The German Post-Critical Belief Scale:

Internal and external validity.

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Running Head: The German Post-Critical Belief scale

Key Words: Post-Critical Belief; Prejudice; Religiosity; Religion; Racism

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Abstract

Recently, Duriez, Fontaine and Hutsebaut (2000) and Fontaine, Duriez, Luyten and Hutsebaut (2003) constructed the Post-Critical Belief Scale in order to measure the two religiosity dimensions along which Wulff (1991, 1997) summarized the various possible approaches to religion: Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic. In the present article, the German version of this scale is presented. Results obtained in a heterogenous German sample (N=216) suggest that the internal structure of the German version fits the internal structure of the original Dutch version. Moreover, the observed relation between the Literal vs. Symbolic dimension and racism, which was in line with previous studies (Duriez, in press), supports the external validity of the German version.
Zusammenfassung

Recently, Wulff (1991, 1997) provided a new and interesting perspective on religiosity. According to Wulff, all possible attitudes to religion can be summarized in a two-dimensional space (see Figure 1). The vertical axis in this space, the Exclusion vs. Inclusion of Transcendence dimension, specifies whether the objects of religious interest are granted participation in a transcendent reality or not, and hence refers to the distinctions between being religious or not and being spiritual or not. The horizontal axis, the Literal vs. Symbolic dimension, indicates whether religious expressions and symbols are interpreted literally or symbolically. Hence, this dimension is situated at the level of social cognitions and explicitly refers to the way religious contents are processed, namely either in a literal or symbolic way. In this way, four quadrants are defined, each covering a specific attitude towards religion: Literal Affirmation, Literal Disaffirmation, Symbolic Affirmation and Symbolic Disaffirmation. The first quadrant, Literal Affirmation, represents a position in which the literal existence of religious objects is affirmed. This position is most clearly embodied by religious fundamentalism. The second quadrant, Literal Disaffirmation, represents a position in which one neither beliefs in the literal meaning of religious words nor in the possibility that these words can have a symbolic meaning. The third quadrant, 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 have a symbolic meaning. The fourth quadrant, Symbolic Affirmation, represents a position in which the existence of the religious realm is affirmed, and in which one tries to encompass and transcend the criticism on religion that has been formulated by people like Freud, Marx and Nietzsche in order to find a symbolic meaning in the religious language which has personal relevance. In the sense that it tries to go beyond the criticism on religion the position that is captured in this quadrant can be described as post-critical belief. According to Wulff, this quadrant has received little attention in the empirical research into the psychology of religion.
Building on Wulff's theory, Hutsebaut and his colleagues (Desimpelaere, Sulas, Duriez & Hutsebaut, 1999; Duriez & Hutsebaut, 2000; Hutsebaut, 1996) constructed the Post-Critical Belief Scale, which was designed to capture four approaches to Christian religion: Orthodoxy, External Critique, Relativism and Second Naiveté. These four approaches to Christian religion were considered to be equivalents of, respectively, Literal Affirmation, Literal Disaffirmation, Symbolic Affirmation and Symbolic Disaffirmation (see Figure 1). Only recently, however, thorough assessments were made of the construct validity of the Post-Critical Belief Scale. In this respect, 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 that, when individual differences in acquiescence are corrected for, two components are sufficient to explain the empirical relations between the items of the Post-Critical Belief Scale and that these components can be interpreted in terms of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic (see Figure 1). An individual's position in Wulff's scheme can be identified on the basis of the scores obtained on these dimensions. Moreover, in this way, the effects of being religious or not (Exclusion vs. Inclusion of Transcendence) can be separated from the way in which religious contents are processed (either in a literal or in a symbolical way).

Religion and Prejudice

The fact that the Post-Critical Belief Scale can be used to disentangle the effects of being religious or not from the way in which religious contents are processed allowed Duriez (in press) to shed new light on what is probably the most important paradox within the psychology of religion: The relationship between religiosity and prejudice. 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 whether this is true (for a recent overview: see Duriez, in press). Although some researchers conclude that religion should be considered as a catalyst for prejudice and intolerance, others (e.g., Allport, 1950; Batson, Schoenrade & Ventis, 1993) have argued that there is no intrinsic relation between being religious or not and being intolerant or not, but that it all depends on how religion is being dealt with. Hence, Duriez (in press) hypothesized that the religiosity dimension Exclusion vs. Inclusion of Transcendence, when controlled for individual differences in the Literal vs. Symbolic dimension, would be unrelated to prejudice. In contrast, when controlled for individual differences in Exclusion vs. Inclusion of Transcendence, the Literal vs. Symbolic dimension would be substantially related to prejudice. This hypothesis received support from the finding that literal thinking relates to each of the three pillars of prejudice McFarland (2001) identified (namely authoritarianism, social dominance and lack of empathy) (see Duriez, 2002; Duriez & Van Hiel, 2002), as well as to modes of cognitive functioning that are known to relate to these pillars of prejudice, such as closed-mindedness, intolerance of ambiguity, dogmatism and need for closure (Duriez, 2002; Sidanius, 1985).

Duriez (in press) investigated this in three samples gathered in Flanders (Belgium) (total N = 2171) with respect to one particular form of prejudice, namely racism (i.e., prejudice towards ethnic groups). In line with the abovementioned reasoning, Duriez consistently found racism to be unrelated to being religious or not, but to relate strongly positively to processing religious contents in a literal way. The Literal vs. Symbolic dimension was found to significantly contribute to the prediction of racism, even after differences in authoritarianism, social dominance and empathy were taken into account.

Aims of the Present Study

The first purpose of the present article is to present a German Post-Critical Belief Scale, and to examine its internal structure and how it relates to the internal structure of the original Dutch version of this scale. The second purpose is to cross-validate the relations between racism and the two religiosity dimensions that are captured by the Post-Critical Belief Scale. In this way, the external validity of the German version of the Post-Critical Belief Scale can be established.
Method

Samples
A total of 250 questionnaires were distributed by undergraduate students who asked their neighbours to participate, in order to obtain a heterogeneous sample. Refusal rates were low (14%). All participants were German-speaking persons of German nationality. The mean age was 35 (SD = 14). The sample consisted of 40% males. Of all participants, 110 indicated being Protestant, 35 indicated being Roman Catholic, and 69 indicated being not religious in any way. All subjects having over two missing values on the Post-Critical Belief Scale or having over one missing value on the racism scale were excluded from further analyses. In total, only one of the participants needed to be removed. For subjects which were not removed, missing values were replaced by the mean of the item. In total, only 33 missing values were replaced (< 0.1% of the individual score included in this study).

Measures
Participants completed German versions of the 33-item Post-Critical Belief Scale (Duriez, Fontaine & Hutsebaut, 2000) (see Appendix) and a 9 item racism scale constructed by Billiet and De Witte (1991) (for an English translation, see Duriez & Hutsebaut, 2000). The translation was done according to the guidelines specified by 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 bilingual research assistants decided on the final versions (Van de Vijver & Leung, 1997). All items were scored on a 7-point Likert scale. According to Billiet and De Witte (1991), the racism scale consists of two components: Racism and xenophobia. An example of a racism item is “We have to keep our race pure and fight mixture with other races”. An example of a xenophobia item is “In general, immigrants are not to be trusted”. However, in accordance with previous studies (Duriez, in press; Duriez, Fontaine & Hutsebaut, 2000; Duriez & Hutsebaut, 2000; Duriez, et al., 2002; Duriez & Van Hiel, 2002), a scree test pointed to one component only. This scale had an estimated internal consistency (Cronbach Alpha) of .83.
Results

The Post-Critical Belief Scale

As in Fontaine et al. (2003), a level of acquiescence estimation was subtracted from the raw scores obtained on the Post-Critical Belief scale. Acquiescence means that a subject prefers a specific score level irrespective of the item content. Thus, a tendency to use the same score level across items with a clearly different and even antagonistic meaning can be interpreted as acquiescence. However, since the four approaches to religion that are measured by the Post-Critical Belief Scale (Orthodoxy, External Critique, Relativism and Second Naïveté) are not represented by exactly the same number of items (see Appendix), acquiescence was estimated by a weighted mean score across all items (assigning the same weight to each of the four approaches irrespective of its number of items). This weighted mean score across all items was then subtracted from the observed item scores for each subject. In this way, interindividual differences in acquiescence were removed. A Principal Component Analysis (PCA) was then performed on these weighted-mean-corrected item scores.

A scree test clearly pointed to a two-componential solution: The eigenvalues for the first six components, after extraction, were 8.85, 3.79, 1.67, 1.47, 1.30, and 1.18 respectively. A two-componential solution accounted for 38% of the total variance. However, since PCA allows freedom of rotation, the componential structures of different samples cannot be compared straightforwardly. Therefore, the obtained componential structure was subjected to an orthogonal Procrustes rotation towards the average structure of the Dutch version as reported by Fontaine et al. (2003) (see Figure 1). In this average structure, the items originally belonging to the Orthodoxy subscale have a positive loading on Exclusion vs. Inclusion of Transcendence and a negative loading on Literal vs. Symbolic, the items originally belonging to the External Critique subscale have a negative loading on Exclusion vs. Inclusion of Transcendence and a negative loading on Literal vs. Symbolic, the items originally belonging to the Relativism subscale have a negative loading on Exclusion vs. Inclusion of Transcendence and a positive loading on Literal vs. Symbolic, and the items originally belonging to the Second Naïveté subscale have a positive loading on
Exclusion vs. Inclusion of Transcendence and a positive loading on Literal vs. Symbolic (see Figure 1). After rotating the two components that were obtained in the current sample to this average structure, the Tucker's Phi indices were above the rule-of-thumb recommendation of .90 provided in the literature (Bentler & Bonett, 1980; Van de Vijver & Leung, 1997) for both components. Hence, these components can be interpreted as Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic respectively.

Estimates of internal consistency (theta) (Armor, 1974) were .92 for Exclusion vs. Inclusion of Transcendence and .81 for Literal vs. Symbolic. Due to the correction for acquiescence, the mean score on both dimensions equals zero with a standard deviations of 1. A high positive score on Exclusion vs. Inclusion of Transcendence indicates a tendency to include transcendence (or to be religious). A high positive score on Literal vs. Symbolic indicates a tendency to process religion contents in a symbolic way.

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Religion and Racism

The relation between the religiosity dimensions and racism was investigated by means of bivariate correlations. Results show that, whereas the correlation between racism and Literal vs. Symbolic is strongly negative (r=-.43, p<.0001), the correlation with Exclusion vs. Inclusion of Transcendence tends to zero (r=-.03, n.s.). The correlations of racism with the four attitudes towards religion that are captured by the Post-Critical Belief Scale can be estimated on the basis of this information. As already shown, racism correlates -.03 with Inclusion of Transcendence (or .03 with Exclusion) and -.43 with Symbolic (or .43 with Literal). Racism then correlates [(-.43) + (-.03)] / 2 = -.23 with Literal Affirmation and [(-.43) + (.03)] / 2 = -.20 with Literal Disaffirmation. Similar computations show that the correlations with Symbolic Affirmation and Symbolic Disaffirmation then equal -.20 and -.23. These results show that the interaction of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic is virtually non-existing. These findings replicate the findings of Duriez (in press).
To assess whether the Literal vs. Symbolic dimension still contributes to the prediction of racism after controlling for age, gender and level of education, hierarchical multiple regression analyses were performed with age, gender, level of education, the Exclusion vs. Inclusion of Transcendence dimension and the Literal vs. Symbolic dimension as independent variables and racism as the dependent variable. Results show that only the Literal vs. Symbolic dimension (beta = -.34, p<.0001), age (beta = .23, p<.01) and level of education (beta = -.23, p<.01) are significant predictors of racism. Exclusion vs. Inclusion of Transcendence (beta = -.08, n.s.) and gender (beta = -.06, n.s.) do not contribute significantly to the prediction of racism. The Literal vs. Symbolic dimension, age and level of education account for 30% of the variance in racism. The Literal vs. Symbolic dimension accounts for 11% of the variance in racism beyond the background variables of age and level of education.

Discussion

The analyses reported in the present paper support the internal validity of the German version of the Post-Critical Belief Scale. After an orthogonal Procrustes rotation, a high congruence was observed between the two-componential structure obtained in the German sample and the average two-componential structure of the original Dutch scale as reported by Fontaine et al. (2003). Hence, the two-componential structure of the German sample can be interpreted in terms of Wulf's (1991, 1997) dimensions of Exclusion vs. Inclusion of Transcendence and Literal vs. Symbolic, indicating that the German version of the Post-Critical Belief Scale provides valid measures of individual differences in these dimensions. The correlational analysis shows that racism is negatively related to the Literal vs. Symbolic dimension and unrelated to the Exclusion vs. Inclusion of Transcendence dimension. These results are in line with earlier findings using the original Dutch version of the Post-Critical Belief Scale (Duriez, in press) and lend support to the external validity of the German version of this scale. These findings are also compatible with earlier research, which has shown that there is no intrinsic relation between being religious or not and being prejudiced or not, but that it all depends on how religion is being dealt with (e.g., Allport, 1950; Batson et al., 1993). More specifically, the findings obtained with the Post-Critical Belief Scale suggest that what
seems to be crucially important is whether religious contents and symbols are processed in a literal way or in a symbolic way. If religious contents and symbols are processed in a literal fashion, people are more likely to become intolerant against people of a different race and/or culture. In contrast, if religious contents and symbols are processed in a symbolic fashion, racist attitudes become unlikely.

The results of the hierarchical multiple regression analysis further support the claim that the overall impact of being religious or not on racist attitudes is very weak. The results of this multiple regression analysis also show that the Literal vs. Symbolic dimension remains important towards the prediction of racism even after important background variables such as age, gender and level of education are controlled for. Hence, these results contribute to the debate whether religious people are more inclined to hold racist opinions (see Duriez & Hutsebaut, 2000). When the way in which religious contents and symbols are processed is controlled for, the answer is no. At least in predominantly Christian regions such as Belgium and Germany. Further research should elaborate whether these results can be generalized to other denominations and cultures, and to other forms of prejudice.

Apparently, an important aspect of racial prejudice seems to have to be located in the religious domain, and more specifically in the domain of religious cognitions. Probably that is why religion always seems to be an important aspect in racism and other forms of prejudice. Religious cognition and the way in which religious contents are processed even seems to exert an influence on racism that transcends the influence of mere education. These findings have important pedagogical consequences. The cognitive rigidity that is implied in the Literal vs. Symbolic dimension cannot be countered by merely raising people’s level of education. Hence, in order to transform people into more tolerant human beings, in education, it seems necessary to pay explicit attention to the domain of social attitudes, values and religion. Instead of merely sticking to scholastic aptitudes, the educational system should focus on the alteration of people’s mode of cognitive functioning towards less cognitive rigidity. Therefore, educational programs focusing on moral and democratic abilities, such as the one designed by Lind (2003), deserve more attention.
References


Psycologica Belgica, 40, 153-181.


## Appendix:

### The German Post-Critical Belief scale

<table>
<thead>
<tr>
<th>#</th>
<th>label</th>
<th>item</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>S1</td>
<td>Die Bibel enthält eine tiefere Wahrheit, die nur durch persönliches Nachdenken erschlossen werden kann.</td>
</tr>
<tr>
<td>02</td>
<td>S9</td>
<td>Wenn man die Bedeutung der Wundergeschichten in der Bibel verstehen will, sollte man sie immer in ihrem jeweiligen geschichtlichen Zusammenhang betrachten.</td>
</tr>
<tr>
<td>03</td>
<td>O7</td>
<td>Nur wenn man glaubt, kann man ein sinnvolles Leben führen.</td>
</tr>
<tr>
<td>04</td>
<td>O1</td>
<td>Gott wurde endgültig definiert und ist daher unveränderlich.</td>
</tr>
<tr>
<td>05</td>
<td>E1</td>
<td>Glaube gleicht einem Traum. Er erweist sich als Illusion, sobald man der Härte des Lebens gegenübergestellt wird.</td>
</tr>
<tr>
<td>06</td>
<td>S2</td>
<td>Die Bibel ist ein Leitfaden mit Hinweisen für die Suche nach Gott, und kein historischer Bericht.</td>
</tr>
<tr>
<td>07</td>
<td>O2</td>
<td>Obwohl es dem modernen rationalen Denken widerspricht, glaube ich, dass Maria wirklich eine Jungfrau war, als sie Jesus bekam.</td>
</tr>
<tr>
<td>08</td>
<td>E2</td>
<td>Zu viele Menschen sind im Namen Gottes unterdrückt worden, so dass es nicht möglich ist, noch Glaube zu besitzen.</td>
</tr>
<tr>
<td>09</td>
<td>R1</td>
<td>Jede Aussage über Gott ist ein Ergebnis der Zeit, in welcher sie getroffen wurde.</td>
</tr>
<tr>
<td>10</td>
<td>S3</td>
<td>Obwohl die Bibel in einem völlig anderen geschichtlichen Zusammenhang geschrieben wurde, behält sie eine Grundbotschaft.</td>
</tr>
<tr>
<td>11</td>
<td>O3</td>
<td>Nur die religiösen Haupttraditionen garantieren einen Zugang zu Gott.</td>
</tr>
<tr>
<td>12</td>
<td>S5</td>
<td>Da Jesus vor allem ein Leitbild für mich ist, würde mein Glaube nicht berührt werden, wenn es plötzlich hieße, er hätte nie wirklich existiert.</td>
</tr>
<tr>
<td>13</td>
<td>R11</td>
<td>Im Grunde genommen ist Religion Hingabe ohne absolute Garantie.</td>
</tr>
<tr>
<td>14</td>
<td>O4</td>
<td>Allein Religion gibt dem Leben in jeder Hinsicht einen Sinn.</td>
</tr>
<tr>
<td>15</td>
<td>R4</td>
<td>Die Art und Weise, in der Menschen ihre Beziehung zu Gott erleben, ist immer durch die jeweilige Zeit geprägt.</td>
</tr>
<tr>
<td>16</td>
<td>S6</td>
<td>Die historische Genauigkeit der biblischen Geschichten ist für meinen Glauben an Gott ohne Belang.</td>
</tr>
<tr>
<td>17</td>
<td>O8</td>
<td>Letztendlich gibt es nur eine Antwort auf jede religiöse Frage.</td>
</tr>
<tr>
<td>18</td>
<td>E3</td>
<td>Gott ist nur ein Name für das Unerklärliche.</td>
</tr>
<tr>
<td>19</td>
<td>R2</td>
<td>Die offizielle Kirchenlehre und andere Aussagen über den absoluten Willen sind immer relativ, da sie von Menschen zu verschiedenen Zeiten verkündet werden.</td>
</tr>
<tr>
<td>20</td>
<td>E7</td>
<td>Die Welt der Bibel ist so weit von uns entfernt, dass sie wenig Bedeutung für uns hat.</td>
</tr>
<tr>
<td>21</td>
<td>O5</td>
<td>Wichtige religiöse Fragen können nur von Geistlichen beantwortet werden.</td>
</tr>
<tr>
<td>22</td>
<td>E4</td>
<td>Ein wissenschaftliches Verständnis des menschlichen Lebens und der Welt hat ein religiöses Verständnis überflüssig gemacht.</td>
</tr>
<tr>
<td>23</td>
<td>R3</td>
<td>Gott entwickelt sich mit der Geschichte der Menschheit und ist deshalb wandelbar.</td>
</tr>
</tbody>
</table>
Ich bin mir wohl bewusst, dass meine Ansicht nur eine Möglichkeit unter vielen ist.

Ich bin der Ansicht, dass biblische Geschichten wortwörtlich verstanden werden müssen.

Trotz der vielen Ungerechtigkeiten, die im Namen des Christentums geschehen sind, halte ich die ursprüngliche Botschaft Christi für wertvoll.

Glaube ist im Grunde nicht mehr als ein Auffangnetz für die Ängste der Menschen.

Sowohl weltliche als auch religiöse Weltanschaungen geben wertvolle Antworten auf wichtige Lebensfragen.

Nur ein Außenstehender kann vollständig verstehen, was Religion bedeutet.

Glaube ist Ausdruck einer schwachen Persönlichkeit.

Es gibt keinen absoluten Sinn des Lebens, nur verschiedene Richtungen, die für jeden von uns anders sind.

Religion dient häufig als Machtinstrument und ist deshalb suspekt.

Ich würde mich schon als Christen bezeichnen, obwohl früher viele Dinge im Namen des Christentums geschehen sind, mit denen ich nicht einverstanden bin.

The items are accompanied by the labels that were used by Fontaine et al. (in press). In this article, the Orthodoxy items that appear in the most recent version of the Post-Critical Belief Scale were labeled, O1, O2, O3, O4, O5, O6, O7 and O8, the External Critique items were labeled E1, E2, E3, E4, E7, E8, E9, E10 and E11, the Relativism items were labeled R1, R2, R3, R4, R5, R6, R10 and R11, and the Second Naïveté items were labeled S1, S9, S2, S3, S5, S6, S7 and S8. These labels allow the reader to locate the items in the average two-dimensional structure of the original Post-Critical Belief items that was computed by Fontaine et al. (in press) (see Figure 1).
Figure 1
Integration of the average two-dimensional structure of the original Dutch Post-Critical Belief items in Wulff's (1991, 1997) theoretical model (after Fontaine et al., in press)