The combination of language with its intellectual content, its meaning, is as close a union as can well be imagined.
—A. E. Housman

This is a volume of
Quantitative Studies in Social Relations
Consulting Editor: Peter H. Rossi, University of Massachusetts, Amherst, Massachusetts
A complete list of titles in this series appears at the end of this volume.

Questions and Answers in Attitude Surveys

Experiments on Question Form, Wording, and Context

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ACADEMIC PRESS
A Subsidiary of Harcourt Brace Jovanovich, Publishers
New York London Toronto Sydney San Francisco

the Conqueror the Principal Investigator. The new king was less interested in the attitudes of his subjects than in their holdings; but supposing he had obtained a representative sample of public opinion in the late eleventh century, we would find its value considerably greater if what were preserved were the spontaneous thoughts and language of men and women of those days, rather than simply choices among alternatives a, b, and c. The same will not be less true in our own time, and investigators with a concern for the future should make certain that more than numerical codes are transmitted to social scientists of the next decade, century, or millenium.[20]

[20]This assumes that responses are recorded with substantial accuracy, of course, and that these raw responses are available for later recoding. As Duncan, Schuman, and Duncan (1973:36) discovered, use of earlier open-coding categories and results can be quite misleading. Where the goal is to study social change via exact replication, it is important that all sets of responses be coded by the same set of coders (if possible blind to the sources of the responses), lest changes in coding practices be mistaken for changes in respondent attitudes. New methods of electronic recording of verbal responses should make storage much easier in the future.

4

The Assessment of No Opinion

> I was gratified to be able to answer promptly, and I did.
> I said I didn't know.
> —Mark Twain, *Life on the Mississippi*

To virtually any attitude, opinion, or belief question in a survey, a possible reply is "I don't know." Whether the question deals with the performance of the president or the possibility of life after death, some respondents may prefer to give what survey investigators commonly call a *DK response*.

But survey questions differ in the extent to which they facilitate such responses. The typical practice—what we shall call the *standard question* form—is not to include a DK alternative as part of a question. Interviewers are instructed to record DK only when a respondent gives it spontaneously rather than choosing one of the fixed alternatives provided in the question.[1] Indeed, some survey units take additional steps to reduce the number of DK responses. The current Survey Research Center *Interviewer's Manual* (1976: 17) points out that the answer "I have no opinion on that" can mean merely, "Wait a minute, I'm thinking," and advises that "it is a good idea to probe all of the 'don't know' responses that occur during the first few pages of a questionnaire." It seems likely that such interviewer behavior will communicate to most respondents the undesirability of saying DK and thus minimize the frequency of DK responses. (See Cannell, Oksenberg, and Converse, 1977, on the effects of interviewer feedback.) This is probably not objectionable to most survey analysts, who typically regard DK responses as a

[1]This discussion assumes the use of closed questions, although it would apply with little change where open questions are used.

form of "missing data" and therefore a reduction in effective sample size.[2]

The practice of discouraging DK responses makes most sense if such responses are regarded as momentary hesitancies, evasions, or signs of ambivalence. But some theoretical discussions give the DK response a more important meaning. Bogart (1967: 337), for example, writes that "what people think about public issues is really secondary to... whether they think about them at all.... The first question to ask is: '... Do you have an opinion?'" This emphasis fits the repeated finding that the strongest background correlate of DK responses is low education (Francis and Busch, 1975; J. Converse, 1976–1977). An obvious interpretation of this correlation is that DK often reflects lack of knowledge or opinion about the issue contained in the question, in which case urging the respondent to make a substantive choice would not seem a useful way to proceed. In fact, Philip Converse's (1970) analysis of a three-wave panel study suggests that much error in survey data flows from random responses by persons who really have no views on the issues under inquiry and simply flip mental coins in order to satisfy the interviewer's expectation of an answer. It also seems quite possible that respondents who lack opinions on an issue will be especially susceptible to various response sets, thus contributing systematic as well as random error to survey data.

The reasoning just outlined suggests that respondents should be allowed, perhaps even encouraged, to see DK as a legitimate response in attitude surveys. Items designed to accomplish this goal will be called *filter questions,* since they attempt to screen out respondents from substantive categories by making it explicit that DK or no opinion is a perfectly acceptable response. Thus, the biennial Election Studies carried out through the Institute for Social Research (ISR) include some questions that first ask: *Have you been interested in this enough to favor one side over the other?* before requesting a choice among alternatives; and other questions offer *haven't thought much about this* as one of the alternatives read to respondents.[3] Gallup (1947) long ago recommended such a

[2]The National Opinion Research Center (NORC) interviewer instructions ("A Brush-up on Interviewing Techniques," 1972, p. 7) are very similar to those of the Survey Research Center. Practices of the commercial polls are less clear, but from what we have been able to learn, several of the commercial organizations do not discourage DK responses in this way, and it is interesting to note that their DK levels tend to be higher than those of SRC and NORC (Converse and Schuman, 1981, and Smith, 1978). DKs are less of a problem in simple reporting of item marginals than in multivariate analysis, and this may account for the difference in procedure.

[3]Strictly speaking, the first kind of preliminary question will be called a *full filter,* and the second a *quasi-filter.* Where the distinction is not needed, as in this general discussion, *filter* refers to both kinds.

procedure, and examples are found occasionally in Gallup and other surveys. But use of filters is not common, which is why we refer to unfiltered questions as the *standard form.*

There exist, then, two different approaches to the treatment of DK or no opinion responses in surveys, each represented by a distinct way of asking questions. Under these circumstances it would obviously be useful to know whether the difference in question form leads to important differences in results, and if so what implications this has for conclusions drawn from survey data.[4] But though both forms of questions, standard and filtered, have existed for many years, albeit in different proportions, systematic comparison of the two seems never to have been undertaken prior to our first experiments in 1974. In this chapter we report and analyze a number of such experimental comparisons.

DESIGN

In the standard form of our experiments the DK alternative is not mentioned as part of the question, but it is printed in the questionnaire under the notation *If volunteered.* Interviewers are instructed to accept such responses when offered spontaneously, but otherwise not to encourage them.[5] Filtered forms differ somewhat among the several experiments, but each of them includes as some part of the question an explicit DK or no opinion option.

There are several issues one may usefully address when comparing standard and filtered versions of the same question.

1. *DK Proportions:* Does the addition of a DK filter regularly increase the number of persons saying DK, and does the increase depend on the nature of the item, on the initial (unfiltered) level of DK responses, or on the wording of the filter itself?
2. *Substantive Proportions:* When DK responses are increased as a result of filtering, are the proportions giving the various substantive positions also changed vis-à-vis one another?

[4]Filtering would not solve the problem Philip Converse (1970) identified, since his analysis was in fact based on filtered items. But lack of filtering would presumably increase the problem.

[5]We purposely avoided the more extreme step of having interviewers actively discourage DK responses on the standard form. It seemed wiser at this point to make the comparison between question forms only, rather than include other interviewer behavior as an additional source of variation.

3. *Relationships:* Does filtering change the relation of attitude items to other attitudinal or background variables?

The rest of this chapter addresses in turn these three major issues.

EFFECTS OF FILTERING ON DK PROPORTIONS

Graded Foreign Affairs Items

Three of the items employed in these experiments were especially constructed by us to form a scale of decreasing salience for the general public. That is, we chose topics where knowledge, and therefore the existence of opinions, could be expected a priori to vary in a predictable way. Using the area of foreign affairs, one item dealt with "Russia" (assumed to be best known to the public), one with "Arab nations" (assumed to be somewhat less familiar), and one with the 1974 Portuguese revolution (assumed to be relatively unfamiliar to most Americans even when it was asked in 1974). Results on the standard form of the three questions bear out these assumptions (see Table 4.1, based on

TABLE 4.1
Filter Experiments on Foreign Affairs Items (SRC–74 Fall)[a]

Standard form		Filtered form	
1. Russia			
Here are some questions about other countries. Do you agree or disagree with this statement? The Russian leaders are basically trying to get along with America.		*Here are some questions about other countries. Not everyone has opinions on these questions. If you do not have an opinion, just say so. The Russian leaders are basically trying to get along with America. Do you have an opinion on that?* (If yes) *Do you agree or disagree?* (Repeat original statement if necessary)	
Agree	49.9%	Agree	39.2%
Disagree	34.9	Disagree	23.1
DK (volunteered)	15.2	No opinion	37.6
	100		100
	(499)		(510)

(continued)

TABLE 4.1—*Continued*

Standard form		Filtered form	
2. Arabs			
The Arab nations are trying to work for a real peace with Israel. Do you agree or disagree?		*The Arab nations are trying to work for a real peace with Israel. Do you have an opinion on that?* (If yes) *Do you agree or disagree?*	
Agree	16.7%	Agree	10.1%
Disagree	60.0	Disagree	44.8
DK (volunteered)	23.4	No opinion	45.0
	100		100
	(492)		(513)
3. Portugal			
How about this statement: The new Portuguese military government is trying to maintain its own control without concern for democracy in Portugal. Do you agree or disagree?		*How about this statement: The new Portuguese military government is trying to maintain its own control without concern for democracy in Portugal. Do you have an opinion on that?* (If yes) *Do you agree or disagree?*	
Agree	21.9%	Agree	6.8%
Disagree	14.9	Disagree	5.3
DK (volunteered)	63.2	No opinion	87.9
	100		100
	(498)		(511)

[a] The original order of items in the questionnaire was Russia, Portugal, Arabs; the three experiments are rearranged here in order of expected size of DK or no opinion category.

SRC–74 Fall). The DK percentage is lowest for the Russia item (15%), somewhat higher for the Arabs item (23%), and much higher for the Portugal item (63%). The finding that over three-fifths of the sample spontaneously volunteered DK to the Portugal item is worth special note, since it tends to contradict the assertion sometimes made that most respondents are unwilling to admit ignorance in survey interviews. We will return to this issue in Chapter 5.

Yet Table 4.1 also demonstrates that addition of a filter raises no opinion or DK percentages significantly and substantially: by 22 to 25 percentage points for the 3 foreign affairs questions. It is remarkable that the effect is almost identical for the 3 items despite the difference in their

DK base rates on the standard forms. For the Russia item only 15% say DK on the standard form, and this is increased by 22 percentage points on the filtered form. For the Portugal item, 63% say DK on the standard form, and this is increased by 25 percentage points on the filtered form.

We shall use the term *floaters* to refer to respondents who would give a substantive response to a standard version but a DK response to a filtered version of the same question. In these split-ballot experiments we have no direct way of identifying individual floaters, since we have simply the total DK percentage on a standard form for one subsample and the total DK percentage on a filtered form for a comparable subsample. The difference in percentage DK between two forms of a question allows us to estimate how many floaters there are, subject to sampling error for the two subsamples, but this is a constructed percentage and does not represent a single set of individuals responding to both forms.

It is possible, however, to characterize floaters indirectly. Thus, the mean education (years of schooling) of respondents who say DK on the standard form of the Russia item is 10.5, whereas on the filtered form it is 10.9. This implies, again subject to sampling error, that the mean education of the floaters on this item must have been 11.2.[6] On the Portugal item the same type of calculation yields a mean educational level for the floaters of 12.8 years of schooling. Thus the average educational level is estimated to be appreciably higher for the floaters on the Portugal item than for the floaters on the Russia item, suggesting that it is largely a different set of individuals who float on these two items. If different individuals at different educational levels are involved, however, this makes it even more remarkable that the proportion of floaters is approximately the same for the two items. Floating may be a behavior that many or perhaps even most respondents can engage in under certain circumstances. (For the Russia and Arab items, however, where floaters have very similar estimated educational levels, 11.2 and 11.3, respectively, it is possible that many of the same individuals are involved.) We will return at a later point to the issue of who floaters are.

Additional Experiments

We created DK filter experiments for six other questions, different from the foreign policy items in origin, subject matter, and wording. The questions, shown in Table 4.2, are from the following sources:

[6]The calculation is based on the assumption that DK respondents on the filtered form consist of persons who would have said DK on the standard form, plus the floaters. Using the known proportion and mean education of each type, an estimate of the mean education of the floaters is provided by solving for x in the following equation: $(.152)(10.5) + (.376 - .152)x = (.376)(10.9)$.

Courts

The standard form of this item is a regular NORC General Social Survey question. We were permitted to pair it in NORC-74 with a new form having a DK alternative. The latter is not a DK filter in the strict sense of preceding the substantive question; rather it provides an additional alternative to the question. We refer to such DK alternatives as *quasi-filters*.

Government

The filtered form of this item has been used for a number of years as part of the ISR Election Studies. We created a standard form of the item by omitting the filter about interest. It will be noted that the filter in this case refers to having an interest rather than to having an opinion, but lacking evidence initially as to whether this made a difference, we included the item in our experiments because of the desire to work whenever possible with questions used in previous important surveys. The first experiment with this item appeared in SRC-76 February.

Communist Book

The standard form of this item is part of the classic survey carried out by Stouffer and included in his *Communism, Conformity, and Civil Liberties* (1955). The first experiment with this item appeared in SRC-77 February.

Leaders

The standard versions of these questions—one about the "crookedness" of government officials, the other about their "smartness"—were taken from the ISR Election Studies. Our initial experiments with them were in SRC-78 May.

Liberal-Conservative

The standard form of this item appears regularly in the NORC General Social Survey. We wrote a filtered version that is similar to the one asked in ISR Election Studies. Our only DK experiment with the ques-

TABLE 4.2
Six Additional DK Filter Experiments

Standard form		Filtered form	
1. Courts (NORC-74)			
In general, do you think the courts in this area deal too harshly or not harshly enough with criminals?		*In general, do you think the courts in this area deal too harshly or not harshly enough with criminals, or don't you have enough information about the courts to say?*	
Too harshly	5.6%	Too harshly	4.6%
Not harshly enough	77.8	Not harshly enough	60.3
About right (volunteered)	9.7	About right (volunteered)	6.1
DK (volunteered)	6.8	Not enough information to say	29.0
	100		100
	(745)		(723)
2. Government (SRC-76 February)			
Some people are afraid the government in Washington is getting too powerful for the good of the country and the individual person. Others feel that the government in Washington is not getting too strong. What is your feeling, do you think the government is getting too powerful or do you think the government is not getting too strong?		*Some people are afraid the government in Washington is getting too powerful for the good of the country and the individual person. Others feel that the government in Washington is not getting too strong. Have you been interested enough in this to favor one side over the other?* (If yes) *What is your feeling, do you think the government is getting too powerful or do you think the government is not getting too strong?*	
Too powerful	55.0%	Too powerful	45.0%
Not too strong	35.1	Not too strong	21.6
DK (volunteered)	10.0	Not interested enough	33.3
	100		100
	(613)		(606)
3. Communist Book (SRC-77 February)			
This next question is about a man who admits he is a communist. Suppose he wrote a book, which is in your public library. Somebody your community suggests the book should be removed from the library. Would you favor removing the book or oppose removing the book?		*This next question is about a man who admits he is a communist. Suppose he wrote a book which is in your public library. Somebody in your community suggests the book should be removed from the library. Would you favor removing the book, oppose removing the book, or do you not have an opinion on that?*	
Favor removing	29.1%	Favor removing	17.2%
Oppose removing	67.9	Oppose removing	56.6
DK (volunteered)	3.0	No opinion	26.2
	100		100
	(563)		(533)

(*continued*)

TABLE 4.2—*Continued*

Standard form		Filtered form	
4. Leaders smart (SRC-78 May) *Do you feel that almost all of the people running the government are smart people, or do you think that quite a few of them don't seem to know what they are doing?*		*Do you feel that almost all of the people running the government are smart people, **or** that quite a few of them don't seem to know what they are doing, **or** do you not have an opinion on that?*	
Are smart	37.0%	Are smart	28.9%
Don't know what they're doing	58.1	Don't know what they're doing	49.7
DK (volunteered)	4.8	No opinion	21.4
	100		100
	(597)		(594)
5. Leaders crooked (SRC-78 May) *Do you think that **quite a few** of the people running the government are crooked, **not very many** are, or do you think **hardly any** of them are crooked?*		*Do you think that **quite a few** of the people running the government are crooked, **not very many** are, **hardly any** of them are crooked, or do you not have an opinion on that?*	
Quite a few	14.2%	Quite a few	11.2%
Not very many	42.1	Not very many	37.2
Hardly any	39.5	Hardly any	32.2
DK (volunteered)	4.2	No opinion	19.4
	100		100
	(625)		(608)
6. Liberal-conservative (NORC-78) *We hear a lot of talk these days about liberals and conservatives. I'm going to show you a seven-point scale on which the **political** views that people might hold are arranged from extremely liberal—point 1—to extremely conservative—point 7. Where would you place yourself on this scale?*		*We hear a lot of talk these days about liberals and conservatives. I'm going to show you a seven-point scale on which the **political** views that people might hold are arranged from extremely liberal—point 1—to extremely conservative—point 7. Where would you place yourself on this scale, or haven't you thought much about it?*	
Extremely liberal	1.3%	Extremely liberal	1.6%
Liberal	9.1	Liberal	8.6
Slightly liberal	16.0	Slightly liberal	14.2
Moderate, middle-of-the-road	34.2	Moderate, middle-of-the-road	31.1
Slightly conservative	18.6	Slightly conservative	15.1
Conservative	13.9	Conservative	9.6
Extremely conservative	2.5	Extremely conservative	1.4
DK (volunteered)	4.4	Haven't thought much about it	18.4
	100		100
	(757)		(768)

tion was in NORC-78, though we also use a similar item in middle alternative experiments (Chapter 6).

Distributions on these six items, presented in Table 4.2, show DK differences between standard and filtered forms in the range of 14 to 23 percentage points—not too different from those for the foreign affairs items. This finding is noteworthy when one realizes that the present items appear in 5 different surveys, so that the actual samples, as well as item content, nature of filter, and base rates, are different from one another and from the foreign affairs experiments. Later replications of most of these items, shown in Table 4.3, provide a broader range of increments due to DK filters, but the overall average (both mean and median) for the total of 19 experiments that we carried out is 22%, and two-thirds of the increments fall within the range of 13 to 23 percentage points.[7]

Varying the Nature of the Filter

There is more than one way to construct an explicit DK alternative, as we have already noted. If a single set of people exists who are unwilling to voice DK when it is not offered explicitly, but ready to give it when invited, then the exact form of the filter should make no difference. If willingness to voice DK is a matter of response to encouragement, however, we might expect the DK level to vary by degree of encouragement. We tested these opposing hypotheses by repeating the Russia item in a split-ballot experiment using two types of filters: a replication of the full filter employed in Table 4.1 (with minor grammatical changes) as one

[7]The replications in the Detroit Area Study (DAS-76) of the courts item and of a somewhat altered version of the government item show results somewhat different from the original ones. For the courts item, the DK difference drops to 10%, and for the government item to 15%, although both remain highly significant ($p > .001$). (In both cases, the drop is almost entirely due to a decrease in DK% on the filtered form. Further analysis does not reveal any obvious factor such as race or size of place that can account for the decrease.) Later replication of the government item (in SRC-78 March) restores the 23% difference of Table 4.2 exactly; replications of the book item lead to similar figures (22% and 20% in SRC-78 March and SRC-78 May); those for the Russia and Arabs items to higher figures (34% and 29% for the former in SRC-78 May and SRC-78 Fall; 31% for the latter in SRC-78 May); and a replication of the crooks item to a lower figure (13% in SRC-78 Fall). It seems possible that the smaller effect on the crooks and liberal-conservative items is due to their offering a middle-response category. There is also some evidence that DK level is affected by mode of interviewing, based on a special experiment with the Arabs item in SRC-76 Spring as part of a large-scale comparison of face-to-face and telephone interviewing. See Table 4.3, No. 3, and the further discussion in Appendix B.2.

TABLE 4.3
Filter Experiment Replications

Standard form		Filtered form	
1. Russia (SRC-78 May)			
(Questions are identical to Table 4.1, item 1)			
Agree	54.5%	Agree	30.7%
Disagree	33.7	Disagree	23.7
DK (volunteered)	11.8	No opinion	45.6
	100		100
	(627)		(616)
2. Russia (SRC-78 Fall)			
(Questions are identical to Table 4.1, item 1)			
Agree	48.2%	Agree	31.4%
Disagree	38.2	Disagree	26.1
DK (volunteered)	13.6	No opinion	42.5
	100		100
	(508)		(1020)
3. Arabs (SRC-76 Spring)			
(Questions are identical to Table 4.1, item 2)			
Telephone			
Agree	31.0%	Agree	10.9%
Disagree	37.4	Disagree	21.7
DK (volunteered)	31.5	No opinion	67.4
	100		100
	(802)		(825)
Face-to-face			
Agree	20.1%	Agree	12.0%
Disagree	43.5	Disagree	24.0
DK (volunteered)	36.4	No opinion	64.0
	100		100
	(711)		(803)
4. Arabs (SRC-78 May)			
(Questions are identical to Table 4.1, item 2)			
Agree	39.7%	Agree	28.1%
Disagree	46.3	Disagree	26.6
DK (volunteered)	14.0	No opinion	45.4
	100		100
	(620)		(595)
5. Courts (DAS-76)			
(Questions are identical to Table 4.2, item 1)			
Too harshly	3.9%	Too harshly	3.2%
Not harshly enough	84.0	Not harshly enough	76.6

(continued)

TABLE 4.3—*Continued*

Standard form		Filtered form	
About right (volunteered)	5.0	About right (volunteered)	2.6
DK (volunteered)	7.2	No opinion	17.6
	100		100
	(545)		(568)
6. Government (DAS-76)			
(Questions are identical to Table 4.2, item 2, except the filter is changed to: *Do you have an opinion on this issue?*)			
Too powerful	58.2%	Too powerful	51.9%
Not too strong	31.4	Not too strong	22.6
DK (volunteered)	10.5	No opinion	25.4
	100		100
	(545)		(570)
7. Government (SRC-78 March)			
(Questions are identical to No. 6 above)			
Too powerful	40.8%	Too powerful	41.0%
Not too strong	48.2	Not too strong	25.1
DK (volunteered)	11.0	No opinion	33.9
	100		100
	(363)		(363)
8. Communist book (SRC-78 March)			
(Questions are identical to Table 4.2, item 3)			
Favor removing	29.5%	Favor removing	18.9%
Oppose removing	62.3	Oppose removing	50.6
DK (volunteered)	8.3	No opinion	30.6
	100		100
	(363)		(360)
9. Communist book (SRC-78 May)			
(Questions are identical to Table 4.2, item 3)			
Favor removing	24.5%	Favor removing	14.1%
Oppose removing	69.5	Oppose removing	59.6
DK (volunteered)	6.0	No opinion	26.3
	100		100
	(616)		(601)
10. Leaders crooked (SRC-78 Fall)			
(Questions are identical to Table 4.3, item 5)			
Quite a few	12.5%	Quite a few	8.3%
Not very many	27.4	Not very many	26.0
Hardly any	55.3	Hardly any	47.9
DK (volunteered)	4.8	No opinion	17.7
	100		100
	(497)		(1010)

version; and a simple addition of a DK alternative (a quasi-filter) following substantive choices as the other version. (A standard version was not included in this SRC-77 February experiment.) The two forms and marginal results are shown in Table 4.4.

As can be seen from the marginals presented with each item, the DK percentage is nearly 14 points higher on the full filter version than on the quasi-filter version ($\chi^2 = 20.86$, 1 *df*, $p < .001$). On replication in SRC-78 March, the difference is 10% ($\chi^2 = 7.48$, 1 *df*, $p < .01$). Thus a full filter that precedes an item and emphasizes the frequency of no opinion is more effective in encouraging DK responses than is a quasi-filter.

Another possibly important variation in type of filter is that between questions asking whether the respondent has an opinion (e.g., the foreign policy items in Table 4.1) and those asking whether the respondent is interested or informed (e.g., courts and government items in Table 4.2). Claiming an opinion is probably easier than claiming information or interest, and thus one might expect DK to be higher with the latter type of filter. Our own experiments do not permit such comparisons, but in an analysis of seven NORC split-ballot experiments, Bishop, Oldendick, and Tuchfarber, (1978) report significantly more DKs with the use of an *interest* compared to an *opinion* filter. Thus here, as in the case of quasi-filters versus full filters, it evidently makes a difference how a DK option is constructed. Both results indicate that floaters are not a fixed set of people, but rather vary in number depending upon the wording of the filter.

TABLE 4.4
Comparison of Two Types of Filters[a]

Full filtered version				Quasi-filtered version		
Here is a statements about another country. Not everyone has an opinion on this. If you do **not** *have an opinion, just say so. Here's the statement: The Russian leaders are basically trying to get along with America. Do you have an opinion on that?*				*Here is a statement about another country: The Russian leaders are basically trying to get along with America. Do you agree, disagree,* **or** *do you not have an opinion on that?*		
No opinion	Yes, have opinion			Agree	Disagree	No opinion
	↓					
56.3%	*Do you agree or disagree?* (Repeat statement if necessary.)			27.7%	29.5	42.8
	Agree	Disagree	Total			Total
	22.9	20.9	100 (551)			100 (596)

[a] Carried out in SRC-77 February.

THE EFFECTS OF DK FILTERS ON SUBSTANTIVE PROPORTIONS

We have demonstrated that the addition of a DK filter to an opinion question will typically induce more than a fifth of the sample to shift from substantive positions into the DK category. We call these people floaters, since they move between substantive and DK categories depending upon the form of the question. An important practical issue that results from this demonstration is whether or not such movement affects the percentage distribution for the substantive alternatives to a question. Of course, in most cases the percentage giving any one substantive alternative will shrink when a DK filter is added to an item. But this problem is handled by calculating substantive percentages with DK responses omitted. This is often done on standard versions of questions and by performing the same operation on both forms we can determine whether the filtering process alters substantive distributions. Alteration will occur if floaters come disproportionately from a single substantive response category.

The simple step needed for this analysis is illustrated here with the Russian leaders item from Table 4.1:

	Standard*	Filtered**
Agree	58.9%	62.9%
Disagree	41.1	37.1
	100	100
	(423)	(318)
	$\chi^2 = 1.24$, $df = 1$, n.s.	

*Omits 76 DKs
**Omits 192 DKs

For this item, the agree–disagree response distributions do *not* differ significantly once DKs are omitted. Even though an estimated 22% floaters are giving substantive positions on the standard form but drop out entirely from the filtered form, this appears not to affect the substantive comparison.

Including the Russia item just presented, we have 9 original experiments and 10 replications on which it is possible to compare substantive distributions omitting DKs. On 14 of these 19 comparisons, the distributions of substantive positions do not differ significantly between standard and filtered versions, once DK responses are removed. (There

is also no significant difference on the variant of the Russia experiment that compared 2 different types of filters, nor on its replication a year later.) Of the 5 significant differences, 4 are small: On the original government experiment the *too powerful* response is slightly greater (6.6%, $p < .05$) on the filtered form; on 2 of the book experiments the *favor removing* response is slightly larger on the standard form (6.7%, $p < .02$ in SRC–77 February and 6.9%, $p < .01$ in SRC–78 May); and on the SRC–76 Spring replication of the Arabs experiment the standard form shows more agreement (5.9%, $p < .05$).[8] Only the SRC–78 March replication of the government item produces a large univariate difference as shown below:

	Standard	Filtered	Diff.
Too powerful	45.8%	62.1%	16.3%
Not too powerful	54.2	27.9	
	100	100	
	(323)	(240)	
	$\chi^2 = 14.71$, $df = 1$, $p < .001$		

This was one of three administrations of the Government experiment, however, and our best estimate of the univariate shift is probably the weighted average of the 3, which is 8.0%. In sum, our conclusion based on all 19 comparisons is that filtering can on occasion significantly alter the division of substantive opinion, but that it typically does not; when it does, its effect is usually small.[9]

It might seem from these findings that the opinions of floaters tend to be like those of nonfloaters, since the movement of floaters usually has little effect on substantive proportions. The failure to discover strong univariate effects of filtering, however, has limited implications. For one thing, it is also difficult to reject other theoretical models of how floaters behave. Thus if one postulates that floaters act in a purely random way, choosing substantive alternatives on the standard form of the Russia item by mentally flipping a coin, this leads to expected values of 59.5% and 40.5% for the agree and disagree categories, which cannot be dis-

[8]This last effect occurs only for the interviews conducted by phone; the face-to-face part of the sample shows no agree–disagree difference by form. For a discussion of this interaction see Appendix B.2.

[9]Bishop *et al.* (1980) found significant filtering effects on substantive marginals for three of their eight experiments. Two were 6% differences, one 10%.