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How should we measure Conservatism and Liberalism?

A comparison of single-item and multiple-item scales

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Abstract. Two studies compare single-item versus multiple-item measures of liberal and conservative political worldviews. These two methods are compared by computing correlations between them and several other political trait measures. While both techniques provide valid and robust correlations with other traits, the longer measures provide consistently moderately higher correlations, suggesting that multiple-item scales of these political worldviews constitute more robust measures than single-item measures. Single-item measures are thus likely to yield *underestimates* of relationships between worldviews and other variables. Multiple-item measures are recommended for cross-cultural studies to help assure adequate translation of the worldview concepts, “liberal” and “conservative”.

Numerous studies by the author have explored the relationships between political attitudes measured by questionnaires (McConochie, 2012). Many of these have included measures of liberal and conservative worldviews with a single item each, e.g. “Politically, I consider myself to be conservative”. These items are presented in 5-option Likert scale format (ranging from 1 = Strongly Disagree to 5 = Strongly Agree). In one study of 68 traits, all traits correlated in the expected directions with conservative and liberal worldviews thus measured (Study report #36, McConochie, 2012). 94 percent of these correlations were statistically significant, most at the .01 level.

At the annual convention of the Peace and Conflict Studies Consortium at Oregon State University on February 2, 2013 a vigorous discussion arose in response to the author’s presentation of research data on the relationships between political traits measured with questionnaires. The discussion focused especially on the author’s single-item measures of worldviews. It was argued that the terms “liberal” and “conservative” would have different meanings for different citizens, especially in different cultures, rendering a single-item measure of the sort used by the author of dubious local validity and certainly of international validity.

The author countered that scores of psychological traits have been found to consistently differentiate liberal and conservative worldviews (Jost, four articles) across dozens of nations and many continents, suggesting that these two worldviews are fundamental traits of humans, not simply culture-specific or language-specific constructs. This international consistency also suggests that somehow researchers have been able to find adequate translations of the English terms “conservative” and “liberal”.

A challenge was offered that even within the United States culture the terms “liberal” and “conservative” have different meanings for different citizens and thus have limited research reliability and validity.

The author countered by arguing that if the meanings were completely different for different U.S. citizens then correlations would be zero between the single-item measures of liberal and conservative political orientation and other traits in U.S. studies, such as those of the author. Because such correlations have been substantial and usually significant at the .01 level or better, it seems that the single-item measures are both reliable and valid.

To study the reliability and validity of the single-item measures, two studies were conducted comparing these single-item measures with multiple-item measures.

Study #1:

Method.

By coincidence, the author had recently created two several-item measures from miscellaneous items included in the author’s study cited above. The study sample was 151 community college and university students. This study involved four questionnaires that measured over 60 politically-relevant traits. The miscellaneous items had been included in the last of the four 200-item questionnaires. They were items that were expected to represent conservative and liberal worldviews but which didn’t seem to fit other scales created for the study.

A couple of weeks before the conference the author had factor analyzed these clusters of items out of curiosity. This yielded many reliable measures. One measure from the conservative cluster and one from the liberal cluster had been tentatively labeled general measures of the conservative and liberal worldviews respectively.

The 12-item conservative general worldview measure is presented in Figure 1 and the 11-item liberal measure in Figure 2.

Figure 1. General conservative attitude scale. (“Con-12” scale.)

Mean	Range	Standard Deviation	Alpha reliability	Correlation with Conservatism, Liberalism	Frequency percentage (mean scores => 3.5)
1.68	1.00 – 4.08	.63	.93	.35**, -.19*	2%

1. What my leaders tell me is the truth *is* the truth.
2. People in other states are more likely to carry infectious diseases than people in my state.
3. People in other towns or cities are more likely to carry infectious diseases than people in my town or city.
4. It is smart for my preferred political leaders to lie and cheat if necessary to win elections and hang onto political power.
5. It is wise strategy for leaders of my preferred political party to keep those citizens away from the polls who might vote against us.

6. It is okay for my political candidates to run down and discredit their opponents during campaigns for office.
7. I like movies about keeping other nations in their place by defeating them in war.
8. In business, as in sports, profit and winning is more important than sportsmanship or fairness.
9. In political campaigns, winning justifies lying and conniving.
10. In political campaigns, belittling your opponent, even with lying, is justified if it will help you win.
11. In times of war, it is worthwhile to use propaganda to demonize enemies.
12. Even in times of peace, it is more important to dominate other nations than to make friends with them.

While the content of the items in the conservatism scale do not represent some commonly cited characteristics of conservative concerns, such as preserving established proven political systems, resisting change in political systems, or honoring fundamentalist religious beliefs, they do touch on several features associated with conservatism, such as respect for authority (item 1), a militaristic foreign policy (items 7 and 11), a competitive business focus (items 8 and 12), and devious political campaign practices (item 5). The items about disease phobia and political lying and conniving have been found by the author to correlate significantly and positively with conservatism.

In spite of the wide diversity of content of these items, this scale is very reliable, with an Alpha coefficient of .93, strongly suggesting that it is measuring a single underlying concept, presumably conservatism, as the total score of all the items in the miscellaneous conservative items correlates positively with conservatism and negatively with liberalism.

Figure. 2. General liberal worldview scale. (“Lib-11” scale)

Mean	Range	Standard Deviation	Alpha reliability	Correlation with Conservatism, Liberalism, etc.	Frequency percentage
4.07	1.00-5.00	.66	.92	-.32**, .32**	83% (mean scores => 3.5)

1. I worry about the welfare of future generations.
2. I feel a sense of obligation to protect the environment for other species and for future generations of humans.
3. I enjoy traveling, visiting with strangers and learning about people different from myself.
4. I would enjoy traveling to foreign lands.
5. I believe scientists have much to teach us about how to improve our nation.
6. I think government should fund research to figure out how to improve our nation and our government.
7. I sometimes think about how our community and government could be much better.
8. My opinions and ideas about improving our nation are as important as those of our leaders.
9. I prefer to decide for myself what is best for our nation, rather than simply trusting our leaders to decide.
10. I am more inclined to trust rather than fear a stranger from a foreign land.

11. I like stories and movies about exploring and discovery.

The content of the liberal scale (Figure 2) is perhaps more consonant with traditional concepts of liberalism, as it reflects interest in improving and changing government, concern for the environment and future generations and endorsing the citizen voice versus political leader authority in setting government policy. This scale is also very reliable (Alpha .92), consistent with the notion that it too is measuring a single underlying dimension.

Results, Study #1.

To compare these several-item measures with the single-item measures, which were also used in the research project from which this data was taken, Pearson product moment correlations were computed between the four worldview measures and many of the other trait measures in the data file, as presented in Table 1.

Table 1. Pearson product moment correlations between single-item and multiple item worldview measures and other traits.

Trait	Con-1	Con-12	Absolute Difference	Lib-1	Lib-11	Absolute Difference
Disease phobia	.45**	.75**	+.30	-.17*	-.42**	+.25
Natural resource consumption	.51**	.54**	+.03	-.36**	-.61**	+.25
Sustainable community promotion	-.40**	-.52**	+.12	.43**	.70**	+.27
Conservative tribal beliefs	.43**	.48**	+.05	-.16	-.26**	+.10
Liberal tribal beliefs	-.33**	-.38**	+.05	.33**	.67**	+.34
Political lying and conniving	.37**	.87**	+.50	-.17*	-.50**	+.33
Groupthink	.48**	.72**	+.24	-.29**	-.55**	+.46
Con-12	(.35**)	(1.00)		(-.19*)	(-.59**)	
Religious fundamentalism	.55**	.48**	+.07	-.39**	-.39**	.00
Political fear	.52**	.54**	+.02	-.19	-.40**	
Lib-11	(-.32**)	(-.59**)		(.32**)	(1.00)	
Humanity concern	-.22**	-.47**	+.25	.26**	.72**	+.46
Means	.43 (absolute value, exclusive of Con-12 and Lib-	.58 (absolute value, less Con-12 & Lib-11 r's)	+.16	.44	.68	+.25

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The longer measures of the conservative and liberal worldviews provide consistently stronger correlations with other variables, on average .16 stronger for conservatism and .25 stronger for liberalism.

Discussion, Study #1.

Multiple-item measures of the liberal and conservative worldviews are indeed slightly better than single-item measures in the sense that they yield slightly higher correlations between the worldviews and other variables. However, this does not invalidate the single-item measures of liberalism and conservatism. For example, most of their correlations with traits in this study are significant at the .01 level. These findings seem to confirm that single-item measures are indeed valid, but are likely to provide *underestimates* of the strength of the actual relationships between these political worldviews and other traits.

The results of this study suggest that multiple-item measures of the liberal and conservative worldviews can be valuable for several reasons. They provide a method for helping to get around the language difficulties of finding single words with equivalent meaning of “conservative” and “liberal” across many different languages and cultures.

Multiple-item measures are also valuable because the concepts “liberal” and “conservative” appear to refer to two rather complex trait clusters. An increasing body of research is supporting the notion that these worldviews are multifaceted and are genetically-grounded in species survival mechanisms. This multifaceted nature appears reflected in the substantial correlations with other traits in the present study.

Thus, any given lay citizen is unlikely to appreciate the many facets of these worldviews or understand in accurate detail to what extent his or her personal worldview reflects either of these. So, it would be understandable that a citizen’s response to a single-item measure of each of these worldviews might not be a highly reliable index of his or her actual complex worldview makeup. This limited self-perception hypothesis seems supported by the modest correlations between the single and multiple-item measures of each worldview, as presented in Table 1. Lib-1 and Lib-11 correlate .32** with each other. Con-1 and Con-12 correlate .35**.

Researchers could create other scales of 6 to 10 items, choosing their content to match their specific preferred definitions of “conservative” and “liberal”. It would be interesting to create several such scales, by different researchers independently and compare their power in correlating with other traits. It is the present author’s hunch that all such scales will have high reliability and yield correlations with other variables of similar validity, overall.

The fact that the present scales of 12 and 11 items of relatively diverse content yield very reliable measures suggests that they are indeed measuring underlying political worldviews and worldviews of very diverse content. Their consistent correlations with other traits that correlate significantly with single-item measures of conservatism and liberalism suggest that the long scales are also measuring these traits. The fact that their correlations are consistently somewhat higher with these other traits demonstrates that the longer scales are slightly more valid than their single-item counterparts.

In retrospect, the conference challenge of the author's research measures has been a blessing in disguise. It stimulated a fruitful analysis of data yielding interesting ideas.

Method; Study #2.

To further explore the issues raised in Study #1, two new 10-item measures of the liberal and conservative worldviews were created from data in an unpublished study by the author that uses six-item measures for each of the 20 traits (10 liberal and 10 conservative) measured in the 800-item study cited above (McConochie, 2010). This study measured the same 10 dimensions measured in the 800-item study referenced above but with briefer scales of 6 items for the conservative side and 6 for the liberal side of each dimension. These items were taken from the larger original study. Other variables were also measured with questionnaire items. 55 community college students served as the subjects.

Ten items were selected to create a measure of the liberal worldview, as presented in Figure 3.

Figure.3. Second liberal worldview scale. ("Lib2-10" scale).

Mean	Range	Standard Deviation	Alpha reliability	Correlation with single-item measures of Conservatism, Liberalism	Correlation with 10-item measure of Conservatism	Correl. With single-item Lib minus Con score	Correl. With 10-item Lib minus 10-item Con score	Frequency percentage (=> mean of 3.5)
3.90	2.40-5.00	.55	.79	-.40**, .43 **	-.68**	.49**	.90**	78%

1. In general, religion and government should be kept separate.
2. I identify with all of humanity.
3. Big money should be kept out of campaign contributions, so that elected officials aren't indebted primarily to their biggest contributors.
4. Women should have primary say in their access to various forms of birth control of their choice.
5. Citizens via referendum vote should be able to terminate wars that their nation is waging.
6. I think cooperation with people from other lands is better than competition against them.
7. Government should design, fund and administer a national health care program for those who can't afford private care.
8. My national government should support the United Nations with money and cooperation.
9. Government should provide incentives and funding to develop alternatives to fossil fuels to power personal and commercial vehicles without contributing to global warming.
10. Government should enforce anti-trust laws to prohibit large corporations from dominating society to the detriment of the general public.

Similarly, a ten-item measure of the conservative worldview was created, as presented in Figure 4.

Figure.4. Second conservative worldview scale. (“Con2-10” scale).

Mean	Range	Standard Deviation	Alpha reliability	Correlation with single-item measures of Conservatism, Liberalism	Correlation with 10-item measure of Liberalism	Correl. with single-item Lib minus Con score	Correl. With 10-item Lib minus Con score.	Frequency percentage (=> mean of 3.5)
2.27	1.20-3.60	.63	.78	.54**, -.60**	-.68**	-.67**	-.93**	7%

1. It would be good if all public school children began their school day with a prayer.
2. Many people of other nations are deliberately trying to harm our nation.
3. Government should primarily serve the highest social class.
4. Homosexual men are an unnatural disgrace to their group.
5. Once in a war, we should stay in it until we win.
6. Government should primarily assure an environment in which businesses can make profits.
7. I support the National Rifle Association's interest in citizen access to firearms.
8. Ideally, physicians who favor abortions should not be permitted to practice in our nation.
9. Our nation is better than all other nations.
10. I am not concerned about global warming.

The correlations between these ten-item worldview measures and the many other traits included in this study are presented in Table 2.

The traits in Study 2 are described briefly in Figure 5.

Figure 5. Scale Names and Sample Items. Note: the complete questionnaire can be viewed by completing it online as Study 15 at the author’s web site or contacting the author for a copy.

1 Conservative (Fundamentalist) Religious Beliefs	There is only one source of absolute truth, the holy scriptures or writings of my religion.
2 Liberal (Kindly) Religious Beliefs	In general, religion and government should be kept separate.
3. Social group interests –Conserv.	Government should stay out of the way of big business or help big business succeed.
4. Social group interests – Liberal	Groups to which I belong should be fair and just to everyone in every nation.
5. Preferred government type – Con.	Government should primarily serve the highest social class.

6. Preferred government type – Lib.	Big money should be kept out of campaign contributions, so that elected officials aren't indebted primarily to their biggest contributors.
7. Gender attitudes – Con.	With few, if any, exceptions there should be no birth control measures or abortions for the women of our group.
8. Gender attitudes – Lib.	I think that women deserve just as much respect as men in all matters.
9. Foreign policy – Con.	War is necessary and desirable to keep a nation united, focused and fully employed.
10. Foreign policy – Liberal	In foreign policy, our nation should agree to international arms control and pollution control treaties to reduce the dangers from wars, global warming and destruction of forests, ocean fisheries, etc.
11. Economics - C	Government should primarily assure an environment in which businesses can make profits.
12. Economics – L	Citizens who have above-average incomes should share them (via taxes) with citizens who make less.
13. Civilian violence management – C	I support the National Rifle Association's interest in citizen access to firearms.
14. Civilian violence management – L	I think cooperation with people from other lands is better than competition against them.
15. Group relations – C	My favored political party should dominate state and national politics to the exclusion of other parties, if possible.
16. Group relations – L	A nation's government should strive to provide public transportation, job opportunities, and access to housing, food, clean water and health care, and protection from violence to all of its citizens of every social class.
17. Government authority source – C	I am totally devoted to my preferred government and religious leaders.
18. Government authority source – L	We citizens should be less focused on unquestioning acceptance of political leaders' decisions and more concerned with the government services needed by our citizens.
19. Environment attitudes – C	I am not concerned about global warming.
20. Environment attitudes – L	My national government should fund and encourage research on the design of sustainable communities.
Disease Phobia	People of different language, skin color or nationality are more likely to carry disease than people like me.
Lying and conniving	It is smart for my preferred political leaders to lie and cheat if necessary to win elections and maintain political power.
Groupthink	What my leaders tell me is the truth <i>is</i> the truth.
Tribal attitudes - C	I would strongly support efforts to train our young men in use of war weapons.
Tribal attitudes – L	We should have occasional friendly meetings with neighboring tribes to dance, sing and arrange marriages between our young people.

The correlations are presented in Table 2.

Table 2. Correlations between single-item and multiple item worldview measures and other traits.

Trait	A	B	C	D	E	F	G	H	I
	Con1	Con2-10	Absolute Difference	Lib-1	Lib2-10	Absolute Difference	L10-C10 score	Col B & E absol. mean	Absol. diff. Cols G / H
1. Religion C Fundamentalism	.50**	.65**	+ .15	-.34*	-.32*	+ .02	.544**	.485	+ .059
2. Rel L Kindly beliefs	-.52**	-.62**	+ .10	.47**	.62**	+ .15	-.677**	.620	+ .057
3. Soc. Gp belonging C	.31*	.70**	+ .39	-.56**	-.52**	+ .04	.674**	.610	+ .064
4. Soc. Gp. B L	-.45**	-.57**	+ .12	.54**	.77**	+ .23	-.723**	.670	+ .053
5. Gov Type C	.56**	.62**	+ .06	-.27*	-.62**	+ .35	.674**	.620	+ .054
6. Gov Type L	-.34*	-.44**	+ .10	.32*	.79**	+ .47	-.659**	.615	+ .045
7. Gender C	.43**	.81**	+ .38	-.46**	-.60**	+ .14	.778**	.705	+ .075
8. Gender L	-.37**	-.55**	+ .18	.32*	.59**	+ .27	-.620**	.570	+ .050
9. For pol C	.48**	.72**	+ .24	-.39**	-.66**	+ .27	.757**	.690	+ .067
10. For Pol L	-.37**	-.62**	+ .25	.48**	.79**	+ .31	-.765**	.705	+ .060
11. Econ C	.52**	.76**	+ .24	-.45**	-.69**	+ .24	.795**	.725	+ .070
12. Econ L	-.49**	-.72**	+ .23	.47**	.87**	+ .40	-.866**	.795	+ .068
13. Violence C	.44**	.74**	+ .30	-.50**	-.53**	+ .03	.705**	.635	+ .070
14. Violence L	-.50**	-.60**	+ .10	.46**	.76**	+ .30	-.731**	.680	+ .051
15. GpRelat C	.49**	.66**	+ .25	-.49**	-.71**	+ .22	.749**	.685	+ .064
16. GpRelat L	-.37**	-.61**	+ .24	.33*	.85**	+ .52	-.787**	.775	+ .012
17. GovAuth C	.52**	.70**	+ .18	-.34*	-.63**	+ .29	.732**	.665	+ .067
18. GovAuth L	-.46**	-.75**	+ .29	.39**	.83**	+ .44	-.858	.790	+ .068
19. Environ C	.60**	.80**	+ .20	-.50**	-.69**	+ .19	.816	.745	+ .071
20. Environ L	-.45**	-.71**	+ .26	.47**	.80**	+ .33	-.823	.755	+ .068
Disease Phobic	.29*	.60**	+ .31	-.34*	-.60**	+ .26	.653	.600	+ .053
Lie/connive	.20	.44**	+ .24	-.12	-.53**	+ .41	.526	.485	+ .041
Groupthink	.24	.43**	+ .19	-.05	-.38**	+ .33	.443	.405	+ .038
Tribal C	.16	.55**	+ .39	-.49**	-.38**	+ .10	.511	.465	+ .046
Tribal L	-.16	-.35**	+ .19	.41**	.60**	+ .19	-.510	.475	+ .035
Means:			+ .22			+ .25	+ /-.695		+ .051
Con-1		.54**			-.40**				
Lib-1		-.60**			.43**				
Con2-10					-.67**				
Lib2-10		-.67**							

As for Study #1, the table includes comparisons between single-item worldview measures (Con-1, Lib-1) and the ten-item scales (Con2-10, Lib2-10). Difference scores are provided. The mean differences between the single-item worldview measures and the 10-item measures are .22 and .25 for the conservative and liberal worldviews respectively, not much different than the mean differences in the first study (.16 and .25). The 10-item measures provide moderately higher correlations, perhaps because they are more reliable and robust measures of worldviews than single-item measures. Single-item measures in this study usually provide significant correlations with other traits, but 10-item scales provide firmly significant correlations, especially for the last five traits listed, Disease Phobia and following.

In addition, out of concern for possible response bias confounding because the scales include no reverse-scored items, a difference score (L10-C10 diff) was computed (Lib2-10 minus Con2-10). This issue of possible response bias was raised kindly by Dr. Lewis Goldberg of the Oregon Research Institute, with whom the results of Study #1 were shared. He suggested the difference score to help control for this possible distortion of correlation results.

The correlation between this difference score and each scale is provided in column G. This is then compared with the mean of the correlations for the ten-item scales, Columns B and E. The absolute difference between these two (columns G and H) is presented in Column I. The mean absolute correlation between the ten-item worldview scales and the several traits is .695. The mean of the differences between these correlations and those computed by the difference score suggested by Goldberg is .051. This is a slight increase in validity, but less than ten percent ($.051 / .695 = .073$).

The single-item scales correlated with the ten-item scales .54** for conservatism and .43** for liberalism. This is higher than in study #1 (.35** and .32**). This higher correspondence between the single-item and multiple-item measures in the second study may be a result of the scale content, which perhaps was more consonant with “traditional” concepts of the two worldviews than was the content of the multiple-item measures of study #1.

Discussion, Study #2.

The basic results for Study #2 are similar to those for Study #1. Multiple-item measures of liberalism and conservatism correlate somewhat stronger with other variables than do single-item measures. However, both measures provide correlations that are more often than not significant, and for many traits at the .01 level. Of special value, however, are the significant correlations provided by the ten-item worldview measures with the last five traits: disease phobia, lying and conniving, groupthink, and conservative and liberal tribal beliefs. All of these ten correlations are significant at the .01 level, whereas only two of the ten correlations were significant at this level when run on the single-item worldview measures.

The common procedure for avoiding possible response bias is to include some con-trait (reverse-scored) items in questionnaire scale measures of traits. This concern has origins in criticism of scales without reverse-scored items that showed substantial positive correlations between fascism/conservatism and authoritarianism, religious fundamentalism, etc. several decades ago. The critics argued that these correlations might have been spuriously high in reliability and validity secondary to response bias. Bob Altemeyer was eventually successful in developing a scale measure of authoritarianism (his Right Wing Authoritarianism scale) that *did*

have reverse-scored items. It showed the same unflattering (for conservatives) correlations, implying that response bias worries had been unfounded and could not be used as an excuse for ignoring the correlations between conservatism and unflattering traits, the list of which has increased substantially in the interim.

The present findings suggest that, if anything, using scales without con-trait items, as is true for all the scales in both Studies 1 and 2 of the present paper, provides *underestimates* of the relationships between measures. While many of the present findings might be interpreted by conservative readers as unflattering to conservatism, e.g. for traits such as disease phobia, lying and conniving and groupthink, they would not seem likely to gain comfort by hoping for lower correlations by replication with scales including con-trait items.

This conclusion is consistent with similar findings by the author in a study of warmongering-endorsement which showed that validity was not meaningfully different for 44-item scales of this trait with and without con-trait items. (McConochie, article #11, Politicalpsychologyresearch.com).

And conservative readers who are uncomfortable with data about unflattering traits are encouraged to withhold judgment on two further grounds. The first is that mean scores tend to be quite low on the unflattering traits with which conservatism correlates. Details on this for the studies used in present paper are available on the author's web site. (see Publications page, Politicalpsychologyresearch.com, article # 30).

This phenomenon is also evident in the two multiple-item scales used to measure conservatism in Studies 1 and 2 of the present paper. These scales include some unflattering items, e.g.

“In political campaigns, belittling your opponent, even with lying, is justified if it will help you win.” (Study #1)

“Homosexual men are an unnatural disgrace to their group.”(Study #2)

The mean for the first scale is 1.68, in the “Disagree” range on the Likert scale, and 2.37 for the second scale, also essentially in the “Disagree” range.

Strong liberals and strong conservatives are actually rather close together in terms of mean scores on virtually all meaningful measures of political discourse in the two studies by the author mentioned immediately above. These include more than sixty trait measures.

While the present correlation coefficient data is consistent with that of many other studies and may make liberals and conservatives appear to be worlds apart, this is only one facet of a complex, fascinating and ultimately quite encouraging story.

Overall Conclusions.

The liberal and conservative worldviews can be easily measured even with single-item scales for use in questionnaire trait studies. These worldviews correlate substantially with a wide variety of trait or attitude measures across many and perhaps all major dimensions of political discourse, such as religious beliefs, foreign policy, gender attitudes, and primitive tribal beliefs,

as well as groupthink, and even lying and conniving in politics. Such studies yield interesting insights into the human political mind.

Single-item measures of political worldviews appear to be valid but tend to slightly underestimate the strength of relationships between worldviews and other traits. To the extent that researchers can include multiple-item measures rather than single-item ones, they are likely to enjoy more robust findings. Thus, multiple-item scales of worldviews are recommended.

The present studies do not support worry about the possible inferiority or unfairness of all pro-trait item scales as compared to scales that include con-trait items.

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