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Dogmatic Behavior Among Students: Testing a New Measure of Dogmatism

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ABSTRACT. The study tested the validity of a new measure of dogmatism by examining university students' evaluations of the Bible. Those who believed that every word in the Bible came directly from God and that the Bible is free of any error, contradiction, or inconsistency scored much higher on this dogmatism measure than students who thought otherwise. Such "true believers" then read the 4 highly varying Gospel accounts of the resurrection of Jesus. The most dogmatic of them still insisted there were no contradictions or inconsistencies in the Bible. The less dogmatic acknowledged that contradictions and inconsistencies exist. These results reinforce those of 4 earlier studies that indicated that the new measure of dogmatism has empirical validity.

Key words: Bible, Christian, contradictions, dogmatism, DOG Scale, Gospel

RESEARCHERS STUDYING DOGMATISM have, without question, used Rokeach's (1960) pioneering D Scale more than any other in their work. Its popularity notwithstanding, the D Scale has been plagued since its inception by poor validity. For all the times it has been used to measure dogmatism, one can find very little evidence that it does (Altemeyer, 1996, pp. 191–201). Hoping to advance matters, I recently defined dogmatism as "relatively unchangeable, unjustified certainty" and developed a 20-item DOG Scale to measure it (Altemeyer, pp. 201–205; see Appendix). This scale's 10 protrait items express such sentiments as "The things I believe in are so completely true, I could never doubt them." Its 10 contrait items say such things as "Flexibility is a real virtue in thinking, because you may well be wrong."

The DOG Scale has been used mainly with Manitoba student samples and sometimes their parents. Its 190 interitem correlations average about .30 (compared with .10 for the D Scale), yielding an alpha coefficient of about .90. DOG scores correlate (.50–.65) with the Right-Wing Authoritarianism (RWA) Scale—a measure of the

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rightist "authoritarian personality" that led Rokeach (1960) on his quest more than 50 years ago. Similarly, a sample of Republican state legislators scored higher on a set of DOG items than did their Democratic counterparts (Altemeyer, 1996, pp. 287–289). Although some dogmatism probably exists among the advocates of any cause—and indeed the items were written to apply equally to any belief system—the evidence to date indicates it is more often a right-wing than a left-wing mind-lock.

Four studies suggest the DOG Scale has empirical validity. In 1993, I asked samples of students and parents to indicate, in 12 different ways, how zealous they were about their "most important outlook on life"—whatever it was. For example, to what extent did they "try to explain (this) outlook to others at every opportunity"? The outlook could be anything (e.g., religion, socialism, capitalism, feminism, a scientific outlook, or a highly personal philosophy). I expected zealots to be relatively dogmatic, and summed zealot scores were correlated (.43–.52) with DOG responses (Altemeyer, 1996, pp. 209–213).

DOG Scale scores have also predicted clinging to attitudes that scientific evidence has suggested are untenable. In one study, students who were hostile toward homosexuals *and who were also highly dogmatic* were unaffected by a presentation of the mounting evidence that sexual orientation has, to some extent, biological roots. In contrast, other students who were initially just as hostile toward homosexuals, but who scored low on the DOG Scale, shifted their attitudes markedly toward greater tolerance after learning of this evidence (Altemeyer, 1996, pp. 206–207).

In a similar vein, I asked a group of students how they would react to a hypothetical discovery of scientifically validated scrolls that proved that the story of Jesus had been largely borrowed from earlier Greek myths. Persons who had indicated on a pretest that they strongly believed that Jesus was the divine son of God, and who also scored high on the DOG Scale, said such a discovery would have no effect on their beliefs. But students who believed just as much in Jesus's divinity on the pretest, but who scored low on the DOG Scale, indicated that such a discovery would cause a serious change in their beliefs (Altemeyer, 1996, pp. 207–208).

Finally, in 1994 I pitted the DOG Scale against the D Scale (Rokeach, 1960) in a study of the extent to which students (a) had questioned their family religion, (b) had gone to potentially disconfirming as well as confirming sources of information about their religion, (c) presently had doubts about their faith, and (d) would change their religious beliefs if strong evidence showed they were wrong. DOG scores were correlated significantly (–.20 to –.51 in the expected, negative direction) with all of these responses. The only statistically significant D Scale correlation (a +.21 relationship with having questioned the family religion) pointed in the wrong direction (Altemeyer, 1996, pp. 213–214).

Method

The reader will note that most of these studies involved religion. The reason is simple. Although one can find dogmatic scientists, feminists, environmental-

ists, and so on, dogmatism seems to arise most often in religious matters—at least in the populations I dip into. For example, in the study of zealots mentioned earlier (Altemeyer, 1996, 209–213), persons who said their basic outlook was religious proved much more dogmatic than those who built their lives around socialism, capitalism, a personal philosophy—or anything else. Similarly, DOG Scale scores pull in their highest correlations (.60 or better) with the Religious Fundamentalism Scale (RF; Altemeyer, 1996, pp. 157–166; Altemeyer & Hunsberger, 1992). So although the study of dogmatism in other contexts should be pursued, I have found that the easiest way to find dogmatic attitudes is to bring up religion. The present study was accordingly designed to put the empirical validity of the DOG Scale to a further test by seeing whether it could predict reactions to contradictions and inconsistencies in the Bible.

Procedure

The present study, conducted during the autumns of 1999 and 2000, began with a large survey that led to a follow-up experiment. Introductory psychology students at the University of Manitoba ($N = 781$) answered a booklet of materials anonymously, identified only by a secret number of their own choosing. The booklet contained the Religious Fundamentalism, Right-Wing Authoritarianism, and DOG Scales, as well as other material such as questions soliciting the individual's religious background and current level of church attendance. (The vast majority had Christian backgrounds but no longer attended church regularly.) The following two questions about the Bible appeared between the RF and the RWA Scales:

1. To what extent did God write the Bible?

___ Not at all. The Bible is a collection of religious writings including myths, history, and moral teachings. It was produced completely by humans with no divine/supernatural participation.

___ The Bible contains truths that God wants us to know. But God did not “write” or “inspire” the Bible any more than God wrote or inspired Shakespeare's plays.

___ The Bible was divinely inspired. Every word in it came directly from God through God's chosen writers.

2. Does the Bible contain errors, contradictions, or inconsistencies?

___ No. The Bible is free of any errors, contradictions, or inconsistencies.

___ Yes. There are a few errors, contradictions, and inconsistencies in the Bible.

___ Yes. The Bible has many errors, contradictions, and inconsistencies in it.

We shall focus on the students who said, in response to the first question, that every word in the Bible came directly from God, and then said that the Bible is free of any errors, contradictions, and inconsistencies.

When the students turned in their booklets, they received a slip of paper inviting them to participate in a two-phase “second study” starting the following week.

The first phase, the slip said, "will ask you to interpret certain passages from the Bible." The second phase, it continued, would involve a take-home survey due a week later. Experimental credits, it was stated, would be given only to students who completed both phases.

Participants who showed up for Phase 1 of the second study were given a legal-size sheet of paper. On the front were printed, in four side-by-side columns, the different Gospel accounts of the resurrection of Jesus in the order Mark, Matthew, Luke, and John (from the 1989 New Revised Standard Version of the Bible). After reading these, the students were directed to turn to the other side of the sheet, where they were asked to write down their secret number from the booklet study. Then they read a paragraph which noted that the four Gospel accounts of the resurrection seemed replete with inconsistencies and contradictions. Many of these were then cited. Who went to the tomb where Jesus was buried? What time of day was it? Was there a great earthquake? Were there Roman guards at the tomb? Were there angels? How many? Who, if anyone, saw Jesus? Did Jesus let anyone touch him? Did the witnesses tell anyone what they saw? Which apostles, if any, then went to the tomb? And so on. (One finds little agreement among the Gospels on the foregoing points. With regard to the first question, for example, all four accounts have different lists of who went to the tomb.)

After reading this impeaching paragraph, the participants were asked, "How do you explain these apparent inconsistencies and contradictions?" Four choices were offered, plus an invitation to add another if none of these suited the student:

1. There are, in fact, *no* contradictions or inconsistencies in the four accounts. (Please explain, because most people would say there seem to be many contradictions and inconsistencies.)

2. The contradictions and inconsistencies are due to human errors in translation, recording, etc. But God's original inspired account, written by the evangelists, was consistent and error free. (If so, how can one tell what in today's Bible is God's original message, not a later mistake?)

3. There *are* many contradictions and inconsistencies in the four accounts. Each evangelist was reporting what he thought happened, and some of them got details wrong. But this does not change the central message of the accounts: All four Gospels state that Jesus rose from the dead that Sunday morning, and that is what is important. (If so, is the Bible, then, a book containing some central truths, but also many untrustworthy and erroneous details? How, then, can one tell what is the truth, and what is not, in the Bible?)

4. The contradictions and inconsistencies do not surprise me at all, because I consider the story of the resurrection of Jesus a false myth, and myths often develop different versions as they are spread. (If so, why did the Christian church not "clean up" the accounts to make them consistent before making them "gospel"? And how do you explain the fact that so many millions of people believe that Jesus rose from the dead?)

After turning in their explanations of the differing accounts, students received their Phase 2 assignment of this second study, which was to take a copy of the Phase 1 sheet home, discuss the matter with whomever they wished (parents, friends, ministers, or priests were specifically mentioned), write their reconsidered answer to the question, turn it in, and receive their credits. Students were also given the telephone numbers of several on-campus counseling services and the university chaplain's office in case they found the experiment upsetting. I introduced Phase 2 to give the students a copy of the experimental materials that they could take to parents, friends, and ministers for consultation and reassurance, if needed. I also wanted to see how well students would recover any beliefs that had slipped because of the side-by-side presentation of the four Easter stories—which, you will see, shows how badly I anticipated the effect of that presentation.

Results

Of the 781 students who answered the preliminary booklet, 207 said that the Bible is just a collection of human religious writings, 298 responded that God had no more hand in writing the Bible than he had in composing Shakespeare's plays, and 269 said that the Bible was divinely inspired (7 did not answer the first question). Similarly, 139 thought that the Bible is free of any errors, 452 believed that the Bible contained a few errors, and 178 said that it contained many errors (12 students did not answer the second question). Looking at both sets of responses, 113 students (14% of the 781) responded both "God chose every word," and "the Bible is free of any errors, contradictions, or inconsistencies." As one might predict from previous findings (Altemeyer, 1996; Altemeyer & Hunsberger, 1997), these 113 students, compared with the rest of the sample, proved significantly more authoritarian (their mean RWA score was 62% higher: 145.1 vs. 89.7, *SDs* = 41.9 vs. 35.2, respectively), relatively dogmatic (their mean DOG score was 65% higher: 117.6 vs. 71.1, *SDs* = 28.7 vs. 23.6, respectively) relatively fundamentalist in religious outlook (their mean RF score was 73% higher: 139.4 vs. 80.4, *SDs* = 23.4 vs. 25.9, respectively), and, especially, more likely to attend church (444% higher: 4.0 vs. 0.9 times per month, *SDs* = 2.9 vs. 1.4, respectively). They belonged disproportionately to fundamentalist evangelical denominations such as Baptist, Alliance, Pentecostal, and Mennonite.

One hundred and thirty-one students accepted the invitation to serve in the second study, including 31 "God chose every word; perfect Bible" believers (24% of the 131). How did these 31 true believers respond to the differing Gospel accounts of the resurrection? Most of them (17) still insisted there are, in fact, *no* inconsistencies or contradictions in the accounts. Their most common explanation was that the evangelists were like witnesses to an automobile accident; they saw things from different perspectives and reported accordingly. Others gave no explanation of their position or simply wrote responses such as "You have to have faith" or "The Bible is all truth." The other 14 students who had said in the first

study that God wrote every word in a perfect Bible modified this position and split fairly evenly between the “errors in translation” rationale and “the evangelists got some details wrong” explanation.

Does the DOG Scale explain the difference between the “insisters” and the “modifiers”? The 17 who maintained, in the face of challenging evidence to the contrary, that no inconsistencies or contradictions exist in the Bible, had a mean DOG score of 133.5 ($SD = 24.1$). The 14 others, who were also “true believers” in the first study, but who then conceded in the face of the challenging evidence that some inconsistencies or contradictions do exist in the Bible, had a mean DOG score of 114.5 ($SD = 26.2$). The latter mean is, to be sure, relatively high given that the mean DOG score for the initial 781 students equaled 78.0. But it is significantly lower than the 133.5 mean of the insisters by a one-tailed test at the .025 level, $t(30) = 2.09$. In comparison, the insisters and the modifiers were not differentiated as well by their respective scores on the RWA Scale ($M_s = 189.6$ vs. 176.6, $SD_s = 29.1$ vs. 24.7), $t(30) = 1.35$, $p < .09$, and the RF Scale ($M_s = 139.2$ vs. 127.8, $SD_s = 16.2$ vs. 22.8), $t(30) = 1.58$, $p < .07$. But the difference in church attendance ($M_s = 5.88$ vs. 4.00 times per month, $SD_s = 2.5$ vs. 2.0), $t(30) = 2.33$, $p < .02$, proved more highly significant than the DOG difference.

A week later, students completed Phase 2 of the second study simply by returning the Gospel accounts and reactions sheet they had taken home. Almost everyone had the same opinion as before. But 13 of the 131 second-study students failed to return these sheets and, thereby, forfeited the experimental credits they had already earned. Of these thirteen, 8 (i.e., 62%) had been “God wrote every word; perfect Bible” students, who only constituted 24% of the sample in the second study. Most (6) of these 8 had been insisters after they read the Gospel accounts.

Discussion

Dogmatism has been defined here as relatively unchangeable, unjustified certainty. The experiment would seem to have drummed up such certainty in a religious context. Some participants said that (a) every word in the Bible came directly from God and (b) it is free of any contradictions or inconsistencies. Numerous apparent contradictions and inconsistencies in the resurrection accounts were then pointed out. Yet most of the true believers still maintained that there were none; their certainty seems difficult to justify and highly resistant to change.

How can one understand the insisters? Their most common explanation of the differences among the Easter-morning accounts—that the evangelists were like witnesses to an automobile accident and thus wrote things from different points of view—in fact *admits* that contradictions and inconsistencies exist. It just proposes a rationale for their existence. Yet the insisters concluded that this argument shows that imperfections do not really exist. Logically, it makes no sense.

One could infer that the insisters have weak reasoning powers in general. But

however much they may put logic into neutral regarding their own beliefs, they can be competently critical about other people's beliefs (Altemeyer, 1996, pp. 101–104). Instead, I would suggest that the trusted sources who taught them that the Bible was dictated by God and was perfect also provided the “witnesses *rationale*” about its apparent imperfections. Neither the initial teaching nor the inoculation against later challenges was probably subjected to intense rumination by the insisters. *Psychologically*, they proceeded from their faith in a perfect Bible written by God. Some of them wrote that anything disputing the Bible must, therefore, be wrong.

I think we can correctly classify this assertion as dogmatic denial. Such insisters appeared immune, not only to disconfirming scientific evidence about such things as the age of the earth and the evolution of the species but also to disconfirming evidence in the Bible itself. As one of the DOG Scale items says, “I am so sure I am right about the important things in life, there is no evidence that could convince me otherwise.” As another item goes, “There are no discoveries or facts that could possibly make me change my mind about the things that matter most in life.”

Can one glimpse an underlying fear that compels the dogmatism? If you hold that you have found a perfect system of beliefs, have you not painted yourself into a dogmatic corner? Should just one imperfection be admitted, then other things can be untrue as well, and the sublime comfort of knowing you are completely right evaporates. So if the going gets tough, you have to fall back on dogmatic denial. In this study, some students may even have forgone experimental credits they had already earned rather than deal with the matter further.

I am hardly saying that all religious people are dogmatic; that dogmatism cannot be found in other spheres of life; or that religious dogmatism is more disconcerting than dogmatism found in scientists, clinicians, Marxists, conspiracy theorists, or me. Also, one cannot presume that persons who are dogmatic about their religion would also prove dogmatic about less important aspects of their lives. However, the insisters' behavior smacks of dogmatism and, therefore, it can be used to test the validity of the DOG Scale.

How did the scale perform? In the preliminary booklet study involving 781 students, it revealed very large differences between the 113 “God wrote every word; perfect Bible” students and the other 668 participants. In the second study, some “God wrote every word; perfect Bible” students, after reading the Easter-morning accounts, still insisted the Bible had no contradictions or inconsistencies. These participants had significantly higher DOG scores than the other “God wrote every word, perfect Bible” students who conceded that imperfections exist in the Bible.

The RWA and RF Scales produced weaker versions of the foregoing findings, so the DOG Scale was not just riding piggy-back on stronger, more pertinent measures. Frequency of church attendance proved the best predictor of all but presumably would not be related to dogmatism in nonreligious contexts.

Taking stock then, the DOG Scale is a relatively short, internally consistent, reliable measure of dogmatism that is balanced against response sets and appears to be valid. Responses to it correlate with being zealous in a variety of contexts (Altemeyer, 1996, pp. 209–213), and it has predicted dogmatic behavior much better than the widely used D Scale did (Altemeyer, 1996, pp. 213–214). The present results regarding Biblical accuracy replicate the findings of two similar experiments that involved hostility toward homosexuals (Altemeyer, 1996, pp. 206–207) and the impact of disconfirming ancient scrolls (Altemeyer, 1996, pp. 207–208). Persons with strong beliefs on these issues tended to score high on this new measure of dogmatism; among the strong believers, those with the highest DOG scores changed less—if at all—when evidence showed they might well be wrong. I hope that other researchers working on dogmatism find the present results interesting and put the DOG Scale to new tests.

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APPENDIX

The DOG Scale

- X. I may be wrong about some of the little things in life, but I am quite certain I am right about all the BIG issues.
- Y. Someday I will probably think that many of my present ideas were wrong.
1. Anyone who is honestly and truly seeking the truth will end up believing what I believe ($M = 3.92$, $SD = 2.53$).
2. There are so many things we have not discovered yet, nobody should be absolutely certain his beliefs are right ($M = 4.02$, $SD = 2.51$). R
3. The things I believe in are so completely true, I could never doubt them ($M = 4.44$, $SD = 2.38$).
4. I have never discovered a system of beliefs that explains everything to my satisfaction ($M = 3.86$, $SD = 2.52$). R
5. It is best to be open to all possibilities and ready to reevaluate all your beliefs ($M = 3.39$, $SD = 2.16$). R
6. My opinions are right and will stand the test of time ($M = 4.63$, $SD = 2.25$).
7. Flexibility is a real virtue in thinking, since you may well be wrong ($M = 3.12$, $SD = 1.85$). R
8. My opinions and beliefs fit together perfectly to make a crystal-clear “picture” of things ($M = 4.45$, $SD = 2.21$).
9. There are no discoveries or facts that could possibly make me change my mind about the things that matter most in life ($M = 4.57$, $SD = 2.52$).
10. I am a long way from reaching final conclusions about the central issues in life ($M = 3.75$, $SD = 2.21$). R

11. The person who is absolutely certain she has the truth will probably never find it ($M = 4.39$, $SD = 2.23$). R
12. I am absolutely certain that my ideas about the fundamental issues in life are correct ($M = 4.77$, $SD = 2.23$).
13. The people who disagree with me may well turn out to be right ($M = 4.00$, $SD = 2.08$). R
14. I am so sure I am right about the important things in life, there is no evidence that could convince me otherwise ($M = 4.04$, $SD = 2.29$).
15. If you are "open-minded" about the most important things in life, you will probably reach the wrong conclusions ($M = 3.08$, $SD = 1.79$).
16. Twenty years from now, some of my opinions about the important things in life will probably have changed ($M = 3.41$, $SD = 2.15$). R
17. "Flexibility in thinking" is another name for being "wishy-washy" ($M = 3.34$, $SD = 1.99$).
18. No one knows all the essential truths about the central issues in life ($M = 3.23$, $SD = 2.24$). R
19. Someday I will probably realize my present ideas about the BIG issues are wrong. ($M = 5.24$, $SD = 2.10$). R
20. People who disagree with me are just plain wrong and often evil as well ($M = 2.33$, $SD = 1.66$).

Note. The first two statements (X and Y) are not scored. They familiarize the respondent with the content to follow, but they may be omitted. R indicates that the item is worded in the undogmatic direction, for which the scoring key is reversed. Items are answered in a range of -4 to $+4$ and converted to 1 to 9 ($5 = neutral$). Numbers in parentheses show the means and standard deviations of responses by the 781 Manitoba introductory psychology students.

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