Some Methodological Aspects of Responses to the 1986 GSS Welfare Entitlement Vignettes

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Respondents to the 1986 General Social Survey were asked supplemental questions on the welfare entitlement of a set of ten vignette families.[1] Seven of the vignettes depicted young families with children and three depicted elderly women living alone. The circumstances of each family — marital status, number and ages of children, etc. of the young families; number and economic status of adult children, age, etc. of the elderly women; pre-transfer income and savings of both — were varied randomly across vignettes. After reading and seeing on a line graph the weekly income of each vignette family (hereafter termed "vignette-designated income") respondents were asked to mark on the same graph "what should this family's income be?"[2] (hereafter termed "respondent-designated income"), after being informed in the beginning of the vignette booklet that conferring benefits on vignette families could affect the taxes paid by the respondent. The net benefit a respondent gives to a vignette family is thus the difference between respondent-designated income and vignette-designated income.

The 1405 respondents to the vignette supplements produced 13,609 codable responses to the 14,050 possible vignettes.[3] The distribution of these responses, along with the distribution of net benefits, is given in Table 1. The high income responses seem reasonable. The highest income designated by any respondent was $600, up to $550 more than the income level given in the vignette and a not implausible response. The low benefit responses are more troubling. As Table 1 shows, in 891 (6.3 percent of all) vignettes there were negative net benefits; that is, the respondent marked an income level that was lower than the income specified in the vignette. In over one-third (333) of these negative net benefit responses, the respondent actually designated an income of zero — that is, the respondent wanted to take away all of the vignette family's vignette-designated income. These 333 responses were produced by 127 respondents.

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[1]See Smith (1986) for a more complete explanation of the development and execution of the vignettes and an analysis of nonresponse and other aspects of the data. His paper was written simultaneously and independently of ours; readers interested in the properties of the vignettes are urged to read both papers.

[2]A further respondent instruction was to "include both the money already available from sources other than the government and any public assistance support you think this family should get."

[3]There were 1470 respondents to the 1986 GSS but 65 of them failed to respond to the welfare vignette supplement. All of the figures reported in this paper are based on a preliminary release of the data in August, 1986. Some may differ slightly from the data on the file released in Jaunary of 1987.

Table 1

Distribution of Respondent-Designated Incomes and Net Benefits for All GSS Vignettes

Dollar Amount	Respondent-Designated Income		Net Benefits (Respondent-Designated Income Minus Vignette-Designated Income)	
	Number of Vignettes	Percent of All Vignettes	Number of Vignettes	Percent of All Vignettes
$600	71	0.5%	0	0.0%
550	32	0.2	17	0.1
500	164	1.2	21	0.1
450	217	1.5	34	0.2
400	1071	7.6	87	0.6
375	1	0.0	0	0.0
350	914	6.5	205	1.5
300	3742	26.6	392	2.8
250	1449	10.3	493	3.5
225	1	0.0	0	0.0
200	2889	20.6	1125	8.0
150	998	7.1	1263	9.0
100	1254	8.9	2204	15.7
75	0	0.0	1	0.0
50	473	3.4	1648	11.7
25	0	0.0	1	0.0
0	333	2.4	5227	37.2
−50	—	—	204	1.5
−100	—	—	228	1.6
−150	—	—	99	0.7
−200	—	—	163	1.2
−250	—	—	37	0.3
−300	—	—	160	1.1
Not Ascertained	441	3.1	441	3.1
TOTAL	14050	100.0%	14050	100.0%

In this note we describe the characteristics of these negative net benefit vignettes and the respondents producing them, explore several procedures for dealing with negative net benefits, and recommend one way of dealing with them. We conclude that many of the 127 respondents who checked zero incomes probably misunderstood the task and all of their responses should be treated as missing data. We argue that negative net benefit responses which are associated neither with zero designated-incomes nor with respondents who designated zero-incomes on some other vignette are more likely valid and indicate a desire on the part of respondents to "tax" away some of the incomes of the vignette family. Experimentation with numerous alternative treatments of the negative net benefit cases shows reassuringly little sensitivity to the alternative chosen.

A minor but still noteworthy additional problem we discovered in our analysis of the vignettes is a confusing combination of dimensions involving married parents where the father is in jail. These vignettes read: "This family has 1 [2 or 4] child(ren) living with their mother and father,...the father is in jail." Given the contradictory statements about the presence or absence of the father, we recommend excluding all such cases from analysis, although we have included them in the results presented in this paper.

I. Possible Reasons for the Negative Net Benefit Responses

There are several possible explanations for negative net benefit responses and the more extreme subset of them generated by a zero respondent-designated income. First, the respondent may have misunderstood the task and thought that his designated-income responses represented the amount of money that ought to be transferred to the respondent — the net benefit, in other words. Thus, respondents designating zero income may have intended that the vignette family ought not receive any additional money but should be allowed to keep all of their vignette-designated income. A more extreme form of the misunderstanding hypothesis is that a subset of respondents were so confused or put off by the task that no sense can be made out of their responses. This hypothesis leads to expectations that the instances of negative net benefits ought to cluster among certain respondents and that the respondents designating them might be identifiable by characteristics such as a judgement by the interviewer that the respondent did not seem to understand the tasks set forth by the questionnaire.

An alternative explanation is that respondents designating negative net benefits or, in the extreme, zero incomes, did indeed understand the general instructions and designated incomes less than those given in the vignettes because of a desire to tax away some of the income of the vignette families. Respondents designating zero incomes might represent an

extreme form of this desire, perhaps in reaction to vignettes depicting very undeserving potential recipients. This hypothesis leads to expectations of less clustering of negative net benefits by respondents and positive correlations between negative net benefits and vignette characteristics like high income or asset levels that depict little need for additional income. The incidence of zero respondent-designated incomes might be expected to correlate positively with "undeserving" vignette characteristics such as no interest in work on the part of the vignette family members and with respondent characteristics such as very negative attitudes toward government redistribution or very firm beliefs that welfare programs have disastrous effects on work effort, marriage, etc.

II. Characteristics of Negative Net Benefit Responses

Table 2 provides information on the incidence of negative net benefits, zero respondent-designated incomes and missing data responses across respondents. The second column shows a frequency distribution of a count of the number of times a given respondent designated negative net benefits (an income level that was less than the vignette-designated income). Comparable information for a respondent-based count of zero respondent-designated incomes is given in the fourth column. Thus 91 respondents assigned one negative benefit, 48 respondents assigned two negative benefits and 50 respondents assigned one zero designated income. Neither measure is heavily clustered among a small number of respondents. While 283 respondents awarded a negative net benefit at least once, nearly one-third of them did so only once and only one respondent did so in all ten vignettes. A similar pattern holds for the zero respondent-designated incomes. This suggests that respondents were rather selective in their designation of incomes that were less than the pre-transfer income given in the vignette. Missing data responses are somewhat more heavily clustered among a small number of respondents.

We investigated how the incidence of zero respondent-designated incomes and negative net benefits varied according to the characteristics of vignette families by relating dichotomous measures of each to the set of vignette characteristics. We did this using MCA and report results in Table 3. To sharpen the contrast between the zero designated-income responses and the more numerous negative net benefit responses, our analysis of negative net benefit responses excludes cases where zero designated incomes led to the negative net benefits.

As Table 3 shows, vignette-designated income was by far the most powerful predictor of negative net benefits and zero designated incomes. Mean values on the dichotomies by income level, characteristics of the mother in the younger vignettes and characteristics of the

Table 2

Incidence of Negative Net Benefits, Zero Respondent-Designated Incomes, and Missing Data

Number of Vignettes in Which Respondent Gave the Given Response	Negative Net Benefit (Respondent-Designated Income Less than Vignette-Designated Income)		Zero Respondent-Designated Income		Missing Data on Respondent-Designated Income	
	Number of Respondents	Percent of All Respondents	Number of Respondents	Percent of All Respondents	Number of Respondents	Percent of All Respondents
0	1122[a]	79.9%	1278[a]	91.0%	1309	93.2%
1	91	6.5	50	3.6	34	2.4
2	48	3.4	29	2.1	11	0.8
3	44	3.1	16	1.1	7	0.5
4	20	1.4	11	0.8	4	0.3
5	32	2.3	7	0.5	3	0.2
6	20	1.4	7	0.5	4	0.3
7	17	1.2	1	0.1	4	0.3
8	7	0.5	5	0.4	2	0.1
9	3	0.2	1	0.1	5	0.4
10	1	0.1	0	0.0	22	1.6
TOTAL	1405	100.0%	1405	100.0%	1405	100.0%

[a]Missing data responses are treated as neither negative net benefits nor as zero respondent-designated income.

adult children of the older vignette women, along with a measure (eta-squared, adjusted for degress of freedom) of the fraction of the variance of each dichotomous dependent variable explained by the vignette characteristics, are given in Table 3. It is clear that the incidence of both negative net benefits and zero respondent-designated income is much higher at higher levels of vignette-designated income. Although there appears to be a slight tendency for zero incomes to be awarded to less deserving vignette families (i.e., when the young mother is not looking for work or when the older woman has a financially well-off son), the differences are not large and the measure of association indicates that the overall relationship is quite weak. None of the remaining vignette characteristics come close to the explanatory power the income measure.

We then explored associations between respondent characteristics and the incidence of negative net benefits. Zero respondent-designated income responses were investigated in a similar way. Representative results are given in Table 4, using respondent comprehension of the interview as judged by the interviewer and two attitudes toward welfare policy. Here results differed somewhat depending on whether the equation predicted a negative net benefit or a zero respondent-designated income. We look first at the zero respondent-designated income equation. Although its eta-square value was very low, the comprehension measure was the most powerful in predicting the incidence of zero respondent-designated incomes. Zero income responses were three times more likely among respondents who were judged by interviewers to have a "poor" as opposed to a "good" understanding of the interview. However, the relatively small number of vignettes associated with respondents judged to have a "poor" understanding of the question still leads the vast majority of vignettes with zero respondent-designated incomes to be associated with more capable respondents. Education had a pattern similar to the comprehension measure, although it was not completely monotonic. The finding that these two variables have a greater association with zero responses than the attitudinal items provides mild support for the misunderstanding hypothesis. But we find little support for the misunderstanding hypothesis when we examine results for the negative net benefit equations. The incidence of negative net benefit responses, not including the zero designated incomes, did not correlate very highly with the comprehension measure, suggesting more validity to these responses.

III. Alternative Treatments of Net Benefit Measures

A tentative conclusion from these tables is that many zero respondent-designated income responses ought to be viewed with great suspicion, while most negative net benefit responses not involving zero designated income responses may be more valid, reflecting a

Table 3

Fraction of Vignettes with Zero Respondent-Designated Income and
Negative Net Benefits by Selected Vignette Characteristics

Vignette Characteristics	Fraction with Zero Respondent-Designated Income		Fraction with Negative Net Benefits (Excluding Cases with Zero-Designated Incomes)	
	Young	Old	Young	Old
Vignette-Designated Income				
$50	.01	.01	.00	.00
$100	.01	.02	.01	.01
$200	.02	.04	.03	.04
$300	.04	.06	.08	.09
ETA-SQUARE (Adjusted for degrees of freedom)	.006	.009	.027	.038
Employment Status of Mother				
Working Full-time	.02	—	.04	—
Working Part-time	.02	—	.04	—
Looking for work	.01	—	.03	—
Unemployed, not looking	.03	—	.03	—
Unemployed and not looking because cannot find affordable child care	.02	—	.03	—
Unemployed, not looking, because lacks transportation	.02	—	.04	—

Table 3 (continued)

Vignette Characteristics	Fraction with Zero Respondent-Designated Income		Fraction with Negative Net Benefits (Excluding Cases with Zero-Designated Incomes)	
	Young	Old	Young	Old
Unemployed, not looking because available jobs only pay minimum wage	.03	–	.03	–
ETA-SQUARE (Adj.)	.0003	–	.0001	–
Status of Adult Children				
No living children	–	.02	–	.03
Married son, financially well off	–	.05	–	.04
Married son, not financially well off	–	.04	–	.04
Unmarried son, financially well off	–	.03	–	.03
Unmarried son, not financially well off	–	.03	–	.02
Married daughter Financially well off	–	.04	–	.04
Married daughter, not financially well off	–	.03	–	.02
Unmarried daughter, financially well off	–	.03	–	.03
Unmarried daughter, not financially well off	–	.03	–	.04
ETA-SQUARE (Adj.)	–	.0000	–	.0000
Number of Observations	9537	4072	8907	3824

Table 4

Fraction of Vignettes with Negative Net Benefit and Zero Respondent-
Designated Income Responses, by Selected Respondent Characteristics

Respondent Characteristics	Fraction with Zero Respondent-Designated Income		Fraction with Negative Net Benefit (Excluding Zero-Designated Incomes)	
	Young	Old	Young	Old
Interviewer's Assessment of Respondent's Understanding of Questions				
Good	.02[a] (7557)	.03 (3228)	.03 (7046)	.03 (3022)
Fair	.01 (1484)	.02 (630)	.06 (1428)	.05 (609)
Poor	.06 -(210)	.09 (91)	.03 (182)	.05 (79)
ETA-SQUARED (Adj.)	.003	.003	.002	.002
Welfare Makes People Work Less				
Strongly Agree	.03 (3148)	.04 (1351)	.04 (2925)	.04 (1262)
Agree	.02 (4894)	.03 (2089)	.03 (4618)	.03 (1981)
Disagree	.02 (1237)	.05 (522)	.04 (1127)	.04 (471)
Strongly Disagree	.03 (174)	.00 (75)	.01 (153)	.00 (75)
ETA-SQUARE (Adj.)	.000	.002	.001	.001

Table 4 (continued)

Respondent Characteristics	Fraction with Zero Respondent-Designated Income		Fraction with Negative Net Benefit (Excluding Zero-Designated Incomes)	
	Young	Old	Young	Old
<u>Should Gov't. do Something to Reduce Income Differences between Rich and Poor?</u> [7 Point Scale] Gov't. should do something				
1	.03 (2226)	.05 (947)	.04 (2010)	.06 (858)
2	.01 (820)	.03 (343)	.03 (799)	.01 (325)
3	.01 (1607)	.02 (689)	.03 (1530)	.03 (659)
4	.02 (1946)	.04 (831)	.04 (1817)	.04 (777)
5	.04 (1057)	.04 (453)	.05 (947)	.01 (417)
6	.02 (578)	.01 (248)	.03 (550)	.02 (245)
7	.02 (1180)	.02 (506)	.02 (1131)	.02 (488)
Gov't. should not concern Itself				
ETA-SQUARE (Adj.)	.002	.004	.002	.007

[a] Number of observations upon which percentage is based is given in parentheses.

desire to tax away some of the mostly high vignette-designated incomes with which they are strongly associated. How these conclusions translate into empirical procedures is still somewhat problematic. Ideally we would like to be able to distinguish valid from invalid zero income and negative net benefit responses. But this would be possible only if one were confident that a model and the required data could make this distinction.

An alternative strategy is to specify a set of more ad-hoc adjustments to the net benefit measure and to investigate the impact of these adjustments on the relationship between net benefits and vignette characteristics. We tested the following seven alternative definitions of net benefits: (i) simple difference between respondent-designated income and vignette income (i.e., no adjustments of zero incomes or negative net benefits); (ii) truncate the simple difference from below at zero; (iii) assume respondent-designated income is the net benefit in cases where net benefit is negative; (iv) assume net benefit equals zero when respondent-designated income equals zero; (v) assume all of a given respondent's designated incomes are net benefits if that respondent _ever_ designated an income equal to zero; (vi) assume vignettes with respondent-designated incomes of zero are missing data; (vii) assume all of a given respondent's responses are missing data if that respondent ever designated an income equal to zero.

Table 5 shows the mean value of each of these alternative definitions of the net benefit measure, along with a summary measure of the explanatory power (R-squared, adjusted for degrees of freedom) of the set of vignette characteristics in accounting for the variation of each measure. Table 6 details the distribution of the mean values of each dependent variable by vignette-designated income, by far the most powerful independent variable.

Both tables clearly show that it is a mistake to assume that respondent-designated incomes were intended to be net benefits (as in alternatives (iii) and (v)). Measures of association between these two alternatives were generally lower than for the others. There are small differences in R^2's among the remaining definitions, especially for the vignettes on young families. The measure with the highest R^2 and the strongest association with income treats all of the responses of respondents who ever designated a zero income as missing data and treats other negative net benefit responses as valid. This is our recommendation, although its superiority according to the criteria adopted in Tables 5 and 6 is not large.

Table 5

Descriptive Characteristics of Various Measures of Net Benefits

	Young[a]			Old[b]		
	R^2 from Regression on Vignette Characteristics	Mean Value	Number of Observations	R^2 from Regression on Vignette Characteristics	Mean Value	Number of Observations
(i) Simple difference (Respondent-designated income less vignette income)	.270	$75	9537	.300	$61	4072
(ii) Truncate simple difference from below at zero	.269	$85	9537	.296	$72	4072
(iii) Assume respondent-designated income is the net benefit in cases where net benefit is negative	.164	$107	9537	.288	$84	4072
(iv) Assume net benefit equals zero when respondent-designated income equals zero	.273	$80	9537	.301	$68	4072

Table 5 (continued)

	Young[a]			Old[b]		
	R^2 from Regression on Vignette Characteristics	Mean Value	Number of Observations	R^2 from Regression on Vignette Characteristics	Mean Value	Number of Observations
(v) Assume all of a given respondent's designated incomes are net benefits if that respondent ever designated an income equal to zero	.247	$87	9537	.296	$71	4072
(vi) Assume respondent-designated incomes of zero are missing data	.274	$81	9337	.300	$70	3939
(vii) Assume all of a given respondent's responses are missing data if that respondent ever designated an income equal to zero	.278	$83	8655	.306	$72	3693

[a]For the young vignettes, characteristics include number and age of children, mother's marital status, father's employment status, mother's education, mother's employment status, father's martial status, the family's financial prospects, indicators of parental support, family savings, family income, and vignette question position.

[b]For the old vignettes, characteristics include age, children status, housing tenure, savings, income, and vignette question position.

References

Smith, Tom W. "A Study of Non-response and Negative Values on the Factorial Vignettes on Welfare," GSS Technical Paper No. 69, November 1986.

Table 6

Mean Values of Various Net Benefit Measures by Weekly Income Level of Vignette Family

	Young				Eta-Squared	Old				Eta-Squared
	$50	$100	$200	$300		$50	$100	$200	$300	
(i) Simple difference (respondent-designated income less vignette income)	$161	$125	$57	$5	.240	$138	$93	$28	-$14	.264
(ii) Truncate simple difference from below at zero	162	127	65	28	.233	138	96	41	15	.257
(iii) Assume respondent-designated income is the net benefit in cases where net benefit is negative	170	142	90	60	.129	144	104	55	34	.181
(iv) Assume net benefit equals zero when respondent-designated income equals zero	161	126	60	16	.242	138	95	35	3	.268

Table 6 (Continued)

	Young				Eta-Squared	Old				Eta-Squared
	$50	$100	$200	$300		$50	$100	$200	$300	
(v) Assume all of a given respondent's designated incoms are net benefits if that respondent ever designated an income equal to zero	164	131	69	26	.213	141	98	42	6	.258
(vi) Assume respondent-designated incomes of zero are missing data	164	126	61	17	.243	140	98	37	3	.268
(vii) Assume all of a given respondent's responses are missing data if that respondent ever designated an income equal to zero	164	129	64	21	.245	142	99	41	6	.272