1995 NSCG CODING QUALITY EVALUATION

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1995 NSCG Coding Quality Evaluation

This report provides a brief description of the estimates tabulated from the 1995 NSCG coding process. As requested by the National Science Foundation, no in-depth analysis or discussion has been provided.

Attachment A gives the wording of the occupation and education questions. Attachment B provides the statistical formulas for the standard errors used in this report. Any significance tests in this report use the 10 percent significance level.

This evaluation used data obtained from the Coding Quality Control operation. In that operation, two production clerks independently double coded about 10 percent of each batch. We refer to these two clerks as coder 1 and coder 2. When the codes assigned by the two clerks disagreed, a referralist (the next higher level of coder) adjudicated the difference and determined the correct code. Sometimes, both production codes were judged incorrect and the adjudicator assigned a third code as the correct one. The December 5, 1995 memorandum from Bushery to NSCG Team, "1995 NSCG Coding Quality Assurance Plan," provides an overview of the coding and quality assurance system.

I. Measures of Reliability -- Cohen's Kappa and the GDR

Cohen's kappa is an index of reliability based on expected and observed agreements between two coders. Kappa assumes independence between coders and their assignments. We designed the QC process to prevent the two coders -- the non-QC production coder and the QC production coder -- from knowing whether they were assigning a best code or a QC code to a particular case.

$$\text{Cohen's Kappa} = 100x \frac{Po_{wtd} - Pe_{wtd}}{1 - Pe_{wtd}}$$

where Po_{wtd} = weighted probability of total observed agreements and

Pe_{wtd} = weighted probability of total expected agreements

$$\text{GDR} = 100x \frac{\text{Total weighted disagreements}}{\text{Total weighted cases}}$$

The GDR -- the gross difference rate -- is the ratio of disagreements to total cases coded.

We estimated kappa and the GDR from the statistically weighted QC cases and used these estimates from the QC sample to estimate kappa and the GDR for the entire NSCG sample. Because the QC sample was selected randomly, its reliability should reflect that of the full sample.

Cases referred by production coders to a higher level -- to referralists or subject matter experts -- were assigned a code of "R" instead of a three-digit occupation or education code. The higher level coder then assigned a three-digit code. We could convert these "R" values to actual three-digit codes for some cases, but not for others. We decided to exclude the cases we could not convert from our estimates of kappa and the GDR. Cases assigned an "R" by one of the

production coders are more difficult to code and more likely to result in a disagreement between coders. Excluding these cases may have slightly increased our estimates of kappa and slightly decreased our estimates of the GDR.

We have produced kappas for individual occupation or education categories only if the category contained enough cases to satisfy the standard Census Bureau criterion for adequate sample size to estimate kappa.

The user should exercise caution in comparing the estimates reported in these tables. For instance, Table 5 contains no significant differences between any of the major group kappas for Question A6. Particular caution should be taken in using kappas for codes whose data lack any variance (where kappa is estimated to be 100).

Table 1. Question A6: Previous Job
AGGREGATE KAPPA Estimates - WEIGHTED

	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	QC Sample (unwtd.)
Individual CODE LEVEL	88.4	1.4	11.2	1.1	797
MINOR GROUP LEVEL	91.6	1.3	7.5	0.9	797
MAJOR GROUP LEVEL	93.3	1.7	3.0	0.6	797

Table 2. Question A17: Current Job
AGGREGATE KAPPA Estimates - WEIGHTED

	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	QC Sample (unwtd.)
Individual CODE LEVEL	85.6	0.7	13.9	0.5	4,467
MINOR GROUP LEVEL	89.7	0.6	9.3	0.4	4,467
MAJOR GROUP LEVEL	90.8	0.8	4.4	0.3	4,467

Table 3. Question C1: Work History
AGGREGATE KAPPA Estimates - WEIGHTED

	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	QC Sample (unwtd.)
Individual CODE LEVEL	85.7	0.5	14.0	0.4	7,894
MINOR GROUP LEVEL	90.0	0.4	9.1	0.3	7,894
MAJOR GROUP LEVEL	92.0	0.6	3.7	0.2	7,894

Table 4. Question D8: Educational Degree--Last 2 Years
AGGREGATE KAPPA Estimates - WEIGHTED

	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	QC Sample (unwtd.)
Individual CODE LEVEL	85.2	2.7	14.4	2.2	264
MINOR GROUP LEVEL	92.1	2.2	7.1	1.6	264
MAJOR GROUP LEVEL	90.4	3.2	5.1	1.4	264

A. Reliability of Codes at Major Group Level

Major group 6 includes all the non-S&E categories. The kappa for this group is a measure of the reliability of coding an occupation as S&E or not S&E. The larger kappa is, the more reliable the coding.

Table 5. Question A6: Previous Job
MAJOR GROUP Level Kappa
WEIGHTED

Lists only groups with sufficient cell size.

Major Group	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	Percent in Group (unwtd.)	QC Cases in Group (unwtd.)
1	87.8	5.5	0.9	0.3	6.0	48
2	89.6	5.5	0.7	0.3	3.8	30
3	90.3	6.0	0.5	0.2	5.0	40
5	96.7	1.5	0.8	0.3	23.7	189
6	93.9	1.7	2.4	0.5	59.5	474

Table 6. Question A17: Current Job
MAJOR GROUP Level Kappa
WEIGHTED

Lists only groups with sufficient cell size.

Major Group	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	Percent in Group (unwtd.)	QC Cases in Group (unwtd.)
1	89.0	1.4	1.9	0.2	11.7	524
2	87.5	2.8	0.6	0.1	3.3	148
3	94.8	2.1	0.2	0.1	4.1	181
4	85.0	3.7	0.6	0.1	2.2	97
5	94.5	0.9	1.3	0.2	23.0	1,026
6	90.1	0.9	4.1	0.3	55.8	2,493

Table 7. Question C1: Work History
MAJOR GROUP Level Kappa
WEIGHTED

Lists only groups with sufficient cell size.

Major Group	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	Percent in Group (unwtd.)	QC Cases in Group (unwtd.)
1	89.2	1.3	1.3	0.1	8.4	661
2	84.3	2.4	0.8	0.1	3.2	253
3	95.0	1.4	0.2	0.1	4.5	359
4	85.4	2.5	0.6	0.1	2.2	173
5	96.2	0.5	1.0	0.1	23.9	1,887
6	91.6	0.6	3.5	0.2	57.8	4,563

Table 8. Question D8: Educational Degree--Last 2 Years
MAJOR GROUP Level Kappa
WEIGHTED

Lists only groups with sufficient cell size.

Major Group	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	Percent in Group (unwtd.)	QC Cases in Group (unwtd.)
1	94.2	4.5	0.9	0.6	11.0	29
4	88.1	6.6	1.8	0.8	8.7	23
5	98.9	2.0	0.2	0.2	17.0	45
6	89.2	3.7	4.8	1.3	54.2	143

B. Reliability of Codes at Minor Group Level

Table 9. Question A6: Previous Job
MINOR GROUP Level Kappa
WEIGHTED

Lists only groups with sufficient cell size.
Missing s.e. indicates no estimate of s.e. possible

Minor Group	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	Percent in Group (unwtd.)	QC Cases in Group (unwtd.)
1.1	91.1	5.2	0.5	0.3	4.8	38
5.1	98.0	3.4	0.1	0.1	2.8	22
5.3	96.6	4.2	0.1	0.1	3.4	27
5.4	90.0	4.9	0.7	0.3	5.4	43
5.6	96.1	3.4	0.2	0.2	5.0	40
5.7	92.6	5.1	0.4	0.2	4.6	37
6.1	92.7	2.2	2.1	0.5	12.4	99
6.2	91.4	4.0	0.8	0.3	5.6	45
6.3	92.6	2.9	1.2	0.4	6.3	50
6.5	92.7	3.9	0.7	0.3	4.5	36
6.6	86.5	6.7	0.7	0.3	3.6	29
6.7	96.0	2.1	0.7	0.3	7.4	59
6.9	91.5	2.2	2.7	0.6	16.1	128

Table 10. Question A17: Current Job
MINOR GROUP Level Kappa
WEIGHTED

Lists only groups with sufficient cell size.
Missing s.e. indicates no estimate of variance possible.

Minor Group	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	Percent in Group (unwtd.)	QC Cases in Group (unwtd.)
1.1	89.0	1.5	1.8	0.2	10.6	475
1.2	91.3	6.6	0.1	0.0	0.5	21
1.8	87.3	6.3	0.1	0.1	0.6	28
2.2	83.4	4.2	0.5	0.1	2.0	90
2.8	86.0	6.3	0.2	0.1	0.7	33
3.1	91.5	4.0	0.1	0.1	1.5	68
3.2	95.3	3.5	0.1	0.0	1.5	68
3.3	92.3	8.2	0.0	0.0	0.5	23
4.3	83.9	4.9	0.4	0.1	1.3	59
5.1	96.3	3.0	0.1	0.0	1.3	56
5.2	94.7	3.7	0.1	0.0	1.3	58
5.3	94.2	2.1	0.3	0.1	4.0	179
5.4	93.6	1.8	0.4	0.1	6.2	277
5.5	78.1	7.7	0.3	0.1	1.1	49
5.6	94.5	2.0	0.3	0.1	4.3	194
5.7	85.9	3.0	0.8	0.1	4.5	201
6.1	85.2	1.2	4.6	0.3	14.7	656
6.2	95.6	1.0	0.6	0.1	7.2	323
6.3	97.1	0.9	0.3	0.1	4.8	216
6.4	87.0	5.1	0.2	0.1	0.8	34
6.5	93.4	1.6	0.5	0.1	3.6	162
6.6	81.0	2.9	1.4	0.2	5.0	225
6.7	90.2	1.3	1.7	0.2	6.5	289
6.8	92.6	2.9	0.2	0.1	1.0	46
6.9	89.5	1.1	3.0	0.3	12.1	542

Table 11. Question C1: Work History
MINOR GROUP Level Kappa
WEIGHTED

Lists only groups with sufficient cell size.
Missing s.e. indicates no estimate of variance possible.

Minor Group	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	Percent in Group (unwtd.)	QC Cases in Group (unwtd.)
1.1	89.8	1.3	1.1	0.1	7.1	561
1.2	92.1	3.9	0.1	0.0	0.7	54
1.8	78.9	6.7	0.2	0.0	0.6	46
2.1	73.3	7.1	0.3	0.1	0.4	34
2.2	81.4	3.4	0.5	0.1	1.9	151
2.8	76.8	6.7	0.2	0.1	0.6	49
3.1	94.8	1.9	0.1	0.0	2.0	155
3.2	96.9	2.2	0.0	0.0	1.3	105
3.3	94.8	5.0	0.0	0.0	0.6	44
3.8	74.8	10.4	0.1	0.0	0.5	40
4.1	81.9	7.5	0.1	0.0	0.3	26
4.3	84.2	3.8	0.3	0.1	1.0	81
4.8	93.6	3.5	0.1	0.0	0.5	37
5.1	94.7	2.4	0.1	0.0	1.6	124
5.2	94.5	2.2	0.1	0.0	1.6	128
5.3	95.1	1.5	0.2	0.1	3.8	300
5.4	95.9	1.0	0.3	0.1	6.3	500
5.5	85.8	3.5	0.3	0.1	1.4	112
5.6	92.0	1.7	0.4	0.1	4.3	342
5.7	86.0	2.1	0.8	0.1	4.5	355
5.8	96.2	4.5	0.0	0.0	0.3	26
6.1	84.9	1.1	3.6	0.2	10.7	848
6.2	93.8	1.0	0.7	0.1	6.2	492
6.3	96.6	0.6	0.5	0.1	6.5	512
6.4	80.0	4.3	0.4	0.1	0.9	71
6.5	92.2	1.3	0.6	0.1	3.6	286
6.6	87.8	1.5	1.3	0.1	6.4	507
6.7	92.1	0.9	1.4	0.1	6.6	519
6.8	91.0	2.2	0.3	0.1	1.4	109
6.9	88.7	0.8	3.6	0.2	15.4	1,219

Table 12. Question D8: Educational Degree--Last 2 Years
MINOR GROUP Level Kappa
WEIGHTED

Only lists codes with sufficient cell size.
Missing s.e. indicates no estimate of variance possible.

Minor Group	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	Percent in Group (unwtd.)	QC Cases in Group (unwtd.)
1.1	100.0	.	0.0	.	8.0	21
6.1	93.9	4.2	1.2	0.7	12.5	33
6.2	99.4	1.1	0.2	0.3	12.9	34
6.3	90.5	4.2	2.9	1.0	13.3	35
6.9	82.1	7.3	3.4	1.1	7.6	20

C. Reliability of Three-digit Codes

Table 13. Question A6: Previous Job
CATEGORY Level Kappa
WEIGHTED

(Ordered by minor group, then code)
Only lists codes with sufficient cell size.
Missing s.e. indicates no estimate of variance possible.

Minor Group	Code	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	Percent (unwtd.)	QC Sample (unwtd.)
1.1	52	89.0	7.8	0.4	0.2	2.4	19
5.1	82	98.0	3.4	0.1	0.1	2.8	22
5.3	86	96.6	4.2	0.1	0.1	3.4	27
5.4	89	91.6	4.8	0.6	0.3	5.1	41
5.6	94	96.1	3.4	0.2	0.2	5.0	40
6.1	141	91.4	2.8	1.8	0.5	8.2	65
6.5	240	90.8	5.7	0.5	0.2	2.8	22
6.7	202	95.2	4.2	0.2	0.2	2.6	21
6.9	500	79.4	6.9	1.6	0.4	3.3	26

Table 14. Question A17: Current Job
CATEGORY Level Kappa
WEIGHTED

(Ordered by minor group, then code)
Only lists codes with sufficient cell size.
Missing s.e. indicates no estimate of variance possible.

Minor Group	Code	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	Percent (unwtd.)	QC Sample (unwtd.)
1.1	52	79.4	3.1	1.4	0.2	4.1	184
1.1	54	80.1	4.9	0.5	0.1	1.5	66
1.1	55	72.1	6.0	0.7	0.1	1.3	57
1.1	88	89.6	2.8	0.5	0.1	3.5	155
2.2	23	76.6	8.3	0.3	0.1	0.8	34
2.2	25	84.5	7.2	0.2	0.1	0.6	25
3.1	193	91.5	4.0	0.1	0.1	1.5	68
3.2	194	96.1	3.5	0.0	0.0	1.3	57
3.3	196	100.0	.	0.0	.	0.5	21
4.3	236	83.9	4.9	0.4	0.1	1.3	59
5.1	82	96.3	3.0	0.1	0.0	1.3	56
5.2	85	94.7	3.7	0.1	0.0	1.3	58
5.3	86	94.2	2.1	0.3	0.1	4.0	179
5.4	87	83.4	7.2	0.2	0.1	0.8	37
5.4	89	94.6	1.8	0.3	0.1	5.4	240
5.5	91	78.1	7.7	0.3	0.1	1.1	49
5.6	94	94.5	2.0	0.3	0.1	4.3	194
5.7	90	93.5	3.7	0.1	0.0	1.3	58
5.7	93	87.5	8.6	0.1	0.0	0.6	26
5.7	98	91.0	5.2	0.1	0.0	0.7	30
5.7	99	55.9	11.7	0.5	0.1	0.9	41
6.1	141	84.5	1.5	3.7	0.3	10.6	472
6.1	151	84.1	3.0	0.9	0.1	2.3	101
6.1	152	82.5	5.5	0.3	0.1	0.7	31
6.1	153	55.8	7.0	1.3	0.2	1.2	52
6.2	111	97.3	1.0	0.2	0.1	4.4	196
6.2	112	93.2	3.2	0.2	0.1	1.1	47
6.2	113	85.3	4.4	0.4	0.1	1.2	54
6.2	114	61.3	10.8	0.4	0.1	0.6	26
6.3	252	89.3	3.8	0.3	0.1	0.9	41
6.3	253	93.4	2.4	0.3	0.1	1.8	82
6.3	255	87.9	5.5	0.2	0.1	0.5	23
6.3	256	90.8	4.4	0.1	0.1	0.5	22
6.5	40	97.4	2.1	0.1	0.0	0.7	33
6.5	70	87.0	4.9	0.2	0.1	0.9	40
6.5	240	91.8	2.4	0.4	0.1	2.0	89
6.6	51	80.3	3.9	0.8	0.1	2.8	127
6.6	100	88.7	6.1	0.1	0.1	0.5	24
6.7	200	88.1	2.6	0.7	0.1	1.7	78
6.7	201	76.9	4.6	0.8	0.1	1.3	57
6.7	202	87.6	2.9	0.6	0.1	1.6	71
6.7	203	79.9	3.6	1.0	0.1	1.9	83
6.8	10	92.4	3.0	0.2	0.1	1.0	45
6.9	32	93.2	3.7	0.1	0.1	0.6	26
6.9	33	75.0	4.1	1.2	0.2	1.7	75
6.9	81	87.2	6.4	0.1	0.1	0.6	27
6.9	110	95.2	2.9	0.1	0.0	0.6	25
6.9	120	98.4	0.9	0.1	0.1	2.2	99
6.9	222	87.5	4.3	0.3	0.1	0.7	32
6.9	223	75.6	7.2	0.4	0.1	0.6	29
6.9	401	74.5	6.7	0.5	0.1	0.6	29
6.9	500	75.0	3.6	1.6	0.2	2.6	114

Table 15. Question C1: Work History
CATEGORY Level Kappa
WEIGHTED

(Ordered by minor group, then code)
Only lists codes with sufficient cell size.
Missing s.e. indicates no estimate of variance possible.

Minor Group	Code	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	Percent (unwtd.)	QC Sample (unwtd.)
1.1	52	79.3	2.8	1.0	0.1	2.8	219
1.1	54	78.0	5.3	0.3	0.1	0.8	67
1.1	55	62.0	6.7	0.6	0.1	0.9	68
1.1	88	89.1	2.7	0.3	0.1	2.4	192
1.2	174	94.8	4.7	0.0	0.0	0.3	26
1.8	286	85.7	6.9	0.1	0.0	0.4	33
2.1	21	73.3	7.1	0.3	0.1	0.4	34
2.2	22	82.4	8.2	0.1	0.0	0.3	27
2.2	23	78.0	6.1	0.2	0.1	0.7	57
2.2	25	73.3	7.5	0.2	0.1	0.5	40
2.2	27	80.3	9.1	0.1	0.0	0.3	27
2.8	273	64.2	12.5	0.2	0.0	0.2	19
3.1	193	94.8	1.9	0.1	0.0	2.0	155
3.2	194	96.8	2.4	0.0	0.0	1.1	88
3.3	196	94.1	5.6	0.0	0.0	0.5	40
4.1	232	81.9	7.5	0.1	0.0	0.3	26
4.3	236	84.2	3.8	0.3	0.1	1.0	81
5.1	82	94.7	2.4	0.1	0.0	1.6	124
5.2	85	94.5	2.2	0.1	0.0	1.6	128
5.3	86	95.1	1.5	0.2	0.1	3.8	300
5.4	87	85.9	5.2	0.1	0.0	0.8	60
5.4	89	95.8	1.1	0.3	0.1	5.6	440
5.5	91	85.8	3.5	0.3	0.1	1.4	112
5.6	94	92.0	1.7	0.4	0.1	4.3	342
5.7	90	94.7	3.0	0.1	0.0	0.8	60
5.7	92	95.7	4.6	0.0	0.0	0.3	27
5.7	93	82.3	7.0	0.1	0.0	0.6	51
5.7	96	98.6	2.3	0.0	0.0	0.4	28
5.7	97	93.8	4.7	0.0	0.0	0.4	32
5.7	98	90.1	4.2	0.1	0.0	0.7	53
5.7	99	57.0	8.4	0.5	0.1	1.0	78
5.8	280	96.2	4.5	0.0	0.0	0.3	26
6.1	141	83.0	1.4	2.6	0.2	6.5	517
6.1	151	89.0	1.9	0.6	0.1	2.2	173
6.1	152	79.0	4.0	0.5	0.1	0.9	72
6.1	153	47.4	5.9	1.5	0.1	1.1	86
6.2	111	96.3	1.1	0.2	0.1	3.0	235
6.2	112	91.1	2.9	0.2	0.0	1.0	77
6.2	113	86.4	2.8	0.4	0.1	1.6	125
6.2	114	75.3	5.7	0.4	0.1	0.7	55
6.3	251	95.4	3.1	0.0	0.0	0.3	22
6.3	252	91.9	1.9	0.3	0.1	1.5	115
6.3	253	95.5	1.3	0.2	0.1	2.3	183
6.3	254	92.8	2.9	0.1	0.0	0.6	44
6.3	255	85.3	3.3	0.4	0.1	1.0	76
6.3	256	95.0	2.6	0.1	0.0	0.5	40
6.3	257	58.7	8.7	0.4	0.1	0.4	32
6.5	40	98.1	1.5	0.0	0.0	0.5	42
6.5	70	82.2	4.0	0.4	0.1	1.0	82
6.5	240	90.1	2.0	0.5	0.1	2.1	162
6.6	26	89.1	3.7	0.2	0.0	0.8	63
6.6	51	90.0	1.9	0.5	0.1	3.3	264
6.6	100	80.4	5.9	0.2	0.1	0.6	47
6.6	101	75.6	9.4	0.1	0.0	0.3	26
6.6	103	90.7	5.0	0.1	0.0	0.4	34
6.6	197	86.6	5.1	0.1	0.0	0.5	43
6.7	200	86.3	2.2	0.7	0.1	1.7	132
6.7	201	81.2	3.3	0.6	0.1	1.1	90
6.7	202	85.2	2.2	0.9	0.1	2.2	171
6.7	203	78.7	2.9	1.0	0.1	1.6	126

Table 15. (continued)

Minor Group	Code	Cohen's Kappa	Kappa s.e.	GDR	GDR s.e.	Percent (unwtd.)	QC Sample (unwtd.)
6.8	10	90.8	2.3	0.3	0.1	1.3	106
6.9	31	91.7	3.0	0.1	0.0	0.6	50
6.9	32	93.1	2.2	0.2	0.0	1.1	83
6.9	33	78.8	2.5	1.3	0.1	2.3	182
6.9	81	88.6	6.0	0.1	0.0	0.4	31
6.9	110	87.0	4.1	0.2	0.0	0.5	40
6.9	120	98.8	0.7	0.1	0.0	1.3	106
6.9	221	89.4	3.4	0.2	0.0	0.6	50
6.9	222	92.7	2.7	0.1	0.0	0.7	52
6.9	223	72.8	5.0	0.6	0.1	0.7	55
6.9	401	78.9	4.5	0.4	0.1	0.8	63
6.9	402	76.6	7.8	0.2	0.0	0.4	31
6.9	403	81.8	5.3	0.2	0.1	0.5	38
6.9	404	48.0	11.6	0.4	0.1	0.3	23
6.9	405	81.9	6.5	0.1	0.0	0.3	27
6.9	500	78.6	1.9	2.2	0.2	4.6	362

II. Measures of Accuracy

A. Error Rates

The error rate, which measures coding accuracy, is the proportion of incorrect codes in the entire NSCG sample. We counted errors only among codes assigned by production coder 1. We assumed no error occurred if the two production coders agreed. If they disagreed, we considered the code assigned by the adjudicator to be the correct code. If production coder 1 initially referred the case to a higher level coder, we considered the final three-digit code to be correct, no matter what code the adjudicator assigned. Occasionally, the adjudicator assigned a code of "931," meaning both production codes were acceptable. We sent these "931" cases to subject matter experts at NSF, who assigned a valid three-digit code. We used this three-digit code as the correct code in assigning errors and estimating the error rate.

We estimated the overall, unweighted error rate for a question using the formula,

$$\text{rate} = 100\text{x} \left[\frac{\textit{Total QC cases with incorrect codes}}{\textit{Total QC cases}} \right] \left[\frac{\textit{Total non-QC cases}}{\textit{Total cases}} \right]$$

The first term of this expression is the QC error rate. The second term is the proportion of NSCG cases that have not been corrected in the QC process.

In the above expression, we estimate the error rate for the QC cases (the first term) and multiply it by the proportion of cases that hadn't undergone QC processing and so had not been corrected. We assume the non-QC error rate was similar to the error rate for the QC cases before they were corrected.

Since the QC cases were corrected in the QC process, the "outgoing" error rate for the corrected QC cases was zero.

Table 16.
Question A6: Unweighted Overall ERROR RATE Estimates

	Error Rate	Error Rate Standard Error	Total QC Cases for Code	Disagreements for Code
Individual CODE Level Errors	4.8	0.7	829	44
MINOR GROUP Level Errors	3.1	0.6	835	29
MAJOR GROUP Level Errors	1.2	0.4	835	11

Table 17.
Question A17: Unweighted Overall ERROR RATE Estimates

	Error Rate	Error Rate Standard Error	Total QC Cases for Code	Disagreements for Code
Individual CODE Level Errors	6.0	0.3	4,627	307
MINOR GROUP Level Errors	4.1	0.3	4,652	212
MAJOR GROUP Level Errors	2.2	0.2	4,652	112

Table 18
Question C1: Unweighted Overall ERROR RATE Estimates

	Error Rate	Error Rate Standard Error	Total QC Cases for Code	Disagreements for Code
Individual CODE Level Errors	5.7	0.2	8,243	515
MINOR GROUP Level Errors	3.8	0.2	8,281	346
MAJOR GROUP Level Errors	1.6	0.1	8,281	144

Table 19.
Question D8: Unweighted Overall ERROR RATE Estimates

	Error Rate	Error Rate Standard Error	Total QC Cases for Code	Disagreements for Code
Individual CODE Level Errors	6.6	1.5	274	20
MINOR GROUP Level Errors	2.3	0.9	274	7
MAJOR GROUP Level Errors	1.3	0.7	274	4

B. Problematic Codes

This list of problematic codes may be used to help improve coding quality in the 1997 NSCG.

We used two criteria -- error rates and numbers of errors -- to determine which occupation codes were problematic in 1995. We used unweighted estimates for both criteria.

Question D8, education field, generated too few responses in any single category for us to develop a list of problematic codes.

1. Occupation Codes with High Error Rates

We used the overall error rate formula in section II.A. to estimate error rates for individual codes. We replaced the overall totals in the formula with totals for individual codes.

Table 20 includes only problematic codes, those with error rates significantly higher than the combined overall error rate for questions A17 and C1 (5.8). We combined the two questions to produce the largest possible sample. Only 14 codes proved problematic under this criterion.

Table 20. PROBLEMATIC OCCUPATION CODES, ORDERED BY OUTGOING ERROR RATE
Includes codes with error rates significantly higher than combined A17,C1 error rate (=5.808). Alpha = 0.10

Minor Code	Group	Total QC Sample	Outgoing Error Rate	s.e.	Z-value
295	6.4	4	68.0	21.1	2.941
403	6.9	61	20.8	4.7	3.183
404	6.9	40	20.4	5.8	2.526
153	6.1	147	19.1	2.9	4.527
273	2.8	40	18.1	5.5	2.231
033	6.9	307	14.8	1.8	4.880
099	5.7	111	13.9	3.0	2.714
257	6.3	53	13.7	4.3	1.840
201	6.7	156	13.4	2.5	3.060
223	6.9	84	13.0	3.3	2.151
055	1.1	121	12.7	2.7	2.522
401	6.9	97	11.2	2.9	1.862
255	6.3	109	10.8	2.7	1.856
052	1.1	441	10.5	1.3	3.536
113	6.2	199	8.7	1.8	1.576
500	6.9	468	7.6	1.1	1.577
141	6.1	1020	6.7	0.7	1.212

2. Occupation Codes with Relatively Many Errors

Tables 21 through 23 list the codes with the highest number of errors for each occupation question.

The number of these "problem" codes is different for each question because we truncated each list somewhat arbitrarily to include all the codes with a particular number of errors. For instance, for Question A6, we included codes with 2 errors but not one error, producing a list of 11 "problem" codes.

Too few cases were available to identify problematic education codes.

Table 21.

Question A6: Previous Job
Unweighted INDIVIDUAL CODE OUTGOING ERROR RATE Estimates
Includes Codes with Highest Number of Errors
Excludes cases with 000, 505, or 999 in BEST_ or ADJ_
or R in ADJ_

Code	Minor Group	Outgoing Error Rate	Error Rate s.e.	Total QC Cases	Disagreements
33	6.9	25.9	10.3	21	6
141	6.1	5.5	2.7	66	4
70	6.5	19.4	10.8	14	3
23	2.2	36.2	22.9	5	2
52	1.1	8.6	5.9	21	2
88	1.1	11.3	7.7	16	2
91	5.5	18.1	12.1	10	2
114	6.2	11.3	7.7	16	2
153	6.1	16.5	11.1	11	2
280	5.8	36.2	22.9	5	2
500	6.9	7.2	5.0	25	2
10	6.8	5.0	4.9	18	1
25	2.2	12.9	12.0	7	1
51	6.6	7.5	7.2	12	1
93	5.7	11.3	10.6	8	1

Table 22.

Question A17: Current Job
Unweighted INDIVIDUAL CODE OUTGOING ERROR RATE Estimates
Includes Codes with Highest Number of Errors
Excludes cases with 000, 505, or 999 in BEST_ or ADJ_
or R in ADJ_

Code	Minor Group	Outgoing Error Rate	Error Rate s.e.	Total QC Cases	Disagreements
141	6.1	6.6	1.1	483	35
52	1.1	12.2	2.3	201	27
33	6.9	18.1	4.1	95	19
153	6.1	19.8	5.7	55	12
99	5.7	21.7	6.5	46	11
500	6.9	9.0	2.7	111	11
88	1.1	5.0	1.7	163	9
55	1.1	11.1	4.2	57	7
89	5.4	2.6	1.0	244	7
151	6.1	6.2	2.3	103	7
201	6.7	11.5	4.3	55	7
202	6.7	8.5	3.2	75	7
203	6.7	7.9	3.0	80	7
51	6.6	4.8	2.0	113	6
54	1.1	8.4	3.4	65	6

Table 23.

Question C1: Work History
Unweighted INDIVIDUAL CODE OUTGOING ERROR RATE Estimates
Includes Codes with Highest Number of Errors
Excludes cases with 000, 505, or 999 in BEST_ or ADJ_
or R in ADJ_

Code	Minor Group	Outgoing Error Rate	Error Rate s.e.	Total QC Cases	Disagreements
141	6.1	6.8	1.1	537	40
33	6.9	13.3	2.4	212	31
500	6.9	7.1	1.3	357	28
52	1.1	9.1	1.8	240	24
153	6.1	18.7	4.3	92	19
201	6.7	14.4	3.6	101	16
113	6.2	8.6	2.4	137	13
202	6.7	6.3	1.8	174	12
240	6.5	6.4	1.9	169	12
203	6.7	8.4	2.5	119	11
403	6.9	22.7	6.8	44	11
55	1.1	14.2	4.4	64	10
70	6.5	10.5	3.3	86	10
94	5.6	2.6	0.8	349	10
255	6.3	11.1	3.5	82	10

C. Error Factors

The error factor is a measure of accuracy that gives a rough idea of how much the published estimate may have over- or underestimated the proportion in a particular occupation category. If the error factor is significantly greater than 100, the published estimate of the proportion in that category is probably too large. If the error factor is significantly less than 100, the estimate is probably too small.

As an example of how the error factor can be used, an error factor of 1.03 indicates that the proportion of those in a particular category was overestimated by roughly 3 percent.

If we report error factor estimates to users, we need to warn them not to use the factors to actually adjust the published estimates. Doing this would greatly increase the variance of the estimate as well as making the original estimate of the standard error invalid.

The estimates in the table below are based on weighted data. Again, the sample sizes were too small to estimate reliable error factors for education codes in question D8.

The error factor for category *j* is:

$$factor(j) = 100x \frac{Weighted\ cases\ actually\ in\ category\ \mathrm{j}}{\mathrm{Weighted\ cases\ that\ should\ be\ in\ category\ j}}$$

This can also be written:

$$\frac{NQC_{wtd} + QC_{wtd}}{(QC\ error\ ratio) x\ NQC_{wtd} + QC_{wtd}}$$

where NQC_{wtd} is number of non-QC cases in category *j*
QC_{wtd} is QC cases in category *j* after QC processing

The QC error ratio for category *j* is:

$$ratio(j) = \frac{Weighted\ QC\ cases\ in\ category\ \text{j after QC processing}}{\text{Weighted QC cases in category j before QC processing}}$$

"QC cases in category *j* before QC processing" refers to QC codes assigned to category *j* by the production coder 1. "QC cases in category *j* after QC processing" refers to QC cases' final codes in DSD's final (unedited) data file.

Table 24.
Question A6: Previous Job - Weighted ERROR FACTOR Estimates
Lists codes where QC sample size for final code is greater than 49

Excludes cases with 000, 505, or 999 in final or production code
Or R in production code

Code	Minor Group	Error Factor	Error Factor s.e.	Significantly different from 1?	After QC, Unwtd.
141	6.1	1.01	0.05		66

Table 25.

Question A17: Current Job - Weighted ERROR FACTOR Estimates
Lists codes where QC sample size for final code is greater than 49

Excludes cases with 000, 505, or 999 in final or production code
Or R in production code

Code	Minor Group	Error Factor	Error Factor s.e.	Significantly different from 1?	After QC, Unwtd.
52	1.1	0.98	0.03		198
54	1.1	1.08	0.07		63
55	1.1	1.02	0.09		53
88	1.1	1.00	0.03		157
193	3.1	1.02	0.04		68
194	3.2	1.01	0.05		57
236	4.3	1.15	0.08	*	53
82	5.1	1.10	0.06	*	54
85	5.2	0.98	0.05		57
86	5.3	1.01	0.02		178
89	5.4	1.00	0.02		240
91	5.5	0.96	0.05		51
94	5.6	1.02	0.02		189
90	5.7	0.98	0.03		59
141	6.1	1.00	0.02		474
151	6.1	1.03	0.06		98
153	6.1	0.86	0.10		61
111	6.2	1.00	0.02		193
113	6.2	0.88	0.05	*	61
253	6.3	0.96	0.03	*	86
240	6.5	0.96	0.03		95
51	6.6	1.10	0.05	*	113
200	6.7	1.08	0.07		74
201	6.7	0.97	0.09		56
202	6.7	0.97	0.07		74
203	6.7	1.11	0.08		77
33	6.9	0.86	0.05	*	89
120	6.9	1.00	0.02		100
500	6.9	0.99	0.05		108

Table 26.

Question C1: Work History - Weighted ERROR FACTOR Estimates
Lists codes where QC sample size for final code is greater than 49

Excludes cases with 000, 505, or 999 in final or production code
Or R in production code

Code	Minor Group	Error Factor	Error Factor s.e.	Significantly different from 1?	After QC, Unwtd.
52	1.1	0.98	0.03		234
54	1.1	1.18	0.09	*	57
55	1.1	1.03	0.08		64
88	1.1	1.01	0.02		192
23	2.2	1.01	0.07		55
193	3.1	1.01	0.02		155
194	3.2	1.00	0.03		89
236	4.3	1.04	0.05		82
82	5.1	1.04	0.03		122
85	5.2	1.00	0.03		134
86	5.3	0.97	0.01	*	307
87	5.4	0.95	0.05		62
89	5.4	1.00	0.01		445
91	5.5	0.97	0.03		119
94	5.6	1.01	0.01		341
90	5.7	1.00	0.03		60
93	5.7	0.90	0.06	*	53
98	5.7	1.01	0.07		51
99	5.7	1.16	0.07	*	67
141	6.1	1.02	0.02		520
151	6.1	1.02	0.03		169
152	6.1	0.92	0.05	*	80
153	6.1	0.81	0.07	*	113
111	6.2	1.03	0.02	*	225
112	6.2	0.96	0.04		75
113	6.2	0.96	0.03		132
114	6.2	1.14	0.09		51
252	6.3	1.00	0.04		117
253	6.3	0.98	0.02		189
255	6.3	0.94	0.04		81
70	6.5	0.96	0.05		85
240	6.5	0.97	0.03		167
26	6.6	1.00	0.05		64
51	6.6	1.02	0.02		257
200	6.7	1.05	0.05		129
201	6.7	0.90	0.05	*	98
202	6.7	1.02	0.04		167
203	6.7	1.11	0.06	*	117
10	6.8	1.04	0.05		104
31	6.9	0.94	0.04	*	53
32	6.9	1.00	0.04		84
33	6.9	0.91	0.03	*	206
120	6.9	1.00	0.03		105
221	6.9	0.99	0.06		51
222	6.9	0.98	0.07		52
223	6.9	0.99	0.08		54
401	6.9	0.98	0.08		69
500	6.9	1.04	0.03		344

III. Self-Code Related Measures

We provide three measures to evaluate the quality of self-codes provided by the respondents: self-code agreement rate, no self-code rate, and self-code disagreement rate. We estimated these measures from weighted data for the entire 1995 NSCG sample, not just the QC sample. Table 27 shows the overall agreement rate for each question. Tables 28 through 31 show each question's agreement rates, by occupation or education category.

The self-code agreement rate for category *j* is:

$$100 \text{x} \frac{\textit{Weighted cases with both self - code and final best code in category } \text{j}}{\text{Total weighted cases where final best code in category j}}$$

The no-self code rate for category *j* is:

$$100 \text{x} \frac{\textit{Weighted cases with no self - code where final best code in category } \text{j}}{\text{Weighted cases where final best code in category j}}$$

The self-code disagreement rate for category *j* is:

$$100 - (\textit{self - code agreement rate(j)}) - (\textit{no self - code rate(j)})$$

Note that many estimates in these tables are based on very small samples and may not be reliable.

Table 27. Self-Code Agreement Rates (and Standard Errors)for Occupation and Education Questions -- Weighted Data --

Question	Self-Code Agreement Rate	Self-Code Disagreement Rate	No Self-Code Rate	Number of Cases Coded
A6: Prev Job	71.2 (0.5)	21.0 (0.5)	7.8 (0.3)	7,946
A17: Cur Job	73.6 (0.2)	18.5 (0.2)	7.9 (0.1)	45,189
C1: Work Hist	55.7 (0.2)	13.2 (0.1)	31.1 (0.2)	80,250
D8: Educ Degree	86.9 (0.7)	7.6 (0.6)	5.4 (0.5)	2,200

Table 28.

Question A6: Previous Job -- Self-Code Agreement Rates (Weighted Data)

Missing s.e. indicates no estimate of variance possible.

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
1.1	52	64.1	3.6	30.9	3.5	5.0	1.6	179
1.1	53	87.0	11.2	13.0	11.2	0.0	.	10
1.1	54	87.1	5.5	9.5	4.8	3.4	3.0	38
1.1	55	95.2	2.7	3.5	2.4	1.3	1.5	62
1.1	88	79.0	3.8	13.2	3.2	7.8	2.5	116
1.2	172	65.6	19.4	34.4	19.4	0.0	.	7
1.2	173	100	.	0.0	.	0.0	.	19
1.2	174	81.8	8.6	5.7	5.2	12.5	7.4	21
1.8	276	91.5	7.7	8.5	7.7	0.0	.	14
1.8	286	95.9	3.2	4.1	3.2	0.0	.	39
2.1	21	72.3	7.1	23.6	6.7	4.1	3.1	41
2.2	22	75.2	7.6	8.8	5.0	16.1	6.5	33
2.2	23	69.0	7.8	17.9	6.5	13.1	5.7	36
2.2	25	44.0	6.5	42.4	6.4	13.6	4.5	60
2.2	27	75.2	16.3	0.0	.	24.8	16.3	8
2.3	24	62.7	11.1	27.9	10.3	9.4	6.7	20
2.8	271	88.9	11.1	11.1	11.1	0.0	.	9
2.8	273	84.1	7.6	11.9	6.8	4.0	4.1	24
2.8	287	49.0	13.9	43.9	13.8	7.1	7.1	14
2.8	297	31.1	46.3	68.9	46.3	0.0	.	2
3.1	193	78.2	3.2	17.0	2.9	4.8	1.6	170
3.2	192	87.7	11.6	12.3	11.6	0.0	.	9
3.2	194	83.8	4.0	9.7	3.2	6.5	2.7	84
3.2	195	100	.	0.0	.	0.0	.	1
3.3	196	72.2	7.2	13.3	5.4	14.5	5.6	40
3.4	198	75.4	13.0	20.0	12.1	4.5	6.3	12
3.8	275	83.5	9.0	10.6	7.5	5.9	5.7	18
3.8	277	100	.	0.0	.	0.0	.	6
3.8	289	54.1	20.3	17.3	15.4	28.7	18.5	7

Table 28. (continued)
Question A6: Previous Job -- Self-Code Agreement Rates (Weighted Data)

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
4.1	232	45.1	8.8	43.5	8.8	11.5	5.6	33
4.2	235	100	.	0.0	.	0.0	.	4
4.3	236	64.8	4.9	32.8	4.8	2.4	1.6	96
4.4	231	98.7	6.5	0.0	.	1.3	6.5	4
4.4	237	61.2	18.4	17.1	14.2	21.7	15.6	8
4.5	233	100	.	0.0	.	0.0	.	1
4.5	238	100	.	0.0	.	0.0	.	7
4.8	278	70.5	15.2	26.0	14.6	3.5	6.1	10
4.8	290	40.4	24.5	59.6	24.5	0.0	.	5
4.8	291	60.6	16.3	26.4	14.7	12.9	11.2	10
4.8	293	88.6	18.3	11.4	18.3	0.0	.	4
4.8	298	76.5	16.0	18.2	14.6	5.3	8.4	8
5.1	82	88.1	2.2	10.4	2.1	1.5	0.8	212
5.2	85	78.4	3.6	15.8	3.2	5.8	2.0	132
5.3	86	77.7	2.4	15.1	2.1	7.2	1.5	293
5.4	87	78.8	8.0	19.0	7.7	2.3	2.9	27
5.4	89	83.0	1.8	9.7	1.4	7.3	1.3	435
5.5	91	63.6	4.9	31.5	4.7	4.8	2.2	99
5.6	94	82.0	2.0	11.4	1.6	6.6	1.3	381
5.7	83	77.4	13.9	22.6	13.9	0.0	.	10
5.7	84	79.3	11.7	5.1	6.3	15.6	10.5	13
5.7	90	79.7	5.7	11.5	4.6	8.8	4.1	50
5.7	92	54.3	12.9	40.7	12.7	5.0	5.6	16
5.7	93	79.6	5.3	10.3	4.0	10.1	3.9	59
5.7	95	70.0	17.3	0.0	.	30.0	17.3	8
5.7	96	53.9	10.6	6.6	5.3	39.5	10.4	23
5.7	97	79.2	6.4	14.7	5.6	6.1	3.8	41
5.7	98	77.3	6.8	18.8	6.3	3.9	3.1	39
5.7	99	87.4	4.2	8.4	3.5	4.2	2.5	63
5.8	280	80.4	6.7	13.1	5.7	6.4	4.1	36
6.1	141	75.0	1.6	18.6	1.5	6.4	0.9	694
6.1	151	78.4	3.5	19.9	3.4	1.7	1.1	136

Table 28. (continued)
Question A6: Previous Job -- Self-Code Agreement Rates (Weighted Data)

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
6.1	152	69.8	5.3	28.0	5.2	2.1	1.7	75
6.1	153	58.9	5.2	35.7	5.1	5.4	2.4	89
6.2	111	82.0	3.4	9.5	2.6	8.5	2.5	128
6.2	112	69.3	4.6	18.1	3.8	12.6	3.3	103
6.2	113	74.8	3.6	18.1	3.2	7.1	2.2	143
6.2	114	76.7	4.8	17.7	4.3	5.5	2.6	79
6.3	251	96.7	2.9	1.9	2.2	1.4	1.9	40
6.3	252	79.8	3.2	14.8	2.8	5.5	1.8	156
6.3	253	78.0	3.1	16.1	2.7	5.9	1.7	183
6.3	254	86.6	5.1	12.9	5.0	0.5	1.0	46
6.3	255	52.5	5.8	42.3	5.7	5.2	2.6	75
6.3	256	77.6	6.8	16.1	6.0	6.3	3.9	39
6.3	257	23.0	7.4	62.1	8.6	14.9	6.3	33
6.4	272	70.1	22.9	0.0	.	29.9	22.9	5
6.4	274	94.7	6.7	5.3	6.7	0.0	.	12
6.4	279	94.6	6.0	5.4	6.0	0.0	.	15
6.4	281	73.6	11.0	16.6	9.3	9.8	7.4	17
6.4	282	74.1	21.9	25.9	21.9	0.0	.	5
6.4	283	100	.	0.0	.	0.0	.	6
6.4	284	84.7	20.8	15.3	20.8	0.0	.	4
6.4	285	100	.	0.0	.	0.0	.	5
6.4	288	66.7	33.3	0.0	.	33.3	33.3	3
6.4	292	53.4	28.8	46.6	28.8	0.0	.	4
6.4	294	49.3	28.9	50.7	28.9	0.0	.	4
6.4	295	47.9	50.0	0.0	.	52.1	50.0	2
6.4	296	82.0	12.8	9.3	9.7	8.7	9.4	10
6.4	299	69.7	10.8	28.8	10.7	1.5	2.9	19
6.5	40	74.2	7.2	14.4	5.8	11.4	5.2	38
6.5	70	63.0	4.7	29.1	4.4	7.9	2.6	106
6.5	240	65.5	3.6	26.8	3.3	7.8	2.0	179
6.6	26	83.9	4.1	11.4	3.6	4.7	2.4	81
6.6	51	77.0	3.8	13.6	3.1	9.4	2.6	125

Table 28. (continued)
Question A6: Previous Job -- Self-Code Agreement Rates (Weighted Data)

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
6.6	100	67.1	6.9	30.3	6.7	2.6	2.3	48
6.6	101	75.8	8.9	4.7	4.4	19.5	8.3	24
6.6	102	58.8	13.7	41.2	13.7	0.0	.	14
6.6	103	88.0	6.3	4.3	3.9	7.7	5.1	28
6.6	104	37.8	24.2	30.3	23.0	31.9	23.3	5
6.6	175	100	.	0.0	.	0.0	.	1
6.6	197	74.1	9.3	16.6	7.9	9.3	6.2	23
6.7	200	75.5	3.8	14.3	3.1	10.2	2.6	132
6.7	201	71.4	5.2	19.4	4.5	9.2	3.3	77
6.7	202	74.3	3.4	15.1	2.8	10.6	2.4	162
6.7	203	57.9	4.5	32.2	4.3	9.9	2.7	120
6.8	10	63.8	4.3	30.8	4.1	5.4	2.0	128
6.9	31	88.6	3.7	10.0	3.5	1.4	1.4	76
6.9	32	81.3	3.3	13.1	2.9	5.6	2.0	138
6.9	33	41.5	3.0	44.3	3.0	14.2	2.1	268
6.9	81	69.8	8.0	30.2	8.0	0.0	.	34
6.9	110	39.5	8.3	39.3	8.3	21.2	6.9	36
6.9	120	76.8	3.9	12.1	3.0	11.1	2.9	116
6.9	130	77.5	7.3	12.2	5.7	10.4	5.3	34
6.9	171	100	.	0.0	.	0.0	.	6
6.9	221	70.7	5.9	12.4	4.3	16.8	4.9	60
6.9	222	50.0	8.0	32.2	7.5	17.8	6.1	40
6.9	223	44.3	5.5	45.2	5.5	10.5	3.4	84
6.9	401	58.7	7.6	28.5	7.0	12.8	5.2	43
6.9	402	40.2	10.0	45.8	10.2	14.0	7.1	25
6.9	403	29.0	8.7	54.2	9.6	16.8	7.2	28
6.9	404	18.5	9.1	58.1	11.6	23.4	10.0	19
6.9	405	55.0	8.2	33.0	7.7	12.0	5.3	38
6.9	500	60.4	3.1	28.0	2.8	11.6	2.0	254

Table 29.
Question A17: Current Job -- Self-Code Agreement Rates (Weighted Data)

Missing s.e. indicates no estimate of variance possible.

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
1.1	52	60.5	1.1	31.8	1.0	7.7	0.6	1,999
1.1	53	87.7	2.9	6.9	2.2	5.3	2.0	130
1.1	54	83.3	1.6	10.7	1.3	6.0	1.0	569
1.1	55	93.9	1.0	2.2	0.6	3.9	0.8	582
1.1	88	86.9	0.9	6.9	0.6	6.2	0.6	1,553
1.2	172	72.3	10.5	12.9	7.9	14.8	8.4	19
1.2	173	73.7	4.8	22.8	4.6	3.5	2.0	85
1.2	174	77.4	4.1	18.3	3.8	4.3	2.0	104
1.2	176	100	.	0.0	.	0.0	.	3
1.8	276	75.0	4.2	18.5	3.8	6.4	2.4	105
1.8	286	81.4	2.5	12.7	2.2	5.9	1.5	236
2.1	21	68.6	3.3	28.3	3.2	3.1	1.2	199
2.2	22	81.4	3.1	7.5	2.1	11.1	2.5	154
2.2	23	71.1	2.6	22.1	2.4	6.8	1.4	306
2.2	25	60.8	3.3	26.9	3.0	12.3	2.2	225
2.2	27	85.9	3.5	6.6	2.5	7.6	2.6	101
2.3	24	75.7	4.4	19.8	4.1	4.5	2.1	96
2.8	271	90.4	5.9	8.2	5.5	1.4	2.3	26
2.8	273	83.6	3.5	11.5	3.0	4.9	2.0	116
2.8	287	77.9	4.3	13.7	3.6	8.4	2.9	93
2.8	297	62.8	15.3	26.0	13.9	11.2	10.0	11
3.1	193	77.2	1.5	15.6	1.3	7.3	0.9	762
3.2	192	75.2	4.5	12.1	3.4	12.7	3.5	92
3.2	194	83.3	1.7	10.8	1.5	5.9	1.1	460
3.2	195	96.7	4.2	3.3	4.2	0.0	.	19
3.3	191	78.4	11.0	20.6	10.8	1.0	2.6	15
3.3	196	66.7	3.6	25.5	3.3	7.8	2.0	174
3.4	198	58.9	5.4	33.4	5.2	7.7	2.9	84
3.8	275	77.3	5.2	18.8	4.8	3.8	2.4	66
3.8	277	89.8	4.8	6.5	3.9	3.8	3.0	41
3.8	289	76.1	4.8	16.2	4.1	7.7	3.0	81

Table 29. (continued)
Question A17: Current Job -- Self-Code Agreement Rates (Weighted Data)

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
4.1	232	59.6	4.1	35.6	4.0	4.8	1.8	146
4.2	235	78.3	9.2	18.8	8.7	3.0	3.8	21
4.3	236	58.6	1.9	32.2	1.8	9.2	1.1	669
4.4	231	75.6	7.5	13.6	6.0	10.8	5.4	34
4.4	237	51.3	8.7	39.3	8.5	9.4	5.1	34
4.5	233	90.5	13.1	0.0	.	9.5	13.1	6
4.5	238	86.4	5.8	6.6	4.2	7.0	4.3	36
4.8	278	79.2	6.5	13.1	5.4	7.7	4.3	40
4.8	290	68.2	9.5	25.7	8.9	6.2	4.9	25
4.8	291	73.0	5.5	19.9	4.9	7.1	3.2	67
4.8	293	79.2	7.4	16.0	6.7	4.8	3.9	31
4.8	298	74.0	6.9	20.4	6.4	5.6	3.6	41
5.1	82	91.1	1.1	5.8	0.9	3.1	0.7	625
5.2	85	86.2	1.4	6.2	1.0	7.6	1.1	586
5.3	86	79.1	1.0	11.6	0.8	9.4	0.7	1,626
5.4	87	91.5	1.6	5.1	1.2	3.4	1.0	324
5.4	89	80.9	0.8	10.9	0.6	8.2	0.6	2,442
5.5	91	61.1	2.2	28.3	2.0	10.6	1.4	502
5.6	94	83.6	0.8	9.9	0.7	6.5	0.5	2,020
5.7	83	84.7	8.1	11.3	7.1	4.1	4.4	21
5.7	84	77.8	4.6	16.1	4.1	6.2	2.7	81
5.7	90	87.0	1.4	9.2	1.2	3.9	0.8	573
5.7	92	69.2	6.1	21.3	5.4	9.5	3.9	59
5.7	93	82.0	2.3	12.3	2.0	5.7	1.4	276
5.7	95	92.4	3.8	6.6	3.6	1.1	1.5	49
5.7	96	84.2	3.3	9.9	2.7	5.9	2.2	121
5.7	97	78.8	3.9	12.5	3.2	8.6	2.7	110
5.7	98	84.0	2.2	10.5	1.8	5.5	1.4	277
5.7	99	83.7	1.8	9.4	1.4	6.9	1.2	434
5.8	280	80.4	3.5	12.6	3.0	7.1	2.3	127
6.1	141	73.4	0.6	19.7	0.6	7.0	0.4	5,137
6.1	151	66.7	1.6	25.6	1.5	7.7	0.9	868

Table 29. (continued)
Question A17: Current Job -- Self-Code Agreement Rates (Weighted Data)

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
6.1	152	68.2	2.3	24.0	2.2	7.8	1.4	394
6.1	153	51.5	2.1	41.3	2.1	7.2	1.1	542
6.2	111	85.3	0.8	5.8	0.5	8.9	0.6	2,091
6.2	112	81.9	1.6	10.1	1.2	8.0	1.1	593
6.2	113	73.1	1.9	19.2	1.7	7.7	1.2	523
6.2	114	85.5	2.3	9.8	1.9	4.8	1.4	237
6.3	251	87.7	2.9	4.4	1.8	7.9	2.4	128
6.3	252	81.4	1.8	12.5	1.5	6.2	1.1	466
6.3	253	82.1	1.4	11.8	1.1	6.1	0.8	800
6.3	254	79.6	3.3	11.1	2.6	9.2	2.4	149
6.3	255	62.3	3.3	27.0	3.0	10.7	2.1	217
6.3	256	80.6	3.1	13.5	2.7	6.0	1.8	165
6.3	257	15.6	3.3	74.8	3.9	9.6	2.7	122
6.4	272	80.5	10.6	3.6	4.9	15.9	9.8	15
6.4	274	89.8	3.4	6.2	2.7	4.0	2.2	80
6.4	279	91.4	4.0	6.1	3.4	2.5	2.2	51
6.4	281	76.4	6.9	12.3	5.3	11.3	5.1	39
6.4	282	74.0	8.6	11.0	6.1	15.0	7.0	27
6.4	283	80.4	9.6	19.6	9.6	0.0	.	18
6.4	284	76.3	42.5	23.7	42.5	0.0	.	2
6.4	285	88.6	7.3	0.0	.	11.4	7.3	20
6.4	288	73.2	12.8	26.8	12.8	0.0	.	13
6.4	292	66.5	10.6	18.9	8.8	14.6	7.9	21
6.4	294	43.5	10.3	42.5	10.3	14.0	7.2	24
6.4	295	77.0	9.9	23.0	9.9	0.0	.	19
6.4	296	66.7	6.5	32.0	6.4	1.3	1.6	54
6.4	299	56.6	5.3	16.0	3.9	27.4	4.8	88
6.5	40	84.7	2.4	10.4	2.1	5.0	1.5	219
6.5	70	77.5	1.9	17.7	1.7	4.8	1.0	480
6.5	240	66.2	1.6	26.6	1.5	7.2	0.9	921
6.6	26	80.8	2.7	12.0	2.2	7.2	1.7	221
6.6	51	83.0	1.1	8.6	0.8	8.3	0.8	1,185

Table 29. (continued)
Question A17: Current Job -- Self-Code Agreement Rates (Weighted Data)

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
6.6	100	74.6	2.8	19.1	2.5	6.3	1.5	251
6.6	101	69.6	4.9	28.4	4.8	2.0	1.5	88
6.6	102	65.4	8.3	26.7	7.7	7.9	4.7	34
6.6	103	78.3	3.5	19.7	3.4	2.0	1.2	137
6.6	104	85.0	5.9	15.0	5.9	0.0	.	38
6.6	175	100	.	0.0	.	0.0	.	3
6.6	197	70.6	4.1	21.1	3.7	8.3	2.5	122
6.7	200	71.0	1.6	20.0	1.4	9.0	1.0	851
6.7	201	78.0	1.7	11.9	1.4	10.2	1.3	568
6.7	202	69.8	1.9	16.8	1.6	13.4	1.4	582
6.7	203	77.9	1.5	16.3	1.4	5.8	0.9	733
6.8	10	55.6	2.3	34.0	2.2	10.4	1.4	485
6.8	234	53.2	24.9	0.0	.	46.8	24.9	5
6.9	31	80.6	2.9	12.1	2.4	7.3	1.9	183
6.9	32	84.5	2.4	10.3	2.0	5.2	1.5	223
6.9	33	29.7	1.6	54.1	1.7	16.2	1.3	814
6.9	81	77.3	2.8	13.3	2.3	9.4	2.0	222
6.9	110	73.9	2.9	18.1	2.5	8.0	1.8	236
6.9	120	86.7	1.1	4.5	0.7	8.8	0.9	983
6.9	130	83.0	3.5	11.1	2.9	5.9	2.2	115
6.9	171	86.4	4.5	8.4	3.6	5.2	2.9	60
6.9	221	72.2	3.7	17.3	3.1	10.5	2.6	146
6.9	222	66.7	2.8	27.9	2.6	5.4	1.3	291
6.9	223	54.4	2.9	33.9	2.7	11.6	1.8	304
6.9	401	70.4	3.2	21.3	2.8	8.3	1.9	209
6.9	402	56.7	4.3	26.2	3.8	17.1	3.3	132
6.9	403	49.7	4.1	34.8	3.9	15.6	3.0	151
6.9	404	42.7	4.3	46.0	4.3	11.4	2.8	134
6.9	405	59.1	3.9	30.9	3.7	10.1	2.4	159
6.9	500	60.2	1.5	30.7	1.4	9.1	0.9	1,092

Table 30.

Question C1: Work History -- Self-Code Agreement Rates (Weighted Data)

Missing s.e. indicates no estimate of variance possible.

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
.	512	0.0	.	0.0	.	100	.	6
1.1	52	49.1	1.0	19.3	0.8	31.6	0.9	2,429
1.1	53	67.7	3.4	6.8	1.9	25.5	3.2	185
1.1	54	59.1	2.0	8.7	1.2	32.2	1.9	577
1.1	55	76.7	1.6	3.2	0.7	20.2	1.5	676
1.1	88	66.4	1.1	5.5	0.5	28.0	1.0	1,871
1.2	172	75.4	5.2	7.2	3.1	17.4	4.6	69
1.2	173	72.1	4.0	11.7	2.9	16.2	3.3	126
1.2	174	68.1	3.4	16.0	2.7	16.0	2.7	188
1.2	176	100	.	0.0	.	0.0	.	13
1.8	276	53.8	3.8	9.9	2.3	36.3	3.7	172
1.8	286	67.8	2.5	7.7	1.4	24.5	2.3	359
2.1	21	66.2	2.3	15.2	1.8	18.6	1.9	412
2.2	22	69.6	2.6	7.0	1.4	23.4	2.4	311
2.2	23	59.6	2.1	12.7	1.4	27.8	1.9	550
2.2	25	44.2	2.5	18.9	2.0	36.9	2.4	398
2.2	27	79.4	3.2	6.9	2.0	13.7	2.7	166
2.3	24	64.7	3.7	15.7	2.8	19.6	3.1	168
2.8	271	70.9	5.5	7.3	3.2	21.7	5.0	68
2.8	273	61.9	3.2	8.5	1.8	29.6	3.0	234
2.8	287	58.2	4.5	9.6	2.7	32.2	4.2	123
2.8	297	89.2	7.1	6.5	5.6	4.3	4.7	20
3.1	193	64.3	1.2	11.4	0.8	24.3	1.0	1,686
3.2	192	65.3	3.8	13.8	2.8	20.9	3.2	158
3.2	194	63.8	1.7	10.1	1.1	26.1	1.5	824
3.2	195	74.0	7.1	8.4	4.5	17.5	6.2	39
3.3	191	69.1	8.7	5.0	4.1	25.9	8.3	29

Table 30. (continued)
Question C1: Work History -- Self-Code Agreement Rates (Weighted Data)

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
3.3	196	66.7	2.5	10.8	1.6	22.6	2.2	355
3.4	198	47.9	4.4	12.0	2.8	40.1	4.3	132
3.8	275	66.0	3.7	9.9	2.3	24.1	3.3	169
3.8	277	76.3	4.7	7.7	2.9	16.0	4.0	84
3.8	289	54.1	4.0	13.3	2.7	32.7	3.8	156
4.1	232	38.8	2.7	20.2	2.2	40.9	2.7	327
4.2	235	75.7	6.6	4.7	3.3	19.6	6.1	43
4.3	236	36.5	1.6	25.7	1.4	37.8	1.6	933
4.4	231	53.5	6.2	12.6	4.2	33.8	5.9	65
4.4	237	51.1	5.9	21.9	4.9	27.0	5.2	73
4.5	233	62.3	18.3	17.8	14.4	19.9	15.1	8
4.5	238	75.5	4.5	11.8	3.4	12.7	3.5	91
4.8	278	60.8	5.9	5.3	2.7	33.8	5.7	70
4.8	290	58.5	7.1	9.9	4.3	31.7	6.7	49
4.8	291	64.5	4.1	7.7	2.3	27.9	3.9	135
4.8	293	76.5	5.7	0.8	1.2	22.7	5.6	57
4.8	298	57.7	6.0	21.8	5.0	20.5	4.9	68
5.1	82	72.7	1.3	7.4	0.7	19.9	1.1	1,255
5.2	85	67.4	1.3	8.6	0.8	24.1	1.2	1,278
5.3	86	63.3	0.9	9.2	0.5	27.5	0.8	2,946
5.4	87	63.2	2.1	4.7	0.9	32.1	2.0	536
5.4	89	62.9	0.7	7.9	0.4	29.2	0.7	4,492
5.5	91	47.6	1.5	21.1	1.2	31.3	1.4	1,179
5.6	94	66.2	0.8	7.8	0.4	26.0	0.7	3,610
5.7	83	71.4	5.1	11.3	3.6	17.3	4.3	79
5.7	84	68.2	4.3	14.9	3.3	16.9	3.4	121
5.7	90	69.3	1.8	7.4	1.0	23.3	1.7	640
5.7	92	71.0	3.6	8.3	2.2	20.7	3.2	160
5.7	93	66.1	2.1	12.6	1.5	21.3	1.8	522
5.7	95	73.8	4.0	2.0	1.3	24.1	3.9	121
5.7	96	69.4	2.8	7.3	1.6	23.3	2.6	272
5.7	97	65.1	2.8	9.1	1.7	25.8	2.5	296

Table 30. (continued)
Question C1: Work History -- Self-Code Agreement Rates (Weighted Data)

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
5.7	98	64.9	2.3	9.7	1.4	25.3	2.1	437
5.7	99	73.3	1.6	7.9	1.0	18.8	1.4	780
5.8	280	70.3	2.6	6.6	1.4	23.0	2.4	303
6.1	141	51.0	0.7	13.6	0.5	35.4	0.6	5,628
6.1	151	53.4	1.3	16.1	1.0	30.5	1.2	1,498
6.1	152	58.3	1.8	15.6	1.4	26.2	1.6	717
6.1	153	47.4	1.7	18.5	1.3	34.1	1.6	878
6.2	111	63.7	1.0	5.5	0.5	30.8	0.9	2,385
6.2	112	58.4	1.6	9.9	1.0	31.6	1.5	944
6.2	113	54.1	1.4	16.0	1.0	29.9	1.3	1,231
6.2	114	58.7	2.1	12.8	1.4	28.5	1.9	539
6.3	251	65.7	2.9	7.9	1.6	26.4	2.7	276
6.3	252	58.8	1.4	10.0	0.9	31.2	1.4	1,174
6.3	253	65.8	1.1	8.5	0.7	25.7	1.0	1,794
6.3	254	72.2	2.2	4.8	1.0	23.0	2.0	424
6.3	255	49.9	1.8	17.7	1.4	32.4	1.7	732
6.3	256	64.2	2.7	7.4	1.5	28.3	2.5	322
6.3	257	18.8	2.1	32.2	2.5	48.9	2.7	345
6.4	272	76.1	7.7	2.0	2.5	22.0	7.4	32
6.4	274	69.3	4.5	3.5	1.8	27.2	4.4	105
6.4	279	65.9	6.0	6.6	3.1	27.5	5.6	64
6.4	281	60.7	5.2	2.8	1.8	36.5	5.2	88
6.4	282	75.0	5.6	3.1	2.2	21.9	5.4	60
6.4	283	55.5	8.8	13.7	6.1	30.8	8.2	33
6.4	284	78.5	13.7	11.8	10.7	9.7	9.9	10
6.4	285	69.7	9.4	12.5	6.7	17.8	7.8	25
6.4	288	73.8	8.3	1.6	2.4	24.6	8.1	29
6.4	292	76.9	7.3	11.7	5.6	11.4	5.5	34
6.4	294	43.8	9.5	24.5	8.3	31.7	9.0	28
6.4	295	78.9	5.7	4.4	2.9	16.7	5.2	52
6.4	296	61.7	5.6	16.7	4.3	21.6	4.8	75
6.4	299	31.0	3.2	17.6	2.7	51.5	3.5	204

Table 30. (continued)
Question C1: Work History -- Self-Code Agreement Rates (Weighted Data)

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
6.5	40	64.1	2.6	7.1	1.4	28.8	2.4	353
6.5	70	62.8	1.6	14.5	1.2	22.6	1.4	907
6.5	240	46.6	1.2	20.9	1.0	32.5	1.1	1,769
6.6	26	74.9	1.6	7.6	1.0	17.5	1.4	720
6.6	51	71.2	0.9	5.7	0.5	23.1	0.8	2,591
6.6	100	54.6	2.1	13.6	1.5	31.8	2.0	545
6.6	101	67.2	2.9	15.7	2.2	17.1	2.3	265
6.6	102	68.1	4.3	12.7	3.0	19.3	3.6	121
6.6	103	67.6	2.6	5.4	1.2	27.0	2.5	327
6.6	104	78.0	5.1	0.8	1.1	21.2	5.1	66
6.6	175	47.0	17.6	0.0	.	53.0	17.6	9
6.6	197	48.7	2.6	12.5	1.7	38.8	2.6	366
6.7	200	50.4	1.4	13.1	0.9	36.6	1.3	1,278
6.7	201	63.7	1.5	7.7	0.8	28.6	1.4	1,004
6.7	202	44.2	1.2	10.8	0.8	45.0	1.2	1,591
6.7	203	60.8	1.4	12.2	1.0	27.0	1.3	1,167
6.8	10	42.4	1.6	20.3	1.3	37.2	1.6	955
6.8	234	57.5	14.9	5.4	6.8	37.1	14.6	12
6.9	31	71.3	2.0	6.0	1.1	22.7	1.9	499
6.9	32	70.4	1.6	7.3	0.9	22.4	1.5	820
6.9	33	20.4	0.9	34.9	1.0	44.7	1.1	2,151
6.9	81	55.3	2.7	10.8	1.7	33.9	2.6	330
6.9	110	58.8	2.4	7.3	1.3	34.0	2.4	407
6.9	120	60.9	1.5	6.5	0.7	32.6	1.4	1,117
6.9	130	71.1	3.1	8.8	1.9	20.1	2.7	219
6.9	171	77.4	4.2	4.3	2.1	18.3	3.9	98
6.9	221	47.3	2.0	11.2	1.3	41.5	2.0	612
6.9	222	45.8	2.2	19.4	1.8	34.8	2.1	503
6.9	223	36.2	1.9	18.8	1.5	45.0	1.9	661
6.9	401	56.3	2.3	9.1	1.3	34.7	2.2	485
6.9	402	38.6	2.8	19.2	2.3	42.2	2.9	300
6.9	403	34.0	2.5	32.2	2.4	33.8	2.5	373
6.9	404	38.3	2.8	16.1	2.1	45.6	2.9	302
6.9	405	44.9	3.0	13.7	2.1	41.4	2.9	281
6.9	500	46.2	0.8	20.0	0.7	33.8	0.8	3,621

Table 31.

Question D8: Educational Degree -- Self-Code Agreement Rates (Weighted Data)

Missing s.e. indicates no estimate of variance possible.

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
1.1	671	95.0	5.2	5.0	5.2	0.0	.	19
1.1	673	93.6	2.8	2.8	1.9	3.6	2.1	78
1.1	674	33.4	33.4	66.6	33.4	0.0	.	3
1.1	676	88.4	8.0	10.7	7.7	0.9	2.4	17
1.1	677	100	.	0.0	.	0.0	.	5
1.2	841	100	.	0.0	.	0.0	.	9
1.2	842	91.8	9.2	8.2	9.2	0.0	.	10
1.2	843	98.0	5.3	2.0	5.3	0.0	.	8
1.2	844	100	.	0.0	.	0.0	.	11
1.2	845	90.0	12.2	0.0	.	10.0	12.2	7
2.1	605	86.8	19.5	0.0	.	13.2	19.5	4
2.1	606	100	.	0.0	.	0.0	.	3
2.1	607	56.9	15.7	28.9	14.3	14.2	11.0	11
2.1	608	0.0	.	100	.	0.0	.	2
2.2	631	83.9	9.8	6.5	6.6	9.6	7.9	15
2.2	632	85.8	8.0	13.4	7.8	0.8	2.1	20
2.2	633	77.5	20.9	0.0	.	22.5	20.9	5
2.2	634	91.8	6.3	0.0	.	8.2	6.3	20
2.2	635	100	.	0.0	.	0.0	.	4
2.2	636	100	.	0.0	.	0.0	.	2
2.2	637	100	.	0.0	.	0.0	.	4
2.2	638	100	.	0.0	.	0.0	.	1
2.2	639	56.9	49.5	0.0	.	43.1	49.5	2
2.2	640	100	.	0.0	.	0.0	.	8
2.2	641	64.6	33.8	35.4	33.8	0.0	.	3
2.2	642	42.7	18.7	57.3	18.7	0.0	.	8
2.3	680	94.5	5.0	2.5	3.4	3.0	3.7	22
2.3	681	100	.	0.0	.	0.0	.	2
3.1	873	89.2	4.4	6.5	3.5	4.3	2.9	50
3.2	872	89.0	9.0	2.1	4.1	9.0	8.3	13

Table 31. (continued)
Question D8: Educational Degree -- Self-Code Agreement Rates (Weighted Data)

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
3.2	874	100	.	0.0	.	0.0	.	4
3.2	875	97.0	4.0	0.0	.	3.0	4.0	19
3.2	876	100	.	0.0	.	0.0	.	4
3.2	877	100	.	0.0	.	0.0	.	3
3.3	871	100	.	0.0	.	0.0	.	3
3.3	878	83.5	6.1	3.8	3.1	12.7	5.5	38
3.4	879	100	.	0.0	.	0.0	.	4
4.1	601	67.3	33.2	32.7	33.2	0.0	.	3
4.1	923	63.4	12.0	15.4	9.0	21.2	10.2	17
4.2	902	96.7	7.3	3.3	7.3	0.0	.	7
4.2	927	85.7	15.7	0.0	.	14.3	15.7	6
4.2	928	87.9	9.4	5.8	6.7	6.3	7.0	13
4.3	704	94.1	6.6	5.9	6.6	0.0	.	14
4.3	891	97.2	3.2	2.2	2.8	0.6	1.5	28
4.3	892	100	.	0.0	.	0.0	.	41
4.3	893	92.9	10.5	7.1	10.5	0.0	.	7
4.3	894	11.3	11.2	65.4	16.8	23.2	14.9	9
4.3	895	100	.	0.0	.	0.0	.	2
4.3	896	100	.	0.0	.	0.0	.	3
4.3	897	91.5	6.6	0.0	.	8.5	6.6	19
4.4	921	95.7	5.2	0.0	.	4.3	5.2	16
4.4	929	88.9	9.9	0.8	2.8	10.3	9.6	11
4.5	771	100	.	0.0	.	0.0	.	2
4.5	924	100	.	0.0	.	0.0	.	3
4.5	930	100	.	0.0	.	0.0	.	2
5.1	721	92.3	6.0	0.0	.	7.7	6.0	21
5.3	726	89.4	5.4	4.8	3.7	5.8	4.1	34
5.4	727	80.1	8.1	8.0	5.5	11.8	6.6	25
5.4	728	93.3	2.9	1.7	1.5	5.0	2.5	77
5.5	733	76.2	11.8	23.1	11.7	0.7	2.3	14
5.6	735	81.0	5.7	5.8	3.4	13.1	4.9	48
5.7	722	100	.	0.0	.	0.0	.	2

Table 31. (continued)
Question D8: Educational Degree -- Self-Code Agreement Rates (Weighted Data)

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
5.7	724	81.5	12.3	9.4	9.2	9.0	9.1	11
5.7	725	86.8	7.1	0.0	.	13.2	7.1	24
5.7	729	79.2	16.6	20.8	16.6	0.0	.	7
5.7	730	88.2	6.1	11.8	6.1	0.0	.	29
5.7	731	83.5	18.5	0.0	.	16.5	18.5	5
5.7	732	100	.	0.0	.	0.0	.	1
5.7	734	87.2	8.1	12.8	8.1	0.0	.	18
5.7	736	100	.	0.0	.	0.0	.	1
5.7	738	64.2	48.0	35.8	48.0	0.0	.	2
5.7	739	100	.	0.0	.	0.0	.	9
5.7	741	55.7	10.1	41.3	10.0	3.0	3.5	25
6.1	651	98.4	2.8	1.6	2.8	0.0	.	21
6.1	653	90.5	2.0	4.6	1.4	5.0	1.5	210
6.1	654	87.7	10.4	0.0	.	12.3	10.4	11
6.1	655	100	.	0.0	.	0.0	.	7
6.1	657	91.6	4.2	2.9	2.6	5.6	3.5	44
6.1	659	61.2	5.6	27.8	5.1	11.0	3.6	78
6.2	781	100	.	0.0	.	0.0	.	1
6.2	782	92.4	10.0	7.6	10.0	0.0	.	8
6.2	783	57.1	22.1	30.3	20.6	12.5	14.8	6
6.2	784	91.2	9.0	8.8	9.0	0.0	.	11
6.2	785	100	.	0.0	.	0.0	.	1
6.2	786	87.9	3.3	5.4	2.3	6.8	2.5	99
6.2	787	86.1	6.5	5.1	4.2	8.8	5.4	29
6.2	788	100	.	0.0	.	0.0	.	7
6.2	789	95.9	5.1	0.0	.	4.1	5.1	16
6.2	790	79.3	14.3	10.6	10.9	10.0	10.6	9
6.2	791	85.4	7.7	10.8	6.8	3.8	4.2	22
6.3	701	89.7	5.7	1.5	2.2	8.9	5.3	30
6.3	702	100	.	0.0	.	0.0	.	5
6.3	703	90.0	6.7	3.4	4.1	6.6	5.6	21
6.3	705	99.5	1.0	0.5	1.0	0.0	.	44

Table 31. (continued)
Question D8: Educational Degree -- Self-Code Agreement Rates (Weighted Data)

Minor Group	Best Code	Self-Code Agr. Rate	Agr. Rate s.e.	Self-Code Disag. Rate	Dis. Rate s.e.	No Self-Code Rate	No S-C Rate s.e.	Unweighted Sample
6.3	706	87.0	7.5	9.6	6.6	3.4	4.0	21
6.3	707	100	.	0.0	.	0.0	.	4
6.3	708	60.7	16.3	21.2	13.6	18.0	12.8	10
6.3	709	87.9	7.7	12.1	7.7	0.0	.	19
6.3	710	75.9	9.8	8.4	6.4	15.7	8.3	20
6.3	711	92.9	5.3	5.4	4.6	1.8	2.7	25
6.3	712	100	.	0.0	.	0.0	.	4
6.3	713	85.9	4.4	11.7	4.0	2.4	1.9	64
6.5	862	88.1	6.5	8.9	5.7	3.0	3.4	26
6.5	910	92.0	3.9	4.1	2.8	4.0	2.8	50
6.6	672	100	.	0.0	.	0.0	.	8
6.6	751	100	.	0.0	.	0.0	.	5
6.6	752	98.7	5.6	1.3	5.6	0.0	.	5
6.6	753	100	.	0.0	.	0.0	.	5
6.6	754	31.9	20.8	32.9	21.0	35.2	21.4	6
6.7	656	69.2	9.8	4.0	4.2	26.8	9.4	23
6.8	760	50.5	25.0	15.1	17.9	34.4	23.8	5
6.8	772	100	.	0.0	.	0.0	.	6
6.8	820	100	.	0.0	.	0.0	.	2
6.8	926	100	.	0.0	.	0.0	.	10
6.8	942	20.6	40.5	79.4	40.5	0.0	.	2
6.8	943	100	.	0.0	.	0.0	.	2
6.8	944	61.4	24.3	38.6	24.3	0.0	.	5
6.9	610	80.3	15.0	19.7	15.0	0.0	.	8
6.9	661	62.8	34.2	0.0	.	37.2	34.2	3
6.9	662	100	.	0.0	.	0.0	.	1
6.9	663	85.5	11.1	14.5	11.1	0.0	.	11
6.9	682	84.6	20.8	15.4	20.8	0.0	.	4
6.9	690	80.9	22.7	19.1	22.7	0.0	.	4
6.9	800	42.3	24.7	24.6	21.5	33.1	23.5	5
6.9	810	89.0	2.9	7.7	2.4	3.3	1.6	121
6.9	830	100	.	0.0	.	0.0	.	5
6.9	850	45.8	35.2	54.2	35.2	0.0	.	3
6.9	901	96.5	4.9	0.0	.	3.5	4.9	15
6.9	903	86.2	19.9	0.0	.	13.8	19.9	4
6.9	995	55.4	15.0	19.7	12.0	24.8	13.0	12

Attachment A

1995 NSCG CODING QUALITY EVALUATION

.....QUESTIONS.....

A6. Using the JOB CATEGORIES LIST (pages 14-15), choose the code that BEST describes the work you were doing on this last job. [*For persons who are not currently employed*]

A17. Using the JOB CATEGORIES LIST (pages 14-15), choose the code that BEST describes the work you were doing on your principal job during the week of April 15.

C1. Please review the JOB CATEGORIES LIST on pages 14-15. Using that list, record codes in Column 1 for those job categories where you have had ONE OR MORE YEARS OF WORK EXPERIENCE since completing your (first) bachelor's degree (a single job category code can represent several jobs). . . .

[*We analyzed work history 1 and work history 2 together, combining cases for the two work history questions to increase sample size.*]

D8. Using the EDUCATION CODES (pages 16-17), choose the code that BEST describes the field of study for this degree or certificate. [*If completed between April 1993 and April 1995*]

.....MAJOR GROUPS.....

(For Both Occupation and Education)

1. Computer and Mathematical Sciences
2. Life and Related Sciences
3. Physical and Related Sciences
4. Social and Related Sciences
5. Engineering
6. Non-S&E

Standard Errors for Coding Quality Measures

Weighted Cohen's kappa s.e.:

$$100\sqrt{\frac{\sum w_i^2 \, Po_{wtd}(1 - Po_{wtd})}{(\sum w_i)^2 (1 - Pe_{wtd})^2}}$$

where w_i = weight of case i

Weighted GDR s.e.:

$$100\sqrt{\frac{GDR_{wtd}/100}{n_{unwtd}} - \frac{(GDR_{wtd}/100)^2}{n_{unwtd}}}$$

Unweighted overall error rate s.e. (also used for code-level error rate):

$$100\,\frac{n_{NQC}}{n_{Total}}\sqrt{\frac{(Disagreement\ rate/100)(1 - Disagreement\ rate/100)}{n_{Total} - 1}}$$

where NQC = non-QC sample

Weighted error factor s.e.:

We used a form of generalized variance estimation developed as follows. We estimated weighted error factor standard errors for a sample of codes in Question C1 using the jackknife technique in the WesVarPC software. Then we built a regression model for predicting the empirical standard errors using transformed components of the error factor expression as predictors. Since error factor standard errors based on small numbers of QC cases were impractically large and variable, we based our model on codes having 50 or more QC cases.

Self-code agreement Rate s.e. (disagreement rate and no-self-code rate s.e.'s are similar):

$$100\sqrt{\frac{(Agreement\ rate_{wtd}/100)(1 - Agreement\ rate_{wtd}/100)}{n_{unwtd} - 1}}$$