IMPROVING VALUE RATINGS: AN ASSESSMENT OF THE RANK-THEN-RATE APPROACH

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ABSTRACT

This article looks at the ability of a rank-then-rate measurement procedure to increase discrimination in value ratings. We examine this procedure in two different population segments (college students and their parents) across four Western countries. Findings suggest this procedure is effective with college students, but not their parents.

INTRODUCTION

Marketing research findings over the last twenty years yield consistent evidence of links between personal values and human attitudes, opinions and behaviors. Although there are a number of unresolved measurement issues, marketing researchers tend to rely on value ratings, rather than value rankings, because ratings provide interval-level data which are suitable for parametric statistical analysis. This paper focuses on a measurement correction procedure (rank-then-rate) which has been employed by some marketing researchers (Crosby, Bitner, and Gill 1990; McCarty and Shrum 1993; Munson 1984; Schwartz 1992) for the purpose of improving value rating discrimination by respondents. Proponents contend that a preliminary ranking task sensitizes respondents to their existing value priorities and thus enables them to provide better (i.e., more discriminating) ratings data. However, this approach can be fairly cumbersome and its efficacy has not been empirically tested.

The issue of ratings discrimination is central to both the measurement and theory of human values. It is crucial that value measurement methods effectively tap into respondents' belief system hierarchies by eliciting a meaningful and accurate ordering of value priorities from them. Further, it is important to obtain strong discrimination in value ratings in order to assess the effect of values on criterion variables. Value measure effectiveness can be assessed by evaluating the amount of differentiation in rating responses as indicated by levels of end-piling (characterized as the respondents' tendency to use only a few response categories located at the upper end of the importance scale) and ties (characterized by the respondents' tendency to rate all values as equally important) (Krosnick and Alwin 1988; McCarty and Shrum 1993). In this paper, we look at the effectiveness of the rank-then-rate method for reducing both end-piling and ties in value ratings data.

HYPOTHESES

To test the effectiveness of the rank-then-rate procedure, we compare the level of non-differentiation (ties) in value ratings and the amount of end-piling obtained from two measurement procedures: the rank-then-rate procedure versus a rate-only procedure. The rank-then-rate approach used in this study required one set of respondents to rank values in terms of importance in their own lives, and later to rate the same values after completing some unrelated cognitive tasks. The rate-only procedure, which was assigned to a second set of respondents, required them to simply rate the same list of values. We examine this issue across four countries, with each country representing a replication effort, in order to assess the generality of the findings.

Non-differentiators are defined here as respondents who provided the same score for more than half of the nine values they were asked to rate (that is, those respondents with five or more ratings ties). Although the existent literature does not provide a consistent classification criterion, we reasoned that respondents

who did not distinguish between even half of the total number of objects they were asked to rate were not supplying meaningful information about their values. For the purpose of hypothesis testing, if the rank-then-rate procedure is effective, we should find fewer ratings' non-differentiators among respondents assigned to the rank-then-rate condition than in the rate-only condition.

As a second test of the rank-then-rate procedure, we compare the level of end-piling in the value ratings obtained with rank-then-rate with those obtained using rate-only. If the rank-then-rate procedure effectively improves discrimination in value ratings, we should find significantly less end-piling (i.e., rating all the values as highly important) in the ratings of respondents assigned to this condition. We utilize mean importance ratings to assess the level of end-piling because the primary concern is that all of the responses are at the very top of the scale, which results in very high and non-distinguishable ratings (Schwartz 1992). This may be especially prevalent with value ratings because values tend to be inherently desirable. Thus, end-piling occurs when respondents "concentrate their ratings at the high end of the importance scale and therefore have higher mean ratings" (Krosnick and Alwin 1988, p. 5); i.e., 8 and 9 on a nine-point rating scale.

METHOD

In this study we examine the above hypotheses using the List of Values (Kahle 1983). All forms of this scale have been validated in the United States, as well as in other cross-cultural research. A nine-point value rating was used, as recommended by Kahle (1983).

Data were collected from 788 undergraduate business or communications students and 421 of their parents residing in four countries (the U.S., France, Denmark and Germany). In all cases, a faculty member at the relevant university was involved in questionnaire administration as well as questionnaire translation and back translation (where necessary). Translated questionnaires were fully pretested. Students were randomly assigned to either the rank-then-rate condition or the rate-only condition, and completed the questionnaire in class on a voluntary basis -- with few refusals. Respondents were given a parent questionnaire and instructed to ask their same-gender parent to complete it (in order to maintain approximately the same gender distribution between the student and parent samples). If this parent was not available, then the other parent was to be asked to complete the instrument. Parents' response rates were: United States = 42%, France = 67%, Denmark = 57%, Germany = 82%.

Respondents in the rank-then-rate groups ranked the importance of the nine values on the LOV, and then completed an interruptive task before rating the same nine values. The purpose of the interruptive task was to minimize consistency effects. Rate-only respondents simply rated the LOV values.

Although the samples were not nationally representative, they were matched on one aspect: students were all enrolled in a business course at a university or college, and parents had a child enrolled in a university or college. Sample profiles show reasonable comparability. For example, mean ages were very similar within the parent and student groups. U.S. parents were the youngest--50.6 years while French parents were the oldest--51.5 years. Student mean ages ranged from 21.9 in Germany to 23.3 in the U.S. Sample sizes ranged from 189 in the U.S. to 56 in France for the parents, and 450 in the U.S. to 84 in France for the students.

RESULTS

To test the first hypothesis, respondents were grouped by the degree to which they discriminated between value importance ratings. College student respondents and their parents were analyzed separately, since there are significant developmental differences between these two groups which may affect results (Erikson 1968; Krosnick and Alwin 1989; Sears 1983). For each respondent group (parents and students) and each procedure (rank-then-rate and rate-only), the number of non-differentiators was compared to the number of differentiators by a series of Chi-square analyses. Results are shown in Table 1, and suggest only partial support since the rank-then-rate approach significantly reduces the number of non-differentiators in only the student sample.

TABLE 1
Non-Differentiators by Order of Measure

Country	Percentage of Non-Differentiators	
	Students	Parents
U.S.		
rank-then-rate	18.2	22.3
rate-only	49.8	29.5
Chi-square, df	48.5, 1	.91, 1
p-value	**.006**	.341
France		
rank-then-rate	4.4	19.2
rate-only	17.9	23.3
Chi-square, df	2.7, 1	.002, 1
p-value	**.101**	.963
Denmark		
rank-then-rate	12.0	18.4
rate-only	30.4	21.6
Chi-square, df	5.69, 1	.003, 1
p-value	**.017**	.954
Germany		
rank-then-rate	14.1	14.5
rate-only	45.8	15.2
Chi-square, df	13.4, 1	.000, 1
p-value	**.0003**	1.00

Next, to assess the degree of end-piling, importance ratings for each value were compared in the two conditions using t-tests. Once again, partial support is found. Students in all countries engaged in less end-piling when the rank-then-rate procedure was administered. In total, 17 of the 36 (4 countries x 9 values) t-tests were significant at $p < .05$, which is considerably above chance based on a binomial distribution. This effect was strongest in the U.S. and German samples. For parents, however, only 4 out of the 36 mean value ratings were significantly higher in the rank-then-rate condition.

DISCUSSION

We can offer some tentative reasons for the divergence of findings between the two sample groups. College students, as a group, are more likely to be low-discriminators on a rating-only task because they have not had as many occasions to examine and articulate their own values (Kilby 1993; Sears 1983). For these respondents, the preliminary ranking task may indeed sensitize them to their underlying value hierarchies. An alternative explanation may be that parents, who completed the survey at home, had more time to read through the entire instrument before rating their values and that this process had the same effect as the preliminary ranking task.

The findings have important methodological implications for value research. Ranking may be a difficult, time-consuming task that can result in increased levels of repsond fatigue, inattention and lack of cooperation. However, it appears fruitful to have students rank their values before rating them. Other less time-consuming approaches, such as such as selecting the most important and least important values (cf. McCarty and Shrum 1993; Schwartz 1992) may also be effective and should be examined. Finally, these findings indicate how important it is to understand the sample population being studied and to recognize the interaction that might occur between the population and the measurement instruments and procedures used. This issue has implications beyond

value research and needs attention in regard to other areas of study as well, such as attribute importance measures and conjoint studies.

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