was split into four age groups (30–40, 40–50, 50–60 and 60–70). Post-hoc Tukey comparisons revealed that scores on the C-index tend to rise with level of education: The C-index equals 14.00, 17.81, 21.82 and 27.43 for, respectively, those with a primary school degree only, those with a high school degree, those with a higher education degree, and those with a university degree. In addition, when scores on the C-index are compared between Sample 2 and the

participants of Sample 3 with a university degree (people with a similar educational level but a distinctly different age), the mean score of both groups was not significantly different, $F(1, 388) = 6.20$, ns. This testifies to the importance of level of education instead of age in the prediction of moral competence, and shows that the results that we obtain with the Moral Judgment Test are in line with earlier results.

Correlation analyses

The relation between the religiosity dimensions and both moral attitudes and moral competence was investigated by means of bivariate correlations (see Table 2). In all samples, results show that the Exclusion versus Inclusion of Transcendence dimension is unrelated to moral attitudes, but that the Literal versus Symbolic dimension is not. In general, this dimension is negatively related to preference for stages 1, 2 and 3, unrelated to preference for stage 4, and positively related to

Table 2
Correlations between the variables included in this study

Morality	Inclusion versus Exclusion of Transcendence		
	Sample 1	Sample 2	Sample 3
Stage 1	.07	.09	.11
Stage 2	.03	.02	.05
Stage 3	.05	.08	.10
Stage 4	-.08	.00	.10
Stage 5	-.10	-.05	-.08
Stage 6	-.07	-.01	.01
C-Index	-.05	.06	-.05
Morality	Literal versus Symbolic		
	Sample 1	Sample 2	Sample 3
Stage 1	-.37**	-.27**	-.42**
Stage 2	-.36**	-.29**	-.37**
Stage 3	-.21**	-.24**	-.39**
Stage 4	-.01	-.03	-.11
Stage 5	.13	.19**	.16*
Stage 6	.18*	.25**	.17*
C-Index	.31**	.28**	.27**

* $p < .01$, ** $p < .001$.

preference for stages 5 and 6. Results also show that, whereas Exclusion versus Inclusion of Transcendence is unrelated to moral competence (as measured by the C-index), the Literal versus Symbolic dimension is strongly and positively related to moral competence. This pattern of results also came to the fore in all four age groups that were discerned in Sample 3 (30–40, 40–50, 50–60 and 60–70).

Regression analyses

In order to determine (a) whether the relations between both religiosity dimensions and moral competence remain significant after controlling for the effect of level of education, and (b) whether level of education moderates these relations, a hierarchical regression analysis was performed. In this analysis, moral competence served as the dependent variable and was predicted by level of education in Step 1, the two religiosity dimensions in Step 2, and the two interaction components (level of education by Inclusion versus Exclusion of Transcendence and level of education by Literal versus Symbolic) in Step 3. Results show that, after controlling for the effect of level of education ($\beta = .16, p < .01$), Literal versus Symbolic explained additional variance in moral competence scores ($\beta = .22, p < .001$). Neither Inclusion versus Exclusion of Transcendence ($\beta = -.02, ns$) nor the two interaction components ($\beta = .00$ and $.01, ns$) significantly added to the prediction of moral competence.

Discussion

Religiosity and morality

Results of the present study show that, when separating the effects of being religious or not (Exclusion versus Inclusion of Transcendence) from the way people process religious contents (Literal versus Symbolic), the apparent religiosity–morality relation that was observed in previous studies can be explained by the way people process religious contents. In comparison to people who process religious contents in a literal way, people processing religious contents in a symbolic way show higher moral competence and tend to make a sharper distinction between moral arguments of the lower stages and higher stages of Kohlberg's model: In comparison to people who process religious contents in a literal way, they pay less attention to arguments of the lower stages (as is shown by the negative correlations between Literal versus Symbolic and stages 1, 2 and 3 preference) and more attention to arguments of the higher stages (as is shown by the positive correlations stages 5 and 6 preference). In contrast, being religious or not is unrelated to both moral attitudes and moral competence. These relations follow a similar pattern among adolescents, university students, adults (and different age groups of adults), and among highly religious subjects (see also Duriez, 2003b). Results also remained the same after controlling for educational differences. The relationship between moral competence and the religiosity dimensions could not be explained by educational differences, and did not vary by level of education. Results support the idea of Kohlberg (1981) that religiosity and morality are inherently unrelated and the idea of Wahrman (1981) that the apparent religiosity–morality relation that was observed in previous studies can be explained by cognitive processes that go beyond mere educational differences.

In sum, these results suggest that whether or not someone is religious has no consequences for moral reasoning ability. What seems to be vitally important, however, is the way in which someone processes religious contents. If people process religious contents in a literal way, this seems to have a deleterious effect on their moral reasoning ability. In a similar vein, research that allows for the separation of differences in religiosity from differences in the way religious contents are processed suggests that, even though, in comparison to non-religious people, religious people are more likely to prefer order, structure and predictability (Duriez, 2003a), are less likely to value hedonism, stimulation and self-direction values and more likely to value tradition and conformity values (Fontaine, Duriez, Luyten, Corveleyn, & Hutsebaut, 2005), are more likely to hold cultural conservative and authoritarian beliefs (Duriez, 2003c, 2004a), and are more likely to base important choices in life on the expectations of parents, authority figures or reference groups (Duriez & Soenens, in press; Duriez et al., 2004), they are neither more nor less likely to experience psychological well-being (Dezutter, 2004), to feel empathy (Duriez, 2004a, 2004b), or to hold prejudiced attitudes (Duriez, 2004a). In sum, although religious people tend to be conservative and submissive, they are neither more nor less happy, good-natured and tolerant. This suggests that the impact of being religious or not on individuals' lives is limited when it is separated from the impact of the way people process religious contents. The impact of the way people process religious contents, on the other hand, seems vitally important, with people processing religious contents in a literal way not only showing less advanced moral reasoning abilities but also less psychological well-being, less empathy and more prejudice.

Theoretical and practical implications

The validity analyses that are reported in this article support the claim that level of education can stimulate moral competence (cf. Lind, 1993, 2003; Oser, 1986; Rest, 1986). However, these analyses also make it clear that the way in which people process religious contents contributes to the prediction of moral competence beyond educational differences. In line with this, previous research has shown that the type of education and the type of values that are promoted matter (Lickona, 1977; Snarey, Reimer, & Kohlberg, 1985). There is a consensus among researchers that educational programs targeted at stimulating moral development should be aimed at learning how to distinguish good from bad arguments and at learning to translate one's ethical principles to solutions for specific problems with which one is confronted in real life, even under those circumstances where factors like prejudice, authority or the so-called moral majority try to prevent people from thinking about the different aspects that are part of the problem (e.g., Lind, 2003). The current results suggest that a related educational aim should be to teach people that there are plenty of religious systems, that all of them are more similar than they appear at first sight, and that it is important to spot the symbolical meaning of their contents prior to making judgments about whether a specific religion or religion in general is something that deserves to be incorporated into the personal worldview. This aim might be achieved indirectly. Previous research has shown that the identity styles that are formed during adolescence predict the way religious information is processed, and there is growing evidence that it is

possible to direct this identity formation process (Archer, 1994; Ferrer et al., 2002; Josselson, 1994). This way, adolescents can be expected to learn to deal with religious issues in a more symbolic way. Teaching people either directly or indirectly to deal with religious issues in a more symbolic way can be expected both to stimulate moral development in general and moral competence in particular and to have its positive effects on well-being, pro-social behavior and tolerance. In sum, incorporating this kind of education into the educational system might be a prerequisite for a better functioning democratic society in which people feel better, are less prejudiced and more helpful and, above all, are capable of behaving in a morally competent way.

Limitations and suggestions

An important limitation of the present study is that it was conducted in one specific cultural setting, namely Flanders (Belgium). One might wonder whether the Roman Catholic tradition, which is the dominant religious tradition in this region, shapes the way people process religious issues, and whether members of other religious traditions process religious contents in a different way. However, the present study demonstrates that the religiosity–morality relation remained the same in spite of mean level differences in moral competence. In line with this, even though the way church members process religious issues is no doubt shaped by the church to which they belong, the denomination that is studied will not necessarily alter our findings. In fact, we expect the religiosity–morality relation to remain the same in spite of possible mean level differences in the way people within different religious traditions deal with religious contents. Of course, the prediction that, worldwide, the religiosity–morality relation will be due to differences in the way people process religious contents, with people dealing with religious contents in a more literal way displaying less moral competence, needs further investigation. Future research needs to check these relations in areas in which other religious denominations are dominant, in areas in which religious denominations have to compete in order to gain members, and in areas in which religion plays a less important role in society. However, before being able to do so, future research should focus on revising the Post-Critical Belief Scale, because the current version is tailored for usage among Christians and people that grew up in a Christian setting.

Apart from assessing the cross-cultural generalizability of our findings, research should further develop the educational programs that are available to stimulate moral competence. Our results suggest that, rather than focusing exclusively on directly facilitating moral development, these programs might benefit from incorporating both a pluralist religious education and identity development programs. Incorporating these elements might yield additional beneficial effects on moral development. Because of the importance of citizens' moral competence levels for a properly functioning democratic society, ministers of education should sponsor and integrate research programs that are aimed, either directly or indirectly, at raising moral competence levels, reshaping the school curriculum in order to leave more room for this kind of education, convincing schools and schoolteachers of the importance of these educational programs, and investing in training programs that teach schoolteachers the necessary skills to effectively carry out these educational programs.

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