A slow and easy introduction to the Post-Critical Belief Scale: Internal structure and external relationships

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Abstract

Recently, Fontaine, Duriez, Luyten and Hutsebaut (2003) have shown that the Post-Critical Belief Scale (PCBS; Duriez, Fontaine & Hutsebaut, 2000) captures the two orthogonal bipolar dimensions of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic along which Wulff (1991, 1997) organized the various possible approaches to religion. This chapter outlines the original and valuable contribution of the PCBS to the psychology of religion. In addition, this chapter provides additional evidence from 9 different samples (total *N* = 2657) gathered in Flanders (Belgium) of the fact that its internal structure can truly be represented in terms of the dimensions of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic. Finally, this chapter reviews the results of the research that has been conducted so far on the external relationships of these two dimensions.

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Introduction

In the early 1960s, a guy called Zimmerman wrote a song called The times they are a-changin'. Meanwhile, times have changed. More than ever, we find ourselves exposed to other cultures, other religions, other politics, other ways of building ethical frameworks, ... Because of this, we have entered a time of unprecedented thinking and rethinking. A time also in which beliefs about belief are shaken as never before. We can no longer convince ourselves, let alone others, that our religious story is the "true" one. Not surprisingly, therefore, there is growing consensus among philosophers that ideas - including religious ideas - cannot be understood apart from the people and the language systems that created them (similar ideas can be found among, for instance, members of the Sea of Faith Network; http://www.sofn.org.uk). It is against this background that one should interpret the writings of the French philosopher Ricoeur (1970). Ricoeur tried to answer the question how people can still call themselves religious after taking into account the criticism of atheïsm as formulated by, among others, Karl Marx and Sigmund Freud, which has tried to unveil religion as, respectively, opium for the masses and wishful thinking. Ricoeur concludes that in order to make it possible for religious contents to stay meaningful in spite of this criticism, a restorative interpretation is necessary. In this respect, Ricoeur introduced the concepts of Second Naïveté and Post-Critical Belief.

Relying on the work of Ricoeur (1970), Wulff (1991, 1997) recently provided an interesting new perspective on religious attitudes. According to Wulff, there are four possible approaches to religion, which can be located in a two-dimensional space along two orthogonal bipolar dimensions. We will start this chapter with a presentation of Wulff's theoretical model of the various possible approaches to religion. Doing so, we will stress its original and valuable contribution to the field of the psychology of religion. The presentation of this theoretical model will allow us to easily and comprehensibly introduce the Post-Critical Belief Scale (PCBS). The PCBS was recently developed by Hutsebaut (1996, 1997) to

measure individual differences in the four approaches to religion which Wulff described. Only very recently, however, thorough assessments were made of the construct validity of the PCBS. Duriez, Fontaine and Hutsebaut (2000) have shown that its subscales provide accurate measures of Wulff's four approaches to religion, and Fontaine, Duriez, Luyten and Hutsebaut (2003) have shown in 16 samples (total *N* = 4648) that, once individual differences in acquiescence are corrected for, two components are sufficient to explain the empirical relations between the PCBS items and that these two components can be interpretated in terms of the underlying dimensions of Wulff's conceptual model: Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic. Next, we will present additional evidence from 9 different samples (total *N* = 2657) gathered in Flanders (Belgium) of the fact that the internal structure of the PCBS can indeed be represented in terms of the dimensions of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic. Finally, we will summarize the results of the research that has been conducted so far on the external relationships of these two dimensions.

Wulff's conceptual model

Relying on the work of Ricoeur (1970), Wulff (1991, 1997) recently provided an interesting new perspective on religiosity. According to Wulff, all possible attitudes to religion can be be located in a two-dimensional space along two orthogonal bipolar dimensions. The vertical axis in this space, the Exclusion vs. Inclusion of Transcendence dimension, specifies the degree to which the objects of religious interest are granted participation in a transcendent reality. The horizontal axis, the Literal vs. Symbolic dimension, indicates whether religion is interpreted literally or symbolically. In this way four quadrants are defined, each covering a specific attitude towards religion: Literal Affirmation, Literal Disaffirmation, Symbolic Disaffirmation (or Reductive Interpretation) and Symbolic Affirmation (or Restorative Interpretation). This mutlidimensional theoretical model implies a departure from the established models of religiosity, such as Allport’s distinction between extrinsic and intrinsic religiousness (e.g., Allport & Ross, 1967) and Batson's quest dimension which was introduced as an extention of this model (Batson, 1976a, 1976b). Although Batson’s quest dimension, which refers to an open ended search for the meaning in religious contents, can be situated at the symbolic end of Wulff’s model, Allport's dimensions

of extrinsic and intrinsic religiosity cannot be situated in this model. Whereas Allport made a distinction between the underlying motivations of the religiously, Wulff's model is situated at the level of social cognitions. Therefore, the classification of Allport and Wulff are logically unrelated. An extrinsic religious person can either deal with religious contents in a literal way or in a symbolic way. The same is true for an intrinsic religious person. In addition, Wulff's model can be extended to non-religious persons as well. A non-religious person can neither be extrinsically religious nor intrinsically religious. However, he can be dealing with religious contents either in a literal way or in a symbolic way.

Towards a new religiosity measure

Building further on this, Hutsebaut (1996) developed the Post-Critical Belief Scale (PCBS) to measure the different approaches of religion which Wulff described within a Christian context. Only recently, however, thorough assessments of its construct validity were made. Duriez et al. (2000) have shown that its subscales (Orthodoxy, External Critique, Relativism and Second Naiveté) provide accurate measures of Wulff's four approaches to religion, and Fontaine et al. (2003) have shown that, once individual differences in acquiescence are corrected for, two components are sufficient to explain the empirical relations between the PCBS items and that these two components can be interpretated in terms of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic.

According to Fontaine et al. (2003), once individual differences in acquiescence are corrected for, two components are sufficient to explain the empirical relations between the items of the PCBS and that these two components can be interpretated in terms of the dimensions Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic. In this section, first we will discuss what acquiescence is and why should it be corrected for. Second, we will explain why Fontaine et al. (2003) have advocated the use of the two components of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic instead of the subscales of Orthodoxy, External Critique, Relativism and Second Naiveté. Third, we will present additional evidence from 9 different samples (total N = 2657) gathered in Flanders (Belgium) will now be presented, which will show that the internal structure of the PCBS can truly be represented in terms of the dimensions of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic.

Correcting for acquiescence

What is acquiescence and why should it be corrected for? It is important to keep in mind that all items of the most commonly used 33 item version of the PCBS (see Appendix) are positively worded, and need to be scored on a 7 point Likert scale (see below). It is also important to keep in mind that, in the theory of Wulff, Literal Affirmation (as measured by Orthodoxy) and Symbolic Disaffirmation (as measured by Relativism) are mutually exclusive, and Literal Disaffirmation (as measured by External Critique) and Symbolic Affirmation (as measured by Second Naiveté) are mutually exclusive. Hence, theoretically speaking, a high Orthodoxy score should go hand in hand with a low Relativism score (and vice versa) and a high External Critique score should go hand in hand with a low Second Naiveté score (and vice versa). For each individual, the mean score on these four subscales should thus equal four (= the neutral point on the 7 point Likert scale). Obviously, this is not always the case. But what does this mean? Imagine that the mean score of a certain person equals five. Theoretically speaking, this means that, for this person, the neutral point is not situated at four but at five. This must mean that this person tends to agree with all of the items, irrespective of their content. In other words, this persons makes use of the 7 point Likert scale in an idiosyncratic and unintended way. This can be adjusted for by a correction for acquiescence. A first step in this correction is to compute a person's average score (= his neutral point) on the four subscales. A second step is to subtract this average score from the original scores this person obtained on all 33 items of the PCBS. If someone obtains an average score of four, then four is subtracted from the item scores. As a result, the mean score across the four subscales now equals zero. Likewise, if someone obtains an average score of five on the four subscales, then five is subtracted from all the item scores. As a result, the mean score across the four subscales now also equals zero. In this way, a common neutral point is created. For each persons, all 33 item scores are now centered around this neutral point of zero (with a standard deviation of 1). Deviations from this neutral point on a certain subscale can now be compared straightforwardly across different persons. Correction for acquiescence thus implies to compute standardized scores.

Two dimensions vs. four subscales

At this point, one might wonder why Fontaine et al. (2003) have advocated the use of the two components of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic instead of the subscales of Orthodoxy, External Critique, Relativism and Second Naiveté. There are three reasons for this. First, because of the correction for acquiescence that is done prior to the extraction of the two components, the scores that are used to represent an individual's position in Wulff's model are no longer infected by differences in acquiescence (see above). Second, using factor scores instead of the traditional unweighted sum of item scores guarantees a reliability equal to or greater than that which is obtained by using unweighted sum of item scores (see Armor, 1974). The reason for this is that, in contrast to unweighted sum score, factor scores allow items to contribute differentially to a construct. That is, factor scores allow some items to make a greater contribution to the construct than other items. In this way, the factor scores are based on all of the items included in the PCBS instead of only on some of them. Hence, the scores that are derived to represent an individual's position in Wulff's model are more reliable and more accurate. Third, these factor scores allow to disentangle the effects of being religious or not (Exclusion vs. Inclusion of Transcendence) from the way in which religious contents are processed (either in a literal or in a symbolical way). This allows to directly test theoretical predictions. In this respect, it is important to keep in mind that these predictions directly relate to the two main dimension of this model, and that predictions that relate to the four subscales are only attained by combining the predictions that relate to these main dimensions. Hence, working with the subscales is a detour, which becomes unnecessary when provided with the possibility to directly assess the underlying dimensions. At the same time, people who are interested in the results that would have been obtained when using the four subscales can easily compute these results from the results obtained with the two factor scores (as was illustrated by Duriez, in press-a).

Internal structure

Samples. In total, 9 different samples were gathered in Flanders (Belgium). Table 1 lists some descriptive statistics of these samples, including sample type, number of participants, sex, and mean age of the participants. Participants in the adolescent samples (sample 1, 2 and 3) were pupils

from a secondary school who were contacted by an undergraduate student. Participants in one of the student samples (sample 4) followed an introductory psychology course at a large Belgian university. In the other student sample (sample 5), half of the participants followed an introductory psychology course, and each of these participants was instructed to recruit a university student of the same age but from the opposite sex. Participants in one of the adult samples (sample 6) were recruited by the undergraduate students from sample 5 who were instructed to ask their parents to participate. In those cases where this was impossible, they were instructed to recruit adult of the same age and the same sex as their parents. Participants in the other adult samples (sample 7, 8 and 9) were recruited by the undergraduate students who used the data that were included in this study for their master thesis.

All participants had Belgian nationality and belonged to the Flemish-speaking part of the country. In Belgium, Roman Catholicism is the dominant religion, and although only about 10% of the Belgians attend church services regularly, about 90% is baptized by the Roman Catholics. So all of the participants were either Roman Catholics (and hence Christian) or had a fair knowledge of Roman Catholic doctrines and customs (and Christianity). Participants having over three missing values were excluded from further analyses. In total, 48 participants needed to be removed across the different samples. For participants which were not removed, missing values were replaced by the sample-specific mean of the item. In total, 174 missing values were replaced.

Measures. Participants completed the 33 item Post-Critical Belief Scale (PCBS; Duriez et al., 2000). All items were scored on a 7-point Likert scale (1=completely opposed, 4=neutral, 7=completely in agreement). In the Appendix, the 33 items are listed by subscale (i.e., Orthodoxy, External Critique, Relativism and Second Naiveté). Each item is given a label that allows its identification in the tables and figures presented throughout this article, as well as a label that indicates its position in the PCBS. In line with the procedure described above, a level of acquiescence estimation was subtracted from the raw scores (see also Fontaine et al., 2003).

Results. The question that needs to be answered is whether two underlying dimensions are sufficient to account for the relations between the items of the PCBS, and, if this is the case,

whether these dimensions can be interpreted in terms of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic. To answer the question whether two dimensions are sufficient to account for the relations between the items of the PCBS, principal component analyses (PCA) were performed. In this way, the adequate number of components was investigated in each sample separately. In line with Fontaine et al. (2003), the scree test (Cattell, 1966) pointed to a two-componential solution for all samples (see Table 2 for the eigenvalues of the first six components). In line with Fontaine et al. (2003), this solution accounted, on average, for about 35% of the total variance in each sample (see Table 2).

The analyses reported above indicate that two dimensions are sufficient to account for the relationships between the items of the PCBS. The question that remains is whether these dimensions can be interpreted in terms of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic. To answer this questions, orthogonal Procrustes rotation were performed (McCrae, Zonderman, Costa & Bond, 1996; Schonemann, 1966). For each sample, the obtained two-componential configuration was orthogonally rotated towards the average two-componential structure reported by Fontaine et al. (2003) (see Table 3 and Figure 1). In line with Fontaine et al. (2003), the results indicate that, in all of the samples, the two components can be interpreted as Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic respectively. For both Exclusion vs. Inclusion of Transcendence and Literal vs. symbolic, with only one small exception, Tucker's phi's were above .90 (see Table 2), suggesting good congruence (Bentler & Bonett, 1980; Van de Vijver & Leung, 1997). In all samples, estimates of internal consistency (theta; Armor, 1974) were above .80 for both Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic (see Table 2).

Discussion. The analyses reported above show that there are two dimensions that explain a significant amount of variance in the responses to the items of the PCBS, that these are sufficient to account for the relations between the items of the PCBS, and that they can be interpreted in terms of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic. These findings replicate the findings of Fontaine et al. (2003), and support the claim that an individual's position in Wulff's model can be represented on the bases of two factor scores. A high score on Exclusion vs. Inclusion of Transcendence

indicates a tendency to include transcendence. A high score on Literal vs. Symbolic indicates a tendency to deal with religion in a symbolic way. These factor scores allow researchers to disentangle the effects of being religious or not (Exclusion vs. Inclusion of Transcendence) from the way in which religion and religious contents are processed (either in a literal or in a symbolical way). This allows to identify the antecedents and consequences of both of these dimensions.

External relations

Although the results that are presented in this chapter are limited to the internal structure of the PCBS, a number of studies that yield support for its external validity have been conducted as well. Results of these studies show that, when disentangling the effects of being religious or not (Exclusion vs. Inclusion of Transcendence) from the way in which religious contents are processed (either in a literal or in a symbolical way), both the dimensions of Exclusion vs. Inclusion of Transcendence and of Literal vs. Symbolic relate in a theoretically meaningfull way to a number of external variables. In the remainder of this section, some of these results will be summarized (other results can be found on our homepage: http://www.psy.kuleuven.ac.be/religion). In this way, we will demonstrate the value and utility of the PCBS vis à vis some important debates in the psychology of religion.

Personality Traits

A first debate within the psychology of religion is whether there is a relation between religiosity and personality, and if so, which personality traits are related to religiosity. Early research into this relation using Eysenck's three-dimensional personality model (PEN; Psychoticism, Extraversion and Neuroticism) (Eysenck & Eysenck, 1968, 1985) confirmed the hypothesis that religiosity corresponds, at least to some extent, to individual differences in personality traits. Although some authors failed to find a link between religious attitudes and personality, a series of studies in a variety of cultures and denominations converged on the conclusion that religious people tend to be lower in Psychoticism. Regarding Extraversion and Neuroticism, no such convergence was reached. Different studies yielded inconsistent results, leading to the conclusion that these factors are unrelated to religiosity (for recent overviews, see Duriez, Soenens & Beyers, in press; Saroglou, 2002a; Saroglou & Jaspard, 2000).

Recently, Costa and McCrae (1978, 1992) presented the Five Factor Model of personality (FFM; Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness to Experience). This model can be regarded as an extension of Eysenck's model, with Agreeableness and Conscientiousness providing a two-dimensional view of low Psychoticism and Openness to Experience constituting a new element. Positive relations wih Agreeableness and Conscientiousness were found. However, these relations are typically low, and sometimes even absent. Regarding the other factors, no clear relation with religiosity emerged (for recent overviews, see Duriez, Soenens & Beyers, in press; Saroglou, 2002a; Saroglou & Jaspard, 2000). In spite of this, McCrae (1999) has urged attention to Openness to Experience in order to understand religiosity. Individuals high in Openness to Experience can be characterized by an active motivation to seek out the unfamiliar, which goes hand in hand with tolerance of ambiguity and open-mindedness, and which leads them to endorse liberal values (McCrae, 1996). Hence, Openness to Experience is considered highly relevant towards social attitudes and ideologies. The importance of Openness to Experience towards religiosity was supported by Streyffeler and McNally (1998), who found fundamentalist and liberal Protestants to differ with respect to this factor only, and by Saucier (2000), who found Openness to Experience to relate negatively to alphaism (a broad social attitude dimension which is comprised of, among other things, conventional religion).

In line with all this, whereas Duriez, Soenens and Beyers (in press) expected Openness to Experience to be only modestly related to being religious or not, and hence to be only modestly related to Exclusion vs. Inclusion of Transcendence, they expected it to be very important to understand the way in which people process religious contents, and hence to be strongly related to Literal vs. Symbolic. The hypothesized importance of Openness to Experience was confirmed in a late adolescent sample. Additionally, a positive relation between Agreeableness and Literal vs. Symbolic was found. This finding was in line with McCrae (1999), who argued that, just like Openness to Experience, although to a lesser extent, Agreeableness is relevant to social attitudes and ideologies, and that, as a consequence, a similar pattern of relations with social attitudes and ideologies might be expected. The other personality dimensions (Extraversion, Conscientiousness and Neuroticism) were found to be unrelated to both

Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic. And although Duriez & Soenens (2003a) have shown that the relations between the religiosity dimension and these personality factors may fluctuate quite a bit across different samples, the positive relation of Literal vs. Symbolic with both Openness to Experience and Agreeableness appeard to be highly stable.

Value Orientations

A second debate within the psychology of religion is whether there is a relationship between religiosity and values, and if so, which values are related to religiosity. The empirical study of religiosity-value relations has to be credited to Rokeach (1968) who asked subjects to rank a number of values and compared religious and non-religious subjects with respect to the average rank order. He found religious subjects to rank certain values (e.g., salvation, forgiveness & obedience) higher and other values (e.g., independence, pleasure, intellectual & logical) lower than non-religious subjects. Most of the research on the religiosity-value relation was inspired by this approach. However, because values are treated as isolated entities, the multitude of relations leads to poorly organized results.

A solution to this problem was proposed by Schwartz (1992), who has shown that, within the value domain, ten value types (Hedonism, Stimulation, Self-Direction, Universalism, Benevolence, Tradition, Conformity, Security, Power and Achievement) can be distinguished. When represented in a two-dimensional space, these value types are organized in a circular fashion, with value types with compatible goals being positively related and emerging adjacent to one another, and value types with conflicting goals being negatively related and emerging opposite one another. In total, Schwartz (1992) identified three main conflicts within this value structure. The first is a conflict between Openness to Change and Conservation, which opposes value types referring to novelty and personal autonomy (Stimulation & Self-direction) to value types leading to stability, certainty and social order (Tradition, Conformity & Security). The second is a conflict between Self-Enhancement and Self-Transcendence, which opposes value types referring to the pursuit of selfish interests (Achievement & Power) to value types promoting the welfare of both close and distant others (Benevolence & Universalism). The third is a conflict between values referring to the gratification of one's desires (Hedonism) and values implying

self-restraint and the acceptance of external limits (Tradition & Conformity).

Fontaine, Duriez, Luyten, Corveleyn and Hutsebaut (2003) have shown that the value pattern associated with Exclusion vs. Inclusion of Transcendence is characterized by a conflict between Hedonism, Stimulation and Self-Direction on the one hand, and Tradition and Conformity on the other hand. These findings largely replicate the findings of Schwartz and Huismans (1995) and Saroglou, Delpierre and Dermelle (in press) and suggest that a dependence-autonomy rather than a Conservation vs. Openness conflict seems to be the central intra-personal conflict concerning religiosity. Importantly, the value pattern associated with Exclusion vs. Inclusion of Transcendence showed virtually no correspondence with the Self-Enhancement vs. Self-Transcendence conflict. In contrast, the value pattern associated with Literal vs. Symbolic could almost perfectly be described in terms of the latter conflict. Apparently, whereas being religious as such does not seem to make a person more sensitive for the well-being of others, dealing with religion in a symbolic way does.

Conservative Beliefs

In a somewhat related vain, the psychology of religion has also been concerned with the relation between religiosity and conservative beliefs. In the past, researchers often assumed that political parties and political attitudes could be arrayed on a single left-right dimension (e.g. Lipset, 1960; McClosky, 1958). However, more recently it has been argued that the meaning of this dimension varies across nations and over time and is thus often insufficient to represent the relevant political dimensions in a given society (e.g., Inglehart, 1990; Rokeach, 1973). Middendorp (1978), for instance, analyzed the ideological components of basic political conflicts and distinguished two unrelated dimensions rather than one. The first was labeled cultural conservatism vs. progressivism and concerns individual rights and readiness for social change. Cultural conservatives are concerned with maintaining discipline in people's lives, especially within the family (e.g., by making divorce difficult and by tightening controls over abortion and euthanasia), and are in favor of a harsh upbringing and traditional sex-roles. The second was labeled economic conservatism vs. progressivism and concerns the desirable level of economic equality among people as well as the desirability of trade unions and governmental

interference in economics, with economic conservatives opposing economic equality, trade unions and governmental interference in the economic sphere. The distinction between Cultural and Economic Conservatism is similar to the distinction between social and economic conservatism (Lipset, 1981) and between social traditionalism and economic conservatism (Johnson & Tamney, 2001).

In this respect, Duriez (2003a) has shown that, whereas Cultural Conservatism relates to both the Exclusion vs. Inclusion of Transcendence and the Literal vs. Symbolic dimension, Economic Conservatism is unrelated to these dimensions. As far as Exclusion vs. Inclusion of Transcendence is concerned, these results are in line with studies that reported a strong relationship between Cultural Conservatism and religiosity, as well as with studies that reported Economic Conservatism to be independent of religiosity (for a recent overview, see Duriez, 2003a). As far as Literal vs. Symbolic is concerned, these results are in line with studies that have shown that Literal vs. Symbolic and Cultural Conservatism are both related to dogmatism, closed-mindedness and intolerance of ambiguity (for a recent overview, see Duriez, 2003a), as well as with the reasoning that pragmatism prevents economic conservatives both from being intolerant towards people with different worldviews and from reflecting about the symbolic meaning of religious language (see Johnson & Tamney, 2001).

Prejudice

The religiosity-prejudice relation is probably the most important paradox within the psychology of religion. Whereas all world religions proclaim brotherly love, history is littered with moments in which religion has provided a justification for, or has given cause to, atrocities directed towards people from a different religion, a different culture, a different race, a different sex, or a different sexual orientation. A number of historians and theologians concluded from this that religion should be considered as a catalyst for prejudice and intolerance, and a lot of psychological and sociological research has been carried out to investigate this (for a recent research overview, see Duriez, in press-a).

In this respect, Duriez (in press-a, Duriez, Appel & Hutsebaut, in press) has recently shown that Exclusion vs. Inclusion of Transcendence is not related to racial prejudice. In sharp contast, the Literal vs. Symbolic dimension is highly negatively related to racial prejudice. These findings are compatible

with earlier research, which has shown that there is no clear relation between being religious or not and being prejudiced or not, but that this is dependent upon how people deal with religion. More specifically, the present findings suggest that what seems to be crucially important is not so much whether one is religious or not, but the way in which religious contents are processed. If religious contents are processed in a literal fashion, one is more likely to be intolerant against people of a different race and / or culture. In contrast, if religious contents are processed symbolically, one is unlikely to hold racist attitudes. Hence, these results contribute to the debate whether religious people are more inclined to hold racist opinions. When the way in which religious contents are processed is taken into account, the impact of being religious or not is trivial. This implies that the danger of religious fundamentalism does not lie in religion as such but in the cognitive style that is applied when processing religious issues.

This is in line with the reasoning of Altemeyer (2003), who has argued that the relationship between religious fundamentalism and prejudice should be accounted for by a general attitude towards whatever belief one holds, rather than in terms of particular religious beliefs. According to Altemeyer, religious fundamentalists are characterized by two important tendencies: The tendency to show heightened identification with what they perceive to be the religious in-group and the tendency to show heightened rejection of what they perceive to be the religious out-group. Following this reasoning, it can be argued that Religious Fundamentalism (= RF) can also be displayed by non-religious people. Some non-religious people, namely those that process religious isses in a literal and closed-minded way, can be expected to show these very same tendencies. The only difference between religious and non-religious RF would then be the nature of the in-group. Whereas, for religious RF, the in-group will be the own denomination, for non-religious RF the in-group will be the group of atheists. From this perspective, both religious and non-religious RF can be expected to go hand in hand with a racial prejudice that is grounded in RF. For instance, when thinking of immigrants, people in Western Europe spontaneously think of Muslims. This group of people is especially likely to become a target of RF. They will be a target of non-religious RF because of their religiousness, and of religious RF because of the fact that they belong to a distinctly non-Catholic (and even non-Christian) denomination. Duriez (in press-a) has

shown that this religious etnocentrism cannot be reduced to differences in authoritarianism or to differences in empathy and perspective taking capacity (see below).

Authoritarianism

Two research lines have dominated the quest for the antecedents of prejudice. The first has viewed prejudice as resulting from group processes (e.g., Tajfel & Turner, 1979). The second has regarded it as a results of dispositional factors making people more or less likely to adopt prejudice (e.g., Adorno, Frenkel-Brunswik, Levinson & Sanford, 1950; Altemeyer, 1981; Pratto, Sidanius, Stallworth & Malle, 1994). The latter approach received support from research that demonstrated the generality of prejudice. That is, people that are unfavorable to one outgroup tend to be unfavorable to other outgroups (e.g., Duckitt, 1992). This generality principle has been interpreted as suggesting stable individual differences, such as personality characteristics or enduring beliefs, that predispose people to adopt prejudice. Two individual difference dimensions have received empirical support. The first – the authoritarian personality – was introduced by Adorno et al (1950), and was reconceptualized to Right-Wing Authoritarianism (RWA) by Altemeyer (1981). RWA can be defined as the covariation of (1) a strict adherence to conventional norms and values (conventionalism), (2) an uncritical subjection to authority (authoritarian submission), and (3) feelings of aggression towards norm violators (authoritarian aggression). The second – the Social Dominance Orientation (SDO) – was introduced by Pratto et al. (1994) as a dimension which delineates the extent to which one desires the ingroup to dominate outgroups. And although, according to Altemeyer (1998), RWA and SDO constitute two faces of the authoritarian personality, with RWA referring to authoritarian submission and SDO referring to authoritarian dominance, research has shown that both constructs have a different genesis and are powerful but relatively independent predictors of prejudice (Duckitt, 2001; Duckitt, Wagner, du Plessis, & Birum, 2002; Duriez, Van Hiel & Kossowska, in press; Van Hiel, Pandelaere & Duriez, in press).

Among other things, Duriez and Van Hiel (2002) focussed on the relation between the PCBS and both RWA and SDO. The results of their analyses suggest that, whereas Literal vs. Symbolic relates to both RWA and SDO, Exclusion vs. Inclusion of Transcendence relates to RWA but not to SDO. These findings

support previous research which has shown that fundamentalism is typical of authoritarianism (e.g., Altemeyer, 1996) and that religiosity is typical of RWA but not of SDO (Altemeyer, 1998; Saucier, 2000; Van Hiel and Mervielde, 2002). It is important to note that, according to some researchers, three factors can be discerned in the RWA scale: Punitive authority, sexual morality, and rejecting dissent. The religiosity-RWA relation would primarily be caused by the sexual morality factor (see Schluderman, Schluderman, Needham, Mulega & Huynh, 2003). This might explain the relations between Exclusion vs. Inclusion of Transcendence and RWA, and would bring the findings on religiosity and RWA perfectly in line with the findings on racial prejudice.

Altruism and Empathy

Recently, McFarland (2001) made an extensive review of all the known individual differences that correlate with one or more forms of prejudice, and set up a series of studies to identify the most important prejudice dispositions. According to McFarland (2001), apart from RWA and SDO, a third important prejudice disposition is constituted by lack of empathy. In line with these findings, Batson (1983) has argued that empathy mediates a kin-specific altruistic impulse that is part of the human genetic heritage, and that one of the functions of religion is to extend the range of this altruistic impulse far beyond the kinship circle. Religion achieves this goal through the use of kinship language and imagery: By teaching that we are all children of God, religion enhances an altruistic impulse that is already present, extending it from the kinship circle to human kind in general. However, it is clear that religion does not always succeed in this (see above).

In this respect, Duriez (in press-b) focussed on empathy because it is considered fundamental to altruism and helping behaviour (e.g., Batson, 1991, 1998). It was shown that, whereas empathy is unrelated to Exclusion vs. Inclusion of Transcendence, it is positively related to Literal vs. Symbolic. These results contribute a great deal to the debate whether religious people are nicer people, in the sense that they are more inclined to feel empathy towards their fellow men and, hence, are more likely to provide help to a person in need. The answer is no. The present study shows that, apparently, this debate has its origin in the fact that the religiosity measures that have been used in previous studies confuse being religious

or not with the way in which religion contents are processed. When separating both aspects, religiosity as such has no connection with empathy whatsoever. In contrast, the way in which religion contents are processed tells a great deal about whether or not one is likely to experience feelings of empathy and, hence, to expose helping behaviour. These findings are in line with the findings reported earlier on the relation between the religiosity dimensions and Agreeableness, as well as with the findings reported on the relation between the religiosity dimensions and both the conflict between Self-Enhancement and Self-Transcendence values and racial prejudice and authoritarianism.

Morality

Another important topic within the psychology of religion has been the relation between religiosity and morality. 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. Thus, whereas the primary function of morality would be to resolve competing claims among individuals, the primary function of religion would be to affirm morality. In other words, whereas moral reasoning provides moral prescriptions, religious reasoning affirms moral judgment as meaningful. In spite of Kohlberg's arguments, several researchers have attempted to associate both concepts and have come to the conclusion that religiosity and morality are not unrelated at all (for a recent overview, see Duriez, 2003b). However, some researchers (e.g., Wahrman, 1981) have argued that the apparent religiosity-morality relation can probably be explained by cognitive processes such as dogmatism. Given the fact that the PCBS allows to disentangle the effects of being religious or not (Exclusion vs. Inclusion of Transcendence) from the way in which religious contents are processed (either in a literal or in a symbolical way), and given the fact that the Literal vs. Symbolic dimension relates to dogmatism, closed-mindedness, etc. (for a recent overview, see Duriez, 2003a), the PCBS allows to directly test this hypothesis.

In this respect, Duriez (2003b) and Duriez and Soenens (2003b) examined the relation between

the PCBS and the Moral Judgment Test (MJT; Lind, 1998). In the MJT, people are confronted with moral dilemmas. For each dilemma, a person has to indicate to which degree he agrees with the solution chosen by the main character(s). Next, this person is confronted with six arguments pro and six arguments contra his opinion on how to solve the dilemma. Each argument represents one of Kohlberg's (1958) stages of moral reasoning. The sum score a person obtains for the arguments referring to the same stage indicates the degree to which this person reasons according to this socio-moral perspectives. In addition, the C-index measures the degree to which the judgment about these arguments is consistent. A highly morally competent person will appreciate all arguments referring to a certain socio-moral perspective, irrespective of whether it is a pro or contra argument., and will obtain a C-index close to 100. A person with low moral competence will appreciate the pro arguments only and will obtain a C-index close to zero.

Results showed that the apparent religiosity-morality relation that was observed in previous studies can be explained by the way in which people process religious contents. People processing religious contents in a symbolic way show higher moral competence. In addition, people processing religious contents in a symbolic way tend to make a sharp distinction between moral arguments of the lower stages of Kohlberg's model and moral arguments of the higher stages. In comparison to people that process religious contents in a literal way, they tend to pay less attention to arguments of the lower stages and more attention to arguments of the higher stages. In contrast, in all samples, being religious as such was unrelated to both moral attitudes and moral competence. Results supported the ideas of Kohlberg (1981) who argued that religiosity and morality are inherently unrelated and the ideas of Wahrman (1981) who argued that the apparent religiosity-morality relation that was observed in previous studies can be explained by cognitive processes. Again, these findings are perfectly in line with the findings reported above on prejudice, authoritarianism, etc.

Cognitive Conservatism

Another important topic within the psychology of religion has been the relation between religiosity and cognitive conservatism (i.e., intolerance of ambiguity, dogmatism, rigidity, and need for closure). Kruglanski (1989) argued that knowledge, beliefs and attitudes are arrived at through the process of a

motivated search for information. A central construct in this theory is the need for nonspecific cognitive closure, which refers to the desire for any firm belief on a given topic, as opposed to further ambiguity. Though need for closure may vary as a function of the situation (e.g., Kruglanski & Webster, 1991; Kruglanski, Webster & Klem, 1993), it also represents a dimension of stable individual differences (Webster & Kruglanski, 1994). According to Kruglanski (1989), the need for closure might spring from various sources. In particular, five facets are assumed to represent the universe of the construct (Webster & Kruglanski, 1994). Persons with a high need for closure would (1) desire order and structure in their lives, (2) prefer predictable situations, (3) experience a desire to reach closure which is reflected in the decisiveness of judgments and choices, (4) experience ambiguous situations devoid of closure as aversive, and (5) be unwilling to have one's knowledge and beliefs confronted and hence rendered insecure by inconsistent evidence or alternative opinions. Thus, some people may desire closure because they value ordered environments, whereas others may seek closure out of a concern for predictability, decisiveness, ambiguity avoidance, or sticking to their own knowledge, belief or opinion. Of course, closure may be desired for more than one reason. Hence, the different facets are considered additive in their impact on the total need for closure (Kruglanski et al., 1997).

Previous research suggest that at least some of the need for closure facets, and related constructs, are positively related to religiosity. In this respect, no matter how it was measured, religiosity has been related to intolerance of ambiguity, dogmatism and rigidity. However, these relations are not always very strong. Some studies even suggest that religiosity is independent of intolerance of ambiguity, dogmatism and rigidity (for recent overviews, see Duriez, 2003c; Saroglou, 2002b). Some studies seem to suggest that the way in which religion is perceived and treated might be more important than religiosity as such. Feather (1967), for instance, did find a relation between religious affiliation and intolerance of ambiguity and dogmatism, but this relation was obscured by the kind of religious affiliation, with members of fundamentalist groups obtaining higher intolerance of ambiguity and dogmatism scores than members of liberal religious groups (cf. Glass, 1971). In a similar vain, Stanley (1963) argued that it is fundamentalism that represents the religious manifestation of the closed mind,

and Pargament et al. (1985) argued that churches may selectively attract and keep members with and / or shape members towards varying levels of tolerance of ambiguity.

In line with these findings, Duriez (2003c) hypothesized that, rather than religion per se, dealing with religious contents in a fundamentalist, dogmatic, literal way constitutes the real threat to reason. Hence, he expected need for closure to relate to Literal vs. Symbolic, rather than to Exclusion vs. Inclusion of Transcendence. However, both religiosity dimensions appeared to relate to need for closure (cf. Saroglou, 2002b). In spite of this apparent similarity, a closer look at the data revealed that both relgiosity dimensions related to different facets of need for closure. Apparently, religious people have a higher need for closure than people who are less religious *because* they desire an ordered and predictable environment. This suggests some instrumentality of religion, which is in line with the point of view that religion, by offering a global worldview and a moral program, reduces the complexity of life and creates a psychologically safe environment (Schwartz & Huismans, 1995). In contrast, people who deal with religious contents in a literal way have a higher need for closure than people who deal with religious content in a symbolical way *because* they need to avoid ambiguity or are unwilling to have their beliefs confronted by alternative opinions. Thus, apparently, whereas religious belief as such seem associated with a mere preference for order and structure as well as predictability, it is those who deal with religious content in a literal way who are uncapable of dealing with alternative opinions.

Identity

Finally, another (potentially) important topic within the psychology of religion concerns the relation between religiosity and identity development. According to Erikson (1968), the primary developmental task of adolescence is the formation of a personal identity. In the process of searching and exploring one's identity, the adolescent is thought to develop a personal view on issues of political, philosophical and religious nature. Therefore, an important question is whether differences in identity development relate to the acquisition of religious beliefs. In spite of this, research addressing the relation between religiosity and identity development is limited, and all of these studies have relied on Marcia's (1966) identity status paradigm (for an overview, see Duriez, Soenens & Beyer, in press) Although this

paradigm has proven its utility in empirical research (Marcia, 1980), it has been criticized for treating identity statuses as dispositional outcome variables (e.g., Côté & Levine, 1988; van Hoof, 1999).

In an attempt to conceptualize individual differences in identity development in a more process-oriented way, Berzonsky (1990, 1992) proposed three identity styles or ways of processing information and of coping with problems that typically arise in identity crises during adolescence: The informational, the normative, and the diffuse / avoidant identity style. Information oriented individuals deal with identity issues by actively seeking out, processing and utilizing identity relevant information. When confronted with information that is dissonant with their self-conceptions, adolescents will revise and accommodate their self-perceptions. Normative oriented individuals focus on the normative expectations and prescriptions held up by significant others (e.g., parents or authority figures) and reference groups (e.g., a certain religious tradition), and adhere rigidly to their identity structures, into which they assimilate all identity-relevant information. Finally, diffuse / avoidant oriented individuals procrastinate decisions about and one's identity, which results in a fragmented and loosely integrated identity structure.

Analyses revealed relatively stable relations between the identity styles and the religiosity dimensions (Duriez, Soenens & Beyer, in press; Duriez & Soenens, 2003a). First, adolescents who use an informational identity style tend to interpret religious contents in a personal and symbolic way. This confirms the idea that information oriented adolescents critically evaluate whether certain religious contents correspond to their personal self-definitions (Berzonsky, 1990). Second, a negative relation was found between adolescents' use of a diffuse / avoidant identity style and Literal vs. Symbolic. Based on the theory of Berzonsky (1990), adolescents using this identity style are indeed thought to interpret religious contents in a literal way because they are likely to avoid questioning difficult and personal issues such as religion. Third, late adolescents who use a normative identity style were found to be more religious, at least in a context that is characterized by a strong religious tradition. In addition, they also showed a slight but non-significant tendency to interpret religious contents in a literal way. This confirms the theory of Berzonsky (1990), which claims that adolescents using a normative oriented identity style are likely to rely on and conform to the prescriptions and standards of significant others,

reference groups, authorities, and traditions.

Conclusion

The analyses reported in this chapter substantiate the claim that the Post-Critical Belief Scale can be used to disentangle the effects of being religious or not (Exclusion vs. Inclusion of Transcendence) from the way in which religion and religious contents are processed (either in a literal or in a symbolical way). In this way, the Post-Critical Belief Scale is an extremely valuable instrument to shed a new light in some important debates in the field of the psychology of religion.

Exclusion vs. Inclusion of Transcendence

Religious people are neither more nor less (1) likely to have specific personality traits, (2) inclined to hold prejudiced or social dominant attitudes, (3) likely to feel empathy towards fellow human beings, and (4) to attain higher levels of moral competence. However, religious people are less likely to attach importance to Hedonism, Stimulation and Self-Direction values and more likely to attach importance to Tradition and Conformity values. In line with this, they are more likely to hold cultural conservative and right-wing authoritarian beliefs, and they are more likely to prefer order, structure and predictability. In addition, late adolescents who are religious are more likely to base important choices in life on expectations of parents, authority figures, or reference groups. In sum, although religious people are not characterized by specific personality traits, they are characterized by the importance they attach to tradition values, norms and conventions. This importance might stem from a psychological need for order, structure and predictability. However, the importance that is attached to traditions is not as such accompanied by a rejection of people that chose to live their lifes according to different standards.

Literal vs. Symbolic

People who process religious contents in a literal way (1) are less likely to be Open to Experience amd less likley to be Agreeable, (2) attach more importance to Self-Enhancement values as opposed to Self-Transcendence values, (3) are more likely to hold culturally conservative, prejudiced, right-wing authoritarian and social dominant attitudes, (4) are less likely to feel empathy towards fellow human beings, (5) are less likely to attain high levels of moral competence, (6) are more likely to be closed-

minded and intolerant of ambiguity, and (7) are less likely to actively seeking out identity relevant information and are more likely to procrastinate important choices in life. In sum, those who process religious contents in a literal way, irrespective of wheter they accept or reject these contents, can be characterized as cold-hearted, closed-minded and selfish creatures who are out to protect their luxury and their world-view from people that are perceived to belong to (less fortunate) outgroups, and who refuse to question the status quo and the associated injustices.

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Appendix *The Post-Critical Belief Scale*

Label	Place	Item
		Orthodoxy
O1	03	You can only live a meaningful life if you believe .....
O2	04	God has been defined for once and for all and therefore is immutable .....
O3	07	Even though this goes against modern rationality, I believe Mary truly was a virgin when she gave birth to Jesus .....
O4	11	Only the major religious traditions guarantee admittance to God .....
O5	14	Religion is the one thing that gives meaning to life in all its aspects .....
O6	17	Ultimately, there is only one correct answer to each religious question .....
O7	21	Only a priest can give an answer to important religious questions .....
O8	25	I think that Bible stories should be taken literally, as they are written .....
		External Critique
E1	05	Faith is more of a dream, which turns out to be an illusion when one is confronted with the harshness of life .....
E2	08	Too many people have been oppressed in the name of God in order to still be able to have faith .....
E3	18	God is only a name for the inexplicable .....
E4	20	The world of Bible stories is so far removed from us, that it has little relevance .....
E5	22	A scientific understanding of human life and the world has made a religious understanding superfluous .....
E6	27	In the end, faith is nothing more than a safety net for human fears .....
E7	29	In order to fully understand what religion is all about, you have to be an outsider .....
E8	30	Faith is an expression of a weak personality .....
E9	32	Religious faith often is an instrument for obtaining power, and that makes it suspect.....
		Relativism
R1	09	Each statement about God is a result of the time in which it was made .....
R2	12	Ultimately, religion means commitment without absolute guarantee .....
R3	15	The manner in which humans experience their relationship to God, will always be colored by the times they live in .....
R4	19	Official Church doctrine and other statements about the absolute will always remain relative because they are pronounced by human beings at a certain period of time.....
R5	23	God grows together with the history of humanity and therefore is changeable .....
R6	24	I am well aware my ideology is only one possibility among so many others .....

Appendix *Continued*

Label	Place	Item
R7	28	Secular and religious worldviews give valuable answers to important questions about life .....
R8	31	There is no absolute meaning in life, only giving directions, which is different for every one of us .....
		Second Naiveté
S1	01	The Bible holds a deeper truth which can only be revealed by personal reflection .....
S2	02	If you want to understand the meaning of the miracle stories from the Bible, you should always place them in their historical context .....
S3	06	The Bible is a guide, full of signs in the search for God, and not a historical account.....
S4	10	Despite the fact that the Bible has been written in a completely different historical context from ours, it retains a basic message .....
S5	13	Because Jesus is mainly a guiding principle for me, my faith in him would not be affected, if it would appear that he never actually existed as a historical individual .....
S6	16	The historical accuracy of the stories from the Bible is irrelevant for my faith in God.....
S7	26	Despite the high number of injustices Christianity has caused people, the original message of Christ is still valuable to me .....
S8	33	I still call myself a Christian, even though a lot of things that I cannot agree with have happened in the past in name of Christianity, ...

Note The items are listed by subscale (Orthodoxy, External Critique, Relativism and Second Naiveté). For all items, the label by which they are referred to in this article (= Label) and their position in the Post-Critical Belief Scale (= Place) are given. Although the items were administered in Flemish, they are presented in English. The translation was done according to the guidelines of the International Test Commission (Hambleton, 1994), using the translation back-translation procedure (Brislin, 1980). Differences between the back-translated and the original version were minimal. A committee of four bilingual research assistants decided on the final English version of the test (Van de Vijver & Leung, 1997).

Table 1 *Description of the samples*

Sample	Type	N	% Male	Age (Mean)	Age (SD)
1	Adolescent	161	43	17	0.78
2	Adolescent	205	38	17	0.44
3	Adolescent	338	50	16	0.92
4	Student	421	20	18	1.43
5	Student	336	50	20	1.43
6	Adult	336	50	48	5.00
7	Adult	182	43	46	15.24
8	Adult	478	40	43	10.78
9	Adult	200	51	36	15.86

Table 2 *Eigenvalues for the first six components (E1-E6), proportion of variance accounted for by a two-componential solution (R^2), congruence measures for both components after rotation towards the average structure (T1-T2), and estimates of internal consistency ($\theta 1$ and $\theta 2$)*

Sample	E1	E2	E3	E4	E5	E6	R^2	T1	T2	$\theta 1$	$\theta 2$
1	6.39	4.42	1.71	1.41	1.35	1.28	.33	.89	.96	.89	.83
2	6.19	3.09	1.65	1.51	1.47	1.35	.28	.91	.92	.86	.81
3	5.46	4.14	1.65	1.45	1.29	1.19	.29	.91	.97	.82	.85
4	7.11	4.36	1.39	1.32	1.23	1.14	.35	.92	.96	.90	.83
5	6.48	5.05	1.48	1.29	1.28	1.16	.35	.96	.97	.80	.88
6	6.91	5.24	1.48	1.19	1.16	1.13	.37	.97	.97	.89	.85
7	6.53	4.83	1.51	1.43	1.38	1.25	.34	.95	.97	.88	.85
8	7.03	4.55	1.48	1.32	1.23	1.11	.35	.97	.98	.89	.83
9	8.08	4.59	1.56	1.38	1.26	1.13	.38	.95	.97	.90	.83

Table 3 *Average loading of the PCBS items on the two components (C1 and C2)*

Label	C1	C2	Label	C1	C2	Label	C1	C2	Label	C1	C2
O1	.501	-.142	E1	-.438	-.420	R1	-.257	.355	S1	.374	.391
O2	.483	-.294	E2	-.463	-.275	R2	-.000	.266	S2	.000	.317
O3	.472	-.291	E3	-.509	-.167	R3	-.286	.365	S3	.301	.359
O4	.318	-.381	E4	-.331	-.435	R4	-.341	.361	S4	.481	.497
O5	.592	-.157	E5	-.393	-.510	R5	-.351	.313	S5	.248	.292
O6	.308	-.487	E6	-.527	-.362	R6	-.412	.414	S6	.020	.420
O7	.167	-.521	E7	-.325	-.340	R7	-.348	.137	S7	.407	.522
O8	.199	-.561	E8	-.318	-.459	R8	-.403	.138	S8	.515	.270
			E9	-.518	-.151						
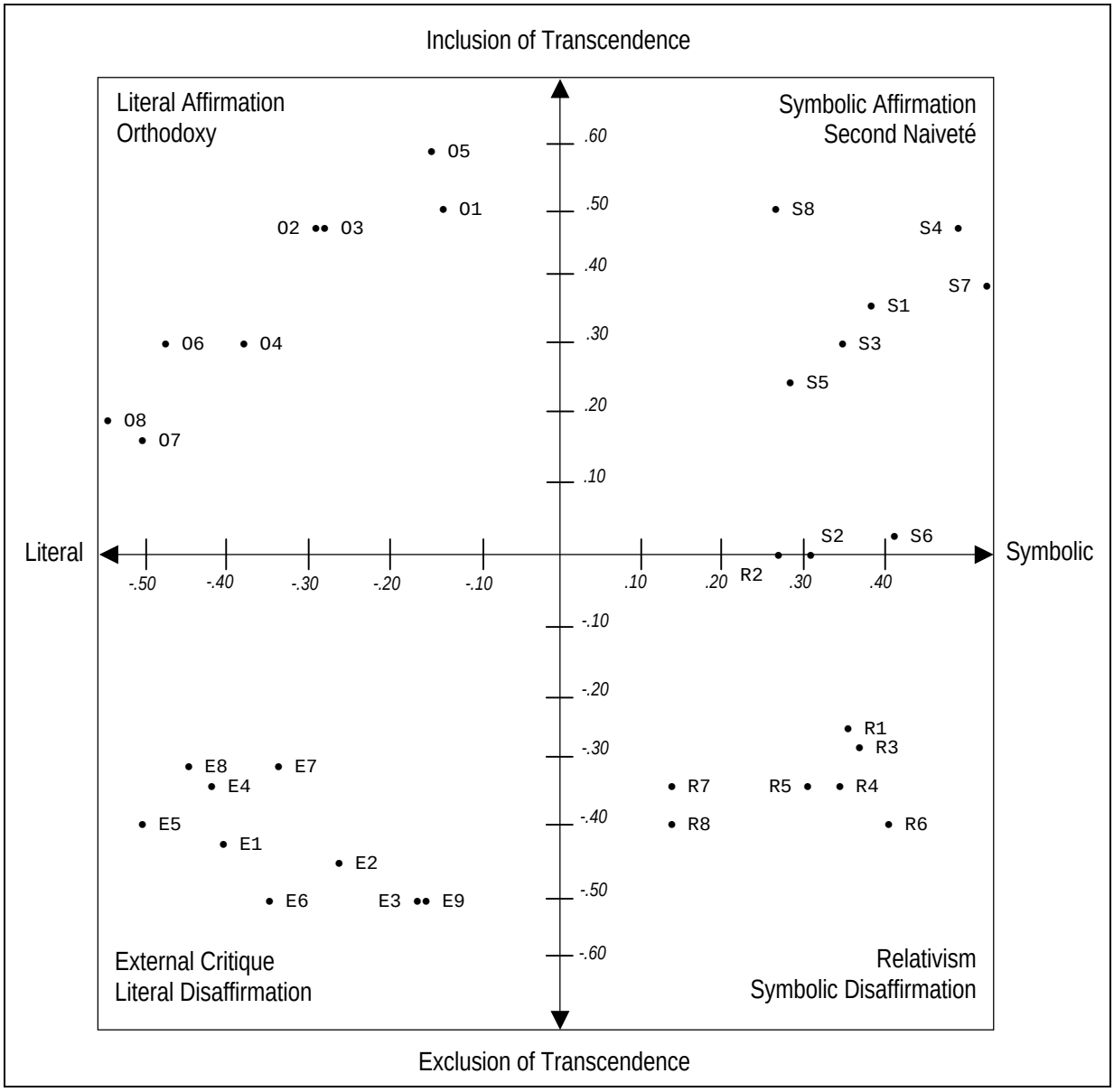
Figure 1 *Two-componential consensus representation of the items of the Post-Critical Belief Scale*