Educated Don’t Knows:  
An Analysis of the Relationship Between Education and Item Nonresponse.

By Tom W. Smith

Research has consistently shown a positive association between years of schooling and the level of item nonresponse. Item nonresponse is typically two to three times higher among those with less than a high school education (LTHS) compared to those with a college education (CE) (see Table 1), and multivariate analysis of item nonresponse consistently shows education to be one of the strongest predictors (Francis and Busch, 1975; Ferber, 1966). This difference is generally seen as resulting from the greater background knowledge, media consumption, political/civic participation, and public affairs interest of the better educated (Hyman, Wright, and Reed, 1975; Campbell et al., 1960). This paper examines the relationship between education and item nonresponse, concentrating on conditions under which the differential widens, declines, and even reverses.

Initially, the item nonresponse education differential tends to increase with the difficulty of the attitude item. Difficulty is an umbrella word used to describe several distinct but frequently closely related attributes. Difficult questions are those that are (1) remote from everyday personal concerns, (2) less salient and important, and (3) more complex, or that demand more specific knowledge. Items about self-evaluations, personal predispositions, and other intimate traits and feelings, usually have negligible item nonresponse and therefore no educational differentials. Such items include evaluations of satisfaction with home and family, ratings of happiness, and class identification. Items about public issues that are germane and salient to most people and strongly emphasized by the media tend to

*This research was done for the General Social Survey Project, directed by James A. Davis and Tom W. Smith. The project is supported by the National Science Foundation, Grant No. SOC77-03279.*
have small to moderate differences, as do items dealing with basic moral/religious issues—questions that inquire about standard beliefs and values and not detailed applications about specific incidents (see Table 2). Items dealing with more remote political concerns affecting day-to-day life less directly, items less emphasized in the news, or items that are more complex, typically have moderate to large differentials. Since unfortunately we have no independent quantitative measures of any elements of difficulty, we are forced to use subjective evaluations of which topical groups of questions would show greater difficulty. In general, we find that Table 2 supports our hypothesis. Items with low differentials deal either with basic and general values (religion, morality, sex) or with public issues of high importance/exposure (capital punishment, race relations in the sixties, abortions in the seventies). Those items with high differentials include foreign affairs and less prominent topics such as civil liberties. This difference is also seen with the confidence in leaders questions. The three institutions with the smallest differentials (organized religion, TV, and medicine) are institutions with which people interact on a personal and continuing basis (going to church, watching TV, seeing doctors). The three institutions with the greatest educational differential (the executive branch of the federal government, Congress, and the Supreme Court) are political institutions with which the average citizen has little personal contact.

Recent research by Schuman and Presser (1980) and Bishop et al. (1980) indicates that when the questions used are totally obscure or fictitious the differential does not widen, but reverses, with the better educated giving more item nonresponse than the less educated (Table 3). On these items, the true nonresponse level should be 100 percent and the educational differential, therefore, zero. Some respondents do answer these questions by either misidentifying them with real references, imputing meaning to the questions, or giving a response to hide their ignorance about what they perceive to be a real, knowable issue. The less educated, either because of greater issue confusion, more willingness to impute an answer, or more pressure to cover up perceived ignorance, are less likely to give an appropriate nonresponse than the better educated.

This reversed differential disappears when filtered versions of the obscure/fictitious questions are used. The ratios and differences for the filtered versions are respectively: Monetary Control Act, 1.02/1.6 percent; Agricultural Trade Act, 1.00/0.1 percent; and repeal of Public Affairs Act, .84/-1.2 percent. The disappearance of
EDUCATIONAL DIFFERENTIALS ON ITEMS NONRESPONSE BY TOPIC

A. Sudman and Bradburn
B. General Social Surveys

Table 2

<table>
<thead>
<tr>
<th>Topic</th>
<th>4 of Items</th>
<th>Ratio Difference</th>
<th>6 of Items</th>
<th>Ratio Difference</th>
<th>10 of Items</th>
<th>Ratio Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Punishment (5)</td>
<td>1.46</td>
<td>0.6</td>
<td>1.72</td>
<td>0.8</td>
<td>1.89</td>
<td>0.7</td>
</tr>
<tr>
<td>Racial Relations (15)</td>
<td>6.6</td>
<td>0.6</td>
<td>6.4</td>
<td>0.6</td>
<td>6.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Anti-Semitism (17)</td>
<td>3.4</td>
<td>0.5</td>
<td>3.3</td>
<td>0.5</td>
<td>3.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Civil Rights (15)</td>
<td>2.08</td>
<td>0.8</td>
<td>2.08</td>
<td>0.8</td>
<td>2.08</td>
<td>0.8</td>
</tr>
<tr>
<td>Religion (4)</td>
<td>0.6</td>
<td>2.2</td>
<td>0.6</td>
<td>2.2</td>
<td>0.6</td>
<td>2.2</td>
</tr>
<tr>
<td>Birth Control (15)</td>
<td>2.32</td>
<td>0.9</td>
<td>2.32</td>
<td>0.9</td>
<td>2.32</td>
<td>0.9</td>
</tr>
<tr>
<td>Middle East (15)</td>
<td>2.10</td>
<td>0.7</td>
<td>2.10</td>
<td>0.7</td>
<td>2.10</td>
<td>0.7</td>
</tr>
<tr>
<td>Demonstrations (6)</td>
<td>2.47</td>
<td>0.9</td>
<td>2.47</td>
<td>0.9</td>
<td>2.47</td>
<td>0.9</td>
</tr>
<tr>
<td>Vietnam (32)</td>
<td>2.62</td>
<td>1.0</td>
<td>2.62</td>
<td>1.0</td>
<td>2.62</td>
<td>1.0</td>
</tr>
</tbody>
</table>

See Table 1 for definition.

Three items believed to have high importance and saliency-busing,
capital punishment and gun control.

Table 3

<table>
<thead>
<tr>
<th>Source</th>
<th>Percent</th>
<th>Difference</th>
<th>Percent</th>
<th>Difference</th>
<th>Percent</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Nonresponse among college educated.</td>
<td>2.7%</td>
<td>0.9</td>
<td>9.3%</td>
<td>3.3</td>
<td>18.1%</td>
<td>4.6</td>
</tr>
<tr>
<td>2. Nonresponse among those with less than high school minus</td>
<td>2.7%</td>
<td>0.9</td>
<td>9.3%</td>
<td>3.3</td>
<td>18.1%</td>
<td>4.6</td>
</tr>
<tr>
<td>3. Identity of Howard C. Baker</td>
<td>93.0</td>
<td>0.0</td>
<td>93.0</td>
<td>0.0</td>
<td>93.0</td>
<td>0.0</td>
</tr>
<tr>
<td>4. Human rights</td>
<td>66.8</td>
<td>0.0</td>
<td>66.8</td>
<td>0.0</td>
<td>66.8</td>
<td>0.0</td>
</tr>
<tr>
<td>5. Water poll Public Affacts Act</td>
<td>3.3</td>
<td>0.0</td>
<td>3.3</td>
<td>0.0</td>
<td>3.3</td>
<td>0.0</td>
</tr>
<tr>
<td>6. Bilingual Education Act</td>
<td>3.3</td>
<td>0.0</td>
<td>3.3</td>
<td>0.0</td>
<td>3.3</td>
<td>0.0</td>
</tr>
<tr>
<td>7. Minority Control Act</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.0</td>
</tr>
<tr>
<td>8. Anti-Americanism</td>
<td>8.5</td>
<td>0.0</td>
<td>8.5</td>
<td>0.0</td>
<td>8.5</td>
<td>0.0</td>
</tr>
</tbody>
</table>

For obscure and fictitious items.

Educational differentials on item nonresponse.
Figure 1. Hypothetical Relationship Between Item Non-response, Question Difficulty, and Education

- College educated
- Less than high school education

Question Difficulty

Item Non-response

0% 50% 100%

Personal (Easy) Moderate Hard Fictive (Filtered) (Not filtered)

differential, is nil for self-evaluations. As items become more difficult, the education differential increases until we reach a point that approaches the totally obscure/fictitious crossover point. An example of a real item that was extremely difficult to answer, yet not about a totally obscure referent, was Schuman and Presser's item on Portugal: "In your opinion, is the new Portuguese military government trying to move towards democracy, or is it trying to maintain its control without concern for democracy in Portugal?" The question asks for a very specific evaluation about a fairly minor foreign policy concern. While it shows the standard positive association (filtered: ratio = 1.17, difference = 14 percent; unfiltered: ratio = 1.30, difference = 16 percent), this is small for difficult items. Apparently the information advantage of the better educated has begun to diminish as we push for a detailed evaluation about a new and remote issue. As we move on to the fictitious filtered questions, we see the educational differential disappears. Finally, among the non-filter, fictive questions, we find that the differential has reversed itself, and that a social desirability effect leads the less educated to express less nonresponse than the better educated.

We also found that the educational differential was probably contingent on the relative distribution of nonattitudes and ambivalent responses within the item nonresponse. Nonattitudes reflect either no knowledge of, or no affect towards, the issue, while ambivalence represents positioning at the mid-point of the issue continuum (Smith, 1981a). We suspected that the educational differential is primarily a result of differences in a level of nonattitudes rather than in the level of ambivalent responses. To test this, we looked at responses to seven replicated policy questions on the 1956-58-60 Michigan election panel (Converse, 1964), comparing the educational differential between those who said they had no opinion on the issue (nonattitudes) and those who selected the mid-point on the five-point scales, "not sure, it depends" (ambivalents). The educational differential ratios and differences averaged 3.64/12.2 percent for the nonattitudes and 0.78/-3.4 percent for the ambivalents. Similar differences were discovered on the seven-point Likert policy items, asked jointly on the 1980 GSS and 1980 Michigan election studies (Smith, 1982). The better educated were more likely to select the mid-point on seven-point scales (which was not labeled as ambivalent) than the less educated, while, as expected, the less educated predominated among the nonattitude holders (see also Faulkemberry and Mason, 1978; Smith, 1981a).

This difference between nonattitudes and ambivalents
suggests that when ambivalence is high and nonattitudes are low, the usual educational differential will either disappear or even reverse. A possible example of this occurs on the harshness of courts question on the GSS. This item dealing with a salient and germane public issue showed both a fairly high level of nonresponse (7.1 percent) and a reverse education differential (ratio = .64; difference = 3.5 percent). We suspect that most nonresponse on this item represents liberal ambivalence. Liberals on most social and political issues (e.g., civil liberties, race relations) are caught between their inclinations on one hand and their concern about high crime on the other. This results in a high degree of nonattitudes and ambivals. This expectation is supported by the fact that nonresponders favored liberal positions on several attitude questions.4

In sum, we have shown that the standard association between education and item nonresponse is actually highly conditional, depending on at least three distinct factors: question difficulty (salience, remoteness, complexity), question format (filtered vs. non-filtered), and the distribution of nonattitudes and ambivalents. These findings have several implications for attitude research. The disproportionate loss of the less educated on hard (but not impossible) questions means that typical research on such matters as attitudes indicated or less difficult questions with reduced differentials should be employed (Martin, 1981; Smith, 1981a). Second, the evidence of a social desirability effect predominating among the less educated is one more bit of evidence of the lower reliability and greater bias of attitudes expressed by the less educated. The less educated are usually more susceptible to social desirability pressures (see Bradburn and Sudman, 1979:86-106; Dehalo, 1980) and to certain other response effects as well (Smith, 1981). Third, the ability of the filtered fictive questions to get closer to the correct level of nonresponse (100 percent) and educational differential (0 percent) indicates that, in these circumstances at least, these questions are superior to the standard, non-filtered form. For real questions, either filtered forms or multidimensional batteries on affect, intensity, salience, and knowledge should help to separate the cream from the whey.

NOTES

1. Nonresponse level is sometimes used as a crude indicator of importance and salience. We doubt it is a very reliable indicator, and it would not be an independent measure in this analysis.

2. The filtered version provides an explicit nonresponse option. For example: "Congress has been considering the Agricultural Trade Act of 1978. Do you favor or oppose the passage of this act or do you not have an opinion on that issue?"

3. In Figure 1 non-filtered fictive questions are considered more difficult because it is harder for respondents to escape the question, since a nonresponse option is not explicit.

4. It is possible that the large difference between the educated selecting mid-points and the less educated tending to choose responses that put them off the scale is more a difference in style than in substance. We suspect that the latter is true. Ambivalence should represent informed indecision; nonattitudes, a lack of knowledge and/or interest. These descriptions seem to fit the better educated and less educated, respectively.

REFERENCES


Campbell, Angus, Philip E. Converse, Warren E. Miller, and Donald Stokes.  

Converse, Jean M.  

Converse, Philip E.  

DeMaio, Theresa.  

Faulkenberry, G. David and Robert Mason.  

Ferber, Robert.  

Frances, Joe D. and Lawrence Busch.  
1975 "What We Know About 'I Don't Know.'" Public Opinion Quarterly 34:207-218.

Hyman, Herbert H., and Charles R. Wright.  

Hyman, Herbert H., Charles R. Wright, and John Shelton Reed.  

Martin, Steven R.  
forthcoming "New Methods Lead to Familiar Results." American Sociological Review.

Schuman, Howard, and Stanley Presser.  