Scale-Checking Styles on the Semantic Differential Among Older People

Jean Drevenstedt, PhD¹

Two groups of older (60+) respondents, matched on age but differing in educational level, and a group of young university undergraduates were compared for scale-checking styles on the Semantic Differential. Subjects rated six concepts pertaining to stages of life on 27 pairs of bipolar adjectives. Although the three groups did not differ in frequency of endorsing extreme scale positions, the less well-educated older group showed a greater tendency to use fewer intermediate scale positions and more neutral midpoint positions than either the undergraduates or the group of retired professors emeriti. Data were interpreted as a propensity for older people to emphasize concrete, well-anchored scale positions in making ambiguous multiple-point scale discriminations, a tendency related to educational background but not to age per se.

The hypothesis was made that older people, when confronted with the ambiguity and unfamiliarity of a task such as rating bipolar adjectives on a 7-point Semantic Differential scale (SD; Osgood, Suci, & Tannenbaum, 1957) would respond by a relatively restricted usage of scale positions—specifically, a tendency to over-emphasize the neutral scale position in preference to other scale points. Such scale preferences, it was hypothesized, would reflect educational level rather than aging processes per se, inasmuch as the neutral response, or “path of least resistance,” would represent a strategy of cautious avoidance of a rather perplexing verbal task, behavior related more to educational background than to age. Although Heise (1969) has reviewed a number of studies suggesting that scale-checking styles on the SD are related to a variety of subject variables, little is known of possible response biases on the SD that may be pertinent especially to the older respondent.

Botwinick (1973) has summarized a number of investigations in the cognition area indicating that older people experience discomfort with the new and uncertain and may respond with increased cautiousness and restraint. In analyzing opinion survey data, Gergen and Back (1966) found that “don’t know” and “no difference” responses increased with respondents’ age, with responding neutrally possibly a strategy among aged people for avoiding the situation. There is evidence, however, that age-related differences in neutrality and in cautiousness may be removed when educational levels between young and old subjects, which typically put the older person at a disadvantage, are controlled. Reanalysis of a number of opinion surveys (Glenn, 1969), for example, failed to support a correlation of neutral responding with aging, when differences in educational level between young and old were controlled. Edwards and Wine (1963) found that cautiousness, although it increased with age, was no longer age-related when intelligence levels were matched for men of a wide age range. Other data have shown a relationship between verbal ability and cautiousness (Wallach & Kogan, 1961) and educational level and an avoidance type of cautiousness (Botwinick, 1966) in older subjects, the later study indicating that a very high level of education tended to reduce an avoidance type of cautiousness in later life.

METHOD

Subjects.—Three groups of 26 subjects each (16 male; 10 female) were composed as fol-

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The community older sample presumably reflected a diversity of backgrounds; there was no claim that they were necessarily representative of older community residents generally or even of senior-citizen program participants. Age ranges of both Groups OP and OC were: 1, age 60-65; 7, age 66-70; 11, age 71-75; 7, over age 75. Although no specific check was made, all groups were composed predominantly of white subjects with few, if any, exceptions. Of the retired professional sample contacted by mail, 50% completed the SD ratings; Group OC volunteered upon personal contact through their clubs.

**Scales and procedure.**—Subjects responded to 27 SD scales on six randomly ordered concepts (rerandomized at intervals throughout presentation): Young Man, Middle-Aged Man, Old Man, Young Woman, Middle-Aged Woman, Old Woman. Concepts were assumed to have comparable experiential salience for both groups of older respondents, regardless of educational background. Although Group Y responded to the standard SD 1-to-7 position format, scale format was slightly modified for both older groups to facilitate their responding by the retention of similarly numbered rating categories for both bipolar adjectives (1, 2, 3). Each concept was typed on a separate sheet, with an explanation that the purpose of the study was to measure the meanings that various stages of life have for people. Any subject omitting more than 5% of the total possible 162 responses was deleted, which resulted in an initial deletion of two persons among the 52 older subjects, 17 (33%) omitted one or more responses for a total of 36 omissions in the 8424 older people’s responses; among the undergraduates, 3 omissions occurred. Since Bartlett’s test of homogeneity of variance revealed heterogeneous variances in the scoring categories, a square root transformation of the data was done when inspection showed a tendency for means and variances to be correlated in the E scores (Table 1).

A one-way analysis of variance showed a significant difference (F = 11.68, df = 2, 75, p < .01) among the three subject groups on I scores, with subsequent t tests indicating significantly greater average usage of I responses by Group Y than Group OC (t = 3.24, df = 50, p < .01); and by Group OP than Group OC (t = 3.83; df = 50, p < .01). Groups Y and OP were comparable in I responses (X = 10.13 vs. 10.56). A significant difference (F = 7.43; df = 2, 75, p < .01) was also found among subject groups in frequency of N responses. The average number by Group OC was higher at p < .01 than either Group Y (t = 3.51, df = 50) or Group OP (t = 3.23, df = 50), although there was no significant difference between Group Y (X = 4.76) and Group OP (X = 4.27). Over-all, there was no significant difference among the three subject groups in the propensity to use E positions (F = 1.52, df = 2, 75).

Table 2 shows that Groups Y, OP, and OC were all relatively consistent across the six

<table>
<thead>
<tr>
<th>Score Category</th>
<th>Extreme</th>
<th>Neutral</th>
<th>Intermediate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw</td>
<td>Transformed</td>
<td>Raw</td>
</tr>
<tr>
<td>Young</td>
<td>33.73</td>
<td>24.15</td>
<td>4.76</td>
</tr>
<tr>
<td>SD</td>
<td>28.05</td>
<td>12.70</td>
<td>1.27</td>
</tr>
<tr>
<td>Older</td>
<td>24.40</td>
<td>12.70</td>
<td>4.76</td>
</tr>
<tr>
<td>professional</td>
<td>20.78</td>
<td>10.45</td>
<td>2.52</td>
</tr>
<tr>
<td>Young</td>
<td>46.19</td>
<td>44.38</td>
<td>6.34</td>
</tr>
<tr>
<td>community</td>
<td>44.48</td>
<td>23.31</td>
<td>2.08</td>
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</tbody>
</table>

Note.—Based upon 162 possible responses (6 concepts x 27 scales).

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Note: (a) Group Y: undergraduate volunteers from university introductory psychology classes (X age = 19.0; SD = 1.4); (b) Group OP: volunteers from a pool of retired university professors emeriti at the same school (82% of the pool holding post-baccalaureate academic degrees); (c) Group OC: community volunteers from four senior-citizen programs within a large urban area and two programs from small towns within Ohio. To obtain Group OC, the retired professors were matched on sex and age range by randomly drawing from subpools of a larger sample of senior-citizen participants from whom data on the SD had already been collected in the context of another study. The community older sample presumably reflected a diversity of backgrounds; there was no claim that they were necessarily representative of older community residents generally or even of senior-citizen program participants. Age ranges of both Groups OP and OC were: 1, age 60-65; 7, age 66-70; 11, age 71-75; 7, over age 75. Although no specific check was made, all groups were composed predominantly of white subjects with few, if any, exceptions. Of the retired professional sample contacted by mail, 50% completed the SD ratings; Group OC volunteered upon personal contact through their clubs.

Subjects in Groups Y and OC were reselected, as necessary, to meet this criterion.
direction of female preference, did not reach
with the mean number for all 48 men
for all 30 women (X = 42.30) was compared
& Zax, 1966), the mean number of E responses
whether females use extreme scale positions
more frequently than males (Dixon & Dixon,
( X = 30.29). The difference, although in the
endorsement of neutral scale positions and
endorsed extreme scale positions as frequently
as they used the neutral midpoint (an average
28.5% for E responses and 27.4% for N), and
no less frequently than did Groups Y and OP,
failed to support the hypothesis that older
subjects would cautiously avoid the task by re-
responding neutrally, to the relative neglect of
other scale positions.
On the other hand, since the community
older people appeared to emphasize relatively
concrete, discriminable anchor points on the
scales—the midpoint and two end points—
their response pattern could be interpreted as
an avoidance of the ambiguity of the inter-
mediate positions. Such an interpretation is
partially consistent with that of Taylor (1955).
Using Thurstone attitude scales, Taylor found
that older subjects were more likely to endorse
extreme responses and avoid neutral ones than
were younger subjects and concluded that the
older person shows more personality rigidity
and intolerance of ambiguity. He interpreted
the neutral response as the response of max-
imum ambiguity. However, Worthy (1969)
found that midpoint responding on the SD is
positively related to endorsing the end points
and asserted that the midpoint response on these
scales should be treated as an extreme
response, inasmuch as both represent prefer-
ences for unambiguous, well-anchored scale
positions.
The interpretation that the older people's
scale-checking preferences represented an
avoidance of ambiguity does not preclude the
possibility that this avoidance was primarily
a cautious response, reflecting insecurity and
lack of confidence on the part of the respond-
ents. Norman (1969) found that anxious
young adults, as measured by MMPI scales,
tended to make more extreme responses on the
SD, the tendency to endorse extreme positions
being correlated with the degree of ambiguity
of the stimuli. In the present study, the
comparably old but highly educated professors
eremit had shown no such avoidance of inter-
mediate scale points, but, as hypothesized, had
revealed scale-checking preferences quite simi-
lar to those of the young undergraduates. Rep-
resenting a high level of educational and pro-

Table 2. Percentages of Responses by Subject Group for Extreme, Intermediate, and Neutral Scale Positions on Six Semantic Differential Concepts.

<table>
<thead>
<tr>
<th>Subject Group</th>
<th>Score Category</th>
<th>Concept*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Young</td>
<td>Extreme</td>
<td>27.1</td>
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<tr>
<td></td>
<td>Neutral</td>
<td>13.0</td>
</tr>
<tr>
<td></td>
<td>Intermediate</td>
<td>60.0</td>
</tr>
<tr>
<td>Older professional</td>
<td>Extreme</td>
<td>15.0</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>14.1</td>
</tr>
<tr>
<td></td>
<td>Intermediate</td>
<td>70.9</td>
</tr>
<tr>
<td>Older community</td>
<td>Extreme</td>
<td>33.0</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>24.2</td>
</tr>
<tr>
<td></td>
<td>Intermediate</td>
<td>41.9</td>
</tr>
</tbody>
</table>

*1 = Young Man; 2 = Middle-Aged Man; 3 = Old Man;
4 = Young Woman; 5 = Middle-Aged Woman; 6 = Old Woman
Note.—Percentage of possible 702 responses (27 scales x 26 subjects).
fessional attainment, with well-developed verbal skills, they may well have perceived themselves competent to make the requested discriminations and confident of their ability to perform satisfactorily.

The results reemphasize, as already demonstrated in a variety of contexts, that educational level must be controlled before concluding that older persons, ipso facto, perform less competently on mental tasks, simply as a function of advancing age.

References