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Abstract

Rosenstone and Diamond evaluate several of the seven-point scales NES has used to measure public opinion on political issues and assess the merits of an alternate opinion measurement device. The Pilot Study contained several questions which employed an experimental unipolar measure of public opinion concerning various political issues, based on four-point agree/disagree scales. This approach was tested against the traditional seven-point polar scale in two issue domains; New Deal social welfare liberalism and support for women's rights. Rosenstone and Diamond find that the unipolar policy issue questions perform about as well as the bipolar items, but do not increase NES' ability to measure political issues in a meaningful way. Additionally, the experimental scales do not reveal any new information concerning the origins of candidate evaluations and voting decisions. The unipolar question format, however, allows for the examination of underlying policy dimensions and, unlike the seven-point scale, may be used in the same manner for both telephone and face-to face interviews. The unipolar items also allows NES to assess the reliability of the seven-point scales and provides guidance for determining the "anchor questions" for those scales. Rosenstone and Diamond close the report with some specific conclusions about seven-point scales. Specifically, they find that respondents who place themselves at "4" on the seven-point scales are really somewhere in the middle of the policy opinion continuum. The authors also discuss the debate concerning whether issue items should ask about principles or about policies. Rosenstone and Diamond suggest that the specific question format employed should depend on how the policy debate is framed in the political community.

Measuring Public Opinion on Political Issues

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This paper has two purposes: evaluate several of the 7-point scales that the National Election Studies has used since 1964 to measure public opinion on political issues; and assess the merits of an alternative measurement strategy. We offer some methodological recommendations to guide the measurement of issue preferences.

I. Some Concerns with the 7-Point Issue Scales

Traditionally, NES has assessed the respondent's position on public policies with 7-point Likert scale, exemplified by the NES government spending item:

"Some people think the government should provide fewer services, even in areas such as health and education, in order to reduce spending. Suppose these people are at one end of the scale, at point 1. Other people feel it is important for the government to provide many more services even if it means an increase in spending. Suppose these people are at the other end, at point 7. And of course, some other people have opinions somewhere in between, at points 2, 3, 4, 5, and 6. Where would you place yourself on this scale, or haven't you thought much about this?"

To facilitate the administration of this question, the interviewer provides a showcard displaying a 7-point scale. The two ends of the scale are labeled: "Government Provide Many Fewer Services, Reduce Spending A Lot" and "Government Provide Many More Services, Increase Spending A Lot."

This R & D work is motivated by several concerns with this measurement strategy:

1. The 7-point scale assumes the alternatives we cook up to anchor the ends of the continuum are meaningful alternatives that reliably cue respondents to the dimension. The cues may work for some respondents, but not for others. The cues may make sense in one election year, but not four or eight years down the road. How extreme should the anchors be? What happens to respondents who don't accept the dimension as we have set it out, yet have opinions on the issue domain? The anchors are sometimes double-barreled (as in the government spending item).

2. Some 7-point scales are anchored by "principles"; some are anchored by specific "policies"; others are anchored by something in between. The 7-point scales carried on the 1988 NES display the brew.¹

¹ "Principles" and "policies" are prototypes, but to keep matters simple, we will assume that the distinction is a crisp one.

7-Point Scales Carried on the 1988 National Election Study
(Arrayed by increasing policy specificity)

Issue	Left Anchor of Scale	Right Anchor of Scale
Women's Rights	Women and Men Should Have an Equal Role	Women's Place is in the Home
Cooperation with Russia	Try to Cooperate More with Russia	Get Much Tougher with Russia
Gov't Services	Government Provide Many Fewer Services, Reduce Spending A Lot	Government Provide Many More Services, Increase Spending A Lot
Gov't Aid to Blacks	Government Should Help Blacks	Blacks Should Help Themselves
Jobs and a Good Standard of Living	Government See to Job and Good Standard of Living	Government Let Each Person Get Ahead on their own
Defense Spending	Greatly Decrease Defense Spending	Greatly Increase Defense Spending
Health Insurance	Government Insurance Plan	Private Insurance Plan

The mix of principles and policies in these issue questions raises several concerns. Which strategy should we follow? Should we ask about principles or specific policies? Which approach is more reliable? Which is a better measure of issue preferences? Which is a better predictor of candidate evaluation and choice? Is there a gap between a respondent's willingness to embrace principles and his ability to apply those principles that parallels the gaps that have been found between principles and policies in the realm of support for civil liberties (McClosky 1964), democratic norms (McClosky and Zaller 1984) and racial equality (Kinder and Sanders 1987)?

3. It may be difficult to interpret responses at the midpoint --"4"-- between the two anchors. We assume that when a respondent replies "4" she prefers a position that is somewhere in the middle between the two extremes. But other possibilities abound. In the government services question, a respondent may feel both that services should be increased and that spending should decreased without addressing the apparent contradiction. (In fact, candidates pull off this high-wire act all the time.) Respondents in the middle category might oppose both options, without much idea about what should be done. The respondent may also favor a moderate solution, reflected in neither of the extremes, or prefer an integrative solution that incorporates the best aspects of both viewpoints (a sensible strategy on the cooperate with Russia scale). And of course, if the respondent has no opinion, but is embarrassed to say so, it is safe to opt out for the middle.

4. The 7-point scale may demand too much from respondents. Not only do we ask the respondent to imagine a debate between two positions (that he may be hearing for the first time), but we also ask him to think about a

dimension, visualize it graphically, and figure out what each of the unlabeled intermediary points on the scale (the "2" "3" etc.) stand for. How confident are we that all respondents do this equally well? (Zaller 1988) The reliability of the responses may vary with political withitness.

5. The 7-point scales do not work over the phone and the branching format may be a feeble approximation. We know from both the 1982 and 1984 NES mode comparisons that there are great cross-mode incompatibilities in our measurement of issue positions and that issue items perform differently in analyses based on data gathered by phone as opposed to face-to-face (Morchio, Sanchez and Traugott 1985; Sanchez and Shanks 1983). Other things being equal, it would be nice to have a measurement strategy that works equally well in both modes.

II. An Alternative Measurement Strategy: Unipolar Questions

In the 1989 Pilot Study we tried out a different approach to measuring opinion on political issues. Rather than asking respondents to select a position on a bipolar dimension, we asked respondents whether they approved or disapproved of various policy statements and principles within the Women's Rights and New Deal Social Welfare issue domains. A prototypical question is:

People have different ideas about how much responsibility the federal government in Washington has for the well-being of its citizens. Please tell me how much you approve or disapprove of each of the following statements. It is important for the federal government to provide many more services even if it means an increase in spending. Do you approve strongly, approve somewhat, disapprove somewhat, or disapprove strongly?

We anticipated that this "unipolar" format might offer several advantages over the "bipolar" 7-point policy scales:

1. The unipolar approach does not force the researcher a priori to impose on respondents an underlying policy dimension, or labels or rationales for the options anchoring those dimensions. Because the framing of a given political problem and the context in which policy options are considered is likely to vary across respondents, we thought it might be preferable not to force respondents to regard a particular option as the polar opposite of some other. Respondents may well embrace a mix of liberal and conservative positions, and should be permitted to do so.

2. We thought that the unipolar policy format would be cognitively less demanding than the bipolar format, the response categories more intuitive, and thus the data more reliable. We also predicted that the reliability of scales built from unipolar items would vary less with levels of political withitness than would the comparable bipolar items.

4. We argued that the unipolar policy format would also support a variety of new inquiries. By allowing for a larger number of policy options, this format would allow the analyst to test for the presence of the dimensions that might underlie preferences within or across domains, examine whether those dimensions hold for all types of respondents, and assess whether the underlying dimensions change over time (as the elite framing of the debate

changes). The ability to construct 7-point scales from pairs of 4-point items is preserved, but now the analyst can choose whichever items he wants to define the dimension. One could test whether candidates and other public figures are understood by virtue of their embracing a particular policy alternative. Do voters make choices by looking at their proximity to candidates on some set of underlying issue dimensions (left-right, or otherwise), or do they align with a candidate simply because he endorses a particular policy?

5. We also thought that the unipolar policy format might be more versatile in measuring changes in public opinion as the policy debate is reshaped over time. As new policy alternatives arise, they could easily be appended to an existing battery without having to recraft the entire item or live with its increasing irrelevance.

6. Finally, we argued that the unipolar format would work well over the phone and thus would provide greater comparability between the phone and face-to-face modes of measuring opinion on political issues.

III. Two Issue Domains for Study

We carried out our assessment of the current 7-point issue scales and our evaluation of the new, unipolar questions in two issue domains: New Deal Social Welfare Liberalism and Support for Women's Rights.

New Deal Social Welfare Liberalism

New Deal Social Welfare Liberalism has been at the heart of the national political debate in the U.S. for well over half a century and it is a set of issues that has been, and should remain, a part of core NES instrumentation. The debate, familiar to all, is over what role the federal government should play in the provision of social services. Liberals, following from Roosevelt, have traditionally supported an array of federal social welfare programs designed to provide for basic human needs (health, income, housing, jobs, education, eradicate poverty). Conservatives have argued for a more modest federal role (if any at all); some claim that these federal programs not only do not work, but actually make matters worse; some embrace private sector solutions; still others suggest a decentralized approach. The underlying debates seem to be these:

1. Does the federal government have a responsibility to provide for the basic human needs of its citizens? If so, how much?
2. What is the nature of this responsibility? What programs discharge it?
3. What responsibilities do citizens have, if any, to qualify for these benefits? Are there certain types of people (e.g. those who are able to work but do not) who do not deserve these benefits?
4. What other ways, beside the creation of allocational programs, allow the government to discharge its responsibility?

5. Are there other agents (e.g. the private sector, the states, or the cities) that could better provide for these needs?

Three 7-point scales² -- government services; jobs and a good standard of living; and national health insurance -- comprise the core items that NES has employed since 1964 to measure opinion on this dimension. Table 1 displays the exact question wording (in both face-to-face and telephone format) as well as the marginals from the 1988 and 1989 administrations of the questions³.

Support for Women's Rights

Our sense is that several debates underlie the issues surrounding Women's Rights:

1. Should there be equality between the sexes? What role should women play in society? Should it be equal to that of men?
2. What role should the government play in ensuring equal opportunity for women? What is the nature of this responsibility? What are the ways that the government should discharge its responsibility? Are there other agents (e.g. the private sector) that could better provide for these needs?
3. Women's rights issues have also manifested themselves in the debate over policy questions having to do with the family and the workplace.

NES currently relies upon a single question, displayed in Table 2, to tap public opinion on this dimension.

IV. Study Design

A random half the respondents to the 1989 NES Pilot Study were asked the traditional, bipolar issue questions (in branching format); the other half of the respondents were asked the new unipolar questions. The unipolar questions were administered in four batteries of six items each. The first battery of unipolar women's rights questions appeared on wave I of the Pilot Study, the second on wave II. The first battery of New Deal Social Welfare items appeared towards the beginning of wave II; the second battery towards the end of wave II. The anchors for each bipolar question appeared among the unipolar items, but not within the same battery of items. Within each domain the unipolar items were balanced (for half the questions to approve was to embrace the liberal position; for the other half to approve was to take the conservative position). Within each domain the unipolar items included a mix of questions both about policies and more general principles.

² And in recent years a federal spending battery.

³ The marginals from the 1988 National Election Study are for those respondents selected into the 1989 Pilot Study sample.

V. Assessment of the Unipolar Issue Questions

1. Marginals and Missing Data

The exact questions and marginals for the unipolar questions appear in Tables 3 and 4. The very few people (1.8 percent on average) who responded "don't know" or whose answers were not ascertained are deleted from the percentages displayed in these tables. About a third of the questions yield highly skewed distributions. This problem was more common among the questions designed to tap support for Women's Rights than among the New Deal Social Welfare items.

2. Overview of Measurement Models Estimated

We employed the familiar Jöreskog (1970) maximum likelihood factor analysis model available in LISREL VII to assess several alternative measurement models that might underlie the Women's Rights and New Deal Social Welfare items.

A. We started with the simplest model that assumed that within each domain the items tap a single dimension and that the variance-covariance matrix among the error terms in the equation for each variate is diagonal.

B. We also investigated models that assumed two correlated dimensions one defined by questions that asked about principles, the other defined by questions that asked about specific policies.

C. We considered a model that assumed two correlated dimensions defined by questions that thematically fit together.

D. And finally, we estimated several models designed to assess the magnitude and consequences of acquiescence, which we will discuss a bit later.

Within each domain, the simplest measurement model seems to do the job. For neither the New Deal Social Welfare nor the Women's Rights questions could we find evidence for one dimension that exclusively tapped policies and another one that exclusively tapped principles; we could find no evidence for sub-dimensions that tapped clusters of issues that hold together thematically.⁴

3. Measurement Model for Unipolar New Deal Social Welfare Liberalism

Tables 5 displays the correlations among the New Deal Social Welfare items;⁵ the maximum likelihood confirmatory factor analysis estimates; the standard errors, item and scale reliabilities, and factor scores used for constructing the scale (all estimated from the variance-covariance matrix

⁴ We also found no positive covariances among the error terms for variates that appeared within the same battery.

⁵ All variables were recoded to the zero-one interval with one being the "liberal position" and zero being the "conservative position."

Table 1
Core NES New Deal Social Welfare Questions

v302 Core NES Government Services Question (asked on 1988 Pre-Election Survey)

Some people think the government should provide fewer services, even in areas such as health and education in order to reduce spending. Suppose these people are at one end of the scale at point 1. Other people feel it is important for the government to provide many more services even if it means an increase in spending. Suppose these people are at the other end, at point 7. And of course, some other people have opinions somewhere in between at points 2, 3, 4, 5, or 6. Where would you place yourself on this scale, or haven't you thought much about this?

1. Gov't provide many fewer services; reduce spending	5.9
2.	9.1
3.	19.1
4.	32.5
5.	16.1
6.	10.0
7. Gov't provide many more services; increase spending	7.3

v8504 Core NES Government Services Question (branching version asked on 1989 Pilot Study, Forms A and B)

Some people think the government should provide fewer services, even in areas such as health and education in order to reduce spending. Others think it is important for the government to provide many more services even if it means an increase in spending. Do you have an opinion on this topic or haven't you thought much about it? Do you think the government should reduce spending, provide more services, or is your position somewhere in between? Would you prefer a moderate (increase/decrease) in spending and services, or a large (increase/decrease)?

A large decrease in spending and services	6.0
A moderate decrease in spending and services	9.0
In between	47.0
A moderate increase in spending and services	25.1
A large increase in spending and services	12.0

v318 Core NES Health Insurance Question (asked on 1988 Pre-Election Study)

There is much concern about the rapid rise in medical and hospital costs. Some people feel there should be a government insurance plan which would cover all medical and hospital expenses for everyone. Others feel that all medical expenses should be paid by individuals, and through private insurance plans like blue cross or other company paid plans. Where would you place yourself on this scale, or haven't you thought much about this?

1. Government insurance plan	16.6
2.	10.9
3.	13.7
4.	19.7
5.	13.3
6.	13.5
7. Private insurance plan	12.3

v8512 Core NES Health Insurance Question (branching version asked on 1989 Pilot Study, Forms A and B)

There is much concern about the rapid rise in medical and hospital costs. Some people feel there should be a government insurance plan which would cover all medical and hospital expenses for everyone. Others feel that all medical expenses should be paid by individuals, and through private insurance plans like blue cross or other company paid plans. Do you have an opinion on this topic or haven't you thought much about this? Do you thin there should be a government insurance plan or that all medical expenses should be paid by individuals and private insurance plans? Do you feel strongly that (government insurance plan / expenses paid by individuals) or not so strongly?

Feel strongly: government insurance plan	48.3
Feel not strongly: government insurance plan	12.6
Feel not strongly: expenses paid by individuals	20.1
Feel strongly: expenses paid by individuals	19.0

v323 Core NES Jobs and Standard of Living Question (asked on 1988 NES)

Some people feel the government in Washington should see to it that every person has a job and a good standard of living. Others think the government should just let each person get ahead on their own. Where would you place yourself on this scale, or haven't you thought much about this?

1. Government see to job and good standard of living	6.5
2.	6.3
3.	10.6
4.	22.3
5.	20.6
6.	18.2
7. Government let each person get ahead on their own	15.4

v8508 Core NES Jobs and Standard of Living Question (branching version asked on 1989 Pilot Study, Forms A and B)

Some people feel the government in Washington should see to it that every person has a job and a good standard of living. Others think the government should just let each person get ahead on their own. Do you have an opinion on this topic or haven't you thought much about it? Should the government see to it that every person has a job and a good standard of living, should it let each person get ahead on their own, or is your position somewhere in between? Do you feel strongly that (government should see to it/each person get ahead on their own) or not so strongly)?

Feel strongly: gov't should see to jobs and std of living	6.9
Feel not strongly: gov't should see to jobs and std of living	2.7
In between	49.5
Feel not strongly: gov't should let each get ahead on their own	8.5
Feel strongly: gov't should let each get ahead on their own	32.5

Table 2
Core NES Question on Support for Women's Rights

v387 Core NES Women's Rights Question (asked on 1988 NES)

Recently there has been a lot of talk about women's rights. Some people feel that women should have an equal role with men in running business, industry and government. Others feel that women's place is in the home. Where would you place yourself on this scale, or haven't you thought much about this?

1. Women and men should have an equal role	42.5
2.	15.8
3.	10.5
4.	15.5
5.	5.1
6.	5.3
7. Women's place is in the home	5.3

v7324 Core NES Women's Rights Question (branching version asked on 1989 Pilot Study, Forms A and B)

Recently there has been a lot of talk about women's rights. Some people feel that women should have an equal role with men in running business, industry and government. Others feel that women's place is in the home. Which do you think: that women should have an equal role with men or that women's place is in the home? Do you feel strongly that (women should have an equal role with men/women's place is in the home) or not so strongly?

Feel strongly that women should have an equal role	68.8
Feel not so strongly that women should have an equal role	16.1
Feel not so strongly that women's place is in the home	4.2
Feel strongly that women's place is in the home	10.9

Table 3
Unipolar New Deal Social Welfare Questions
(Asked on 1989 Pilot Study, Forms C and D)

People have different ideas about how much responsibility the federal government in Washington has for the well-being of its citizens. Please tell me how much you approve or disapprove of each of the following statements.

V8448 The problem of homeless people can be solved best by private charities and volunteer groups. Do you approve strongly, approve somewhat, disapprove somewhat, or disapprove strongly?

Approve strongly	17.1
Approve somewhat	42.1
Disapprove somewhat	27.9
Disapprove strongly	12.9

v8449 The federal government in Washington should see to it that people who work full-time earn enough so that they don't live in poverty.

Approve strongly	50.4
Approve somewhat	30.0
Disapprove somewhat	13.3
Disapprove strongly	6.3

v8450 All medical expenses should be paid by individuals, and through private insurance plans like Blue Cross or other company paid plans.

Approve strongly	23.8
Approve somewhat	31.3
Disapprove somewhat	23.3
Disapprove strongly	21.7

V8451 The government should provide a decent job for everyone who wants to work.

Approve strongly	33.2
Approve somewhat	30.3
Disapprove somewhat	20.7
Disapprove strongly	15.8

V8452 It is important for the federal government to provide many more services even if it means an increase in spending.

Approve strongly	16.9
Approve somewhat	34.2
Disapprove somewhat	28.3
Disapprove strongly	20.7

v8453 The federal government should just let each person get ahead on their own.

Approve strongly	21.3
Approve somewhat	32.5
Disapprove somewhat	30.4
Disapprove strongly	15.8

v8631 The government in Washington to see to it that every person has a job and a good standard of living.

Approve strongly	20.1
Approve somewhat	36.0
Disapprove somewhat	26.8
Disapprove strongly	17.2

v8632 People should take advantage of every opportunity to improve themselves rather than expect help from the government.

Approve strongly	77.2
Approve somewhat	19.1
Disapprove somewhat	2.1
Disapprove strongly	1.7

v8633 There should be a government insurance plan which would cover all medical and hospital expenses for everyone.

Approve strongly	34.3
Approve somewhat	33.9
Disapprove somewhat	19.2
Disapprove strongly	12.6

v8634 Able-bodied people should be required to work in order to receive help from the federal government.

Approve strongly	71.8
Approve somewhat	20.3
Disapprove somewhat	6.6
Disapprove strongly	1.2

v8635 The federal government should provide fewer services even in areas such as health and education in order to reduce spending.

Approve strongly	8.4
Approve somewhat	17.6
Disapprove somewhat	30.1
Disapprove strongly	43.9

v8636 The government in Washington should see to it that every person gets three nutritious meals a day.

Approve strongly	15.8
Approve somewhat	31.3
Disapprove somewhat	34.2
Disapprove strongly	18.8

Table 4
Unipolar Women's Rights Questions
(Asked on 1989 Pilot Study, Forms C and D)

People have different ideas about the position that women should have in our society. Please tell me how much you approve or disapprove of each of the following statements.

v7325 There should be an amendment to the U.S. Constitution guaranteeing equal rights for all citizens regardless of sex. Do you approve strongly, approves somewhat, disapprove somewhat, or disapprove strongly?

Approve strongly	60.3
Approve somewhat	24.7
Disapprove somewhat	10.6
Disapprove strongly	4.5

v7326 The government should ensure that affordable child care is available to all those who need it.

Approve strongly	48.8
Approve somewhat	32.7
Disapprove somewhat	11.4
Disapprove strongly	7.1

v7327 Men should have as much responsibility for raising their children as women do.

Approve strongly	81.9
Approve somewhat	14.8
Disapprove somewhat	1.0
Disapprove strongly	2.3

v7328 When a company has to lay off workers, women whose husbands have jobs should be laid off first.

Approve strongly	11.9
Approve somewhat	18.6
Disapprove somewhat	23.4
Disapprove strongly	46.1

v7329 The government in Washington should make every effort to improve the social and economic position of women.

Approve strongly	37.6
Approve somewhat	42.9
Disapprove somewhat	13.9
Disapprove strongly	5.6

v7330 A Woman's place is in the home.

Approve strongly	10.8
Approve somewhat	15.8
Disapprove somewhat	20.2
Disapprove strongly	53.2

v8125 Women should have an equal role with men in running business, industry, and government.

Approve strongly	56.5
Approve somewhat	36.8
Disapprove somewhat	5.0
Disapprove strongly	1.7

v8126 Women with small children should not work outside home.

Approve strongly	13.3
Approve somewhat	27.9
Disapprove somewhat	24.2
Disapprove strongly	34.6

v8127 The police should stay out of disputes between husbands and wives unless life is in danger.

Approve strongly	24.4
Approve somewhat	25.2
Disapprove somewhat	24.8
Disapprove strongly	25.6

v8128 Men and women who have similar jobs should be paid similar wages.

Approve strongly	86.0
Approve somewhat	11.5
Disapprove somewhat	1.6
Disapprove strongly	.8

v8129 Women who have children without being married shouldn't expect the government to support their children.

Approve strongly	38.3
Approve somewhat	28.1
Disapprove somewhat	17.9
Disapprove strongly	15.7

v8130 The government should enforce tough laws against the harassment of women on the job.

Approve strongly	71.4
Approve somewhat	21.2
Disapprove somewhat	5.0
Disapprove strongly	2.5

among the items); and the reliabilities for the items that were dropped from the model.

Five items make a meaningful contribution to a reliable measure of New Deal Social Welfare Liberalism:

- The federal government in Washington should see to it that people who work full-time earn enough so that they don't live in poverty.
- The government should provide a decent job for everyone who wants to work.
- It is important for the federal government to provide many more services even if it means an increase in spending.
- The government in Washington to see to it that every person has a job and a good standard of living.
- The government in Washington should see to it that every person gets three nutritious meals a day.

Together these items produce a scale with a reliability of .82. The individual item reliabilities range between .26 and .63. The remaining seven items, dropped from the scale, each had reliabilities below .20. Rescored to the zero-one interval, the scale has a mean of .57 and a standard deviation of .26. As one would expect, democrats, liberals, blacks, women, people with low income, low education, people who score high on the equality dimension and low on the moral conservatism dimension liberalism all score higher on the New Deal Social Welfare scale.

4. Measurement Model for Support for Women's Rights

A parallel set of coefficients for the Women's Rights items appears in Table 6. Here too, five items survive to produce a scale with a modest reliability of .64:

- There should be an amendment to the U.S. Constitution guaranteeing equal rights for all citizens regardless of sex.
- The government should ensure that affordable child care is available to all those who need it.
- Men should have as much responsibility for raising their children as women do.
- The government in Washington should make every effort to improve the social and economic position of women.
- Women should have an equal role with men in running business, industry, and government.

The surviving items have reliabilities that range from .19 to .42; the seven deleted items all have reliabilities of less than .16. Rescored to the zero-one interval, the scale has a skewed distribution with a mean of .80 and a standard deviation of .17. This distribution is a bit more skewed than the distribution found for the 7-point Women's Rights scale asked on the 1988 NES (mean=.70; standard deviation=.31). As one would expect, democrats, liberals, women, people who score high on the equality dimension and low on the moral conservatism dimension liberalism all score higher on the Women's Rights scale, though these relationships are smaller than those the New Deal Social

Table 5

Correlations Among Unipolar New Deal Social Welfare Liberalism Items

v8448	1.00											
v8449	.07	1.00										
v8450	.18	.02	1.00									
v8451	.08	.36	.11	1.00								
v8452	.12	.37	.10	.55	1.00							
v8453	.21	.16	.25	.23	.34	1.00						
v8631	.01	.39	.02	.60	.45	.24	1.00					
v8632	.04	.13	.07	.05	.18	.28	.05	1.00				
v8633	.03	.16	.26	.28	.22	.01	.41	-.03	1.00			
v8634	.07	-.05	.10	-.12	.10	.18	-.10	.34	-.08	1.00		
v8635	.16	.01	.31	.14	.20	.16	.09	.03	.23	.03	1.00	
v9636	.09	.30	.08	.44	.38	.22	.50	.12	.33	.03	.08	1.00
v8448 v8449 v8450 v8451 v8452 v8453 v8631 v8632 v8633 v8634 v8635 v8636												

Measurement Model for
New Deal Social Welfare Liberalism

Variate	Loading (Std Error)	Relia- bility	Factor Score	R with Scale
v8449 Gov't should see that people who work aren't in poverty (.020)	.155 (.020)	.261	.390	.56
v8451 Gov't should provide decent job of all who want to work (.022)	.282 (.022)	.630	1.034	.87
v8452 Gov't should provide more services (.021)	.221 (.021)	.436	.603	.73
v8631 Gov't should see that to jobs and good std. living (.020)	.255 (.020)	.588	.962	.84
v8636 Gov't should see that all have 3 nutritious meals/day (.021)	.195 (.021)	.363	.501	.66

Adjusted Goodness of fit: .952

Reliability of Scale: .821

Number of Cases: 233

Reliability of Items Dropped from
the New Deal Social Welfare Liberalism Scale

v8448 Problem of homeless best solved by charities and volunteer groups	.02
v8450 Medical expenses should be paid by individuals or private insurance	.03
v8453 Gov't should just let each person get ahead on their own	.11
v8632 People should improve themselves rather than expect help from gov't	.02
v8633 Government insurance plan to cover all medical and hospital expenses	.18
v8634 People should be required to work to receive help from gov't	.01
v8635 Gov't should provide fewer services	.04

Table 6

Correlations Among Unipolar Items Measuring Support for Women's Rights

v7325	1.00											
v7326	.20	1.00										
v7327	.19	.32	1.00									
v7328	.03	-.05	.08	1.00								
v7329	.40	.40	.27	-.01	1.00							
v7330	.19	.07	.17	.36	.18	1.00						
v8125	.28	.22	.37	.26	.22	.39	1.00					
v8126	.11	.13	.18	.14	.17	.37	.31	1.00				
v8127	.00	-.02	-.02	.21	.03	.14	.16	.29	1.00			
v8128	.24	.06	.10	.19	.24	.12	.16	.05	-.06	1.00		
v8129	.02	.16	-.09	.14	.06	.04	.01	.19	.13	-.13	1.00	
v8130	.24	.17	.11	.16	.21	.21	.31	.03	.00	.28	.11	1.00
v7325 v7326 v7327 v7328 v7329 v7330 v8125 v8126 v8127 v8128 v8129 v8130												

Measurement Model for
Support for Women's Rights

Variate	Loading (Std Error)	Relia- bility	Factor Score	R with Scale
v7325 Constitutional Amendment for equal rights	.143 (.022)	.249	.776	.61
v7326 Affordable child care for all those who need it	.174 (.025)	.301	.827	.68
v7327 Men should have equal responsibility for children	.092 (.015)	.218	1.017	.57
v7329 Gov't should improve soc/econ position of women	.182 (.022)	.417	1.310	.79
v8125 Women equal role with men in business, industry & gov't	.099 (.017)	.193	.813	.54

Adjusted Goodness of fit: 858

Reliability of Scale: .643

Number of Cases: 223

Reliability of Items Dropped from
the Support for Women's Rights Scale

v7328	Women whose husbands have jobs should be laid off first	.09
v7330	A Woman's place is in the home	.15
v8126	Women with small children should not work outside the home	.15
v8127	Police should stay out of disputes between husbands and wives	.03
v8128	Men and women who have similar jobs should be paid similar wages	.11
v8129	Unmarried children shouldn't expect government support	.10
v8130	Gov't should enforce tough laws against harassment on the job	.15

Welfare scale.⁶ No relationship exists between the Women's Rights scale and income, education, or race.

The Women's Rights and New Deal Social Welfare scales are positively correlated ($r=.40$), as one would expect. (Corrected for attenuation, $r=.56$.)

5. Acquiescence

We were concerned with whether acquiescence is driving the responses to the unipolar questions and thus reducing the reliability of the items and scales that can be constructed from questions asked in this format (Lanski and Leggett 1960; Schuman and Presser 1981). We estimated several models designed to assess, in different ways, the magnitude and consequences of acquiescence:

One model, for which we found no support, assumed two correlated dimensions, one measured by questions where acquiescence would lead to "liberal" responses and the other where acquiescence would lead to "conservative" responses.

Another model relaxed the assumption that the variance-covariance matrix for the variate error terms (the theta delta matrix in LISREL) is diagonal. If acquiescence is a problem, then positive covariances should appear among items posed in the same direction; negative covariances should appear among items posed in the opposite direction. No such pattern emerged.

As a final, and perhaps stronger test, within each domain we estimated a model that assumed two correlated dimensions: one measured by the surviving unipolar variates within that domain and by the 7-point scales within that domain that were asked in 1988; the second by a count (recoded to the zero-one interval) of the amount of acquiescence to the 12 unipolar items asked in the other domain. The model is identified and provides direct estimates of the extent to which acquiescence is contributing to the responses to the 5 surviving unipolar items within each dimension.

The maximum likelihood estimates, displayed in Table 7, are small in comparison to the items loadings; only 4 of the 10 coefficients are significant. Three of the New Deal Social Welfare items seem to be contaminated by acquiescence: the government should provide a decent job to all who want to work; the government should provide more services; and the government should see that all have three nutritious meals a day questions. Only one of the five Women's Rights items (the Government should improve the social and economic position of women) is contaminated by acquiescence. In short, some acquiescence, particularly in the New Deal Social Welfare items.

⁶ We relied on unstandardized regression coefficients. Thus, the smaller variance in the Women's Rights scale is not the culprit.

Table 7
Estimates of Effect of Acquiescence
on Responses to Unipolar Questions

	Coef	Std Error
New Deal Social Welfare Variates		
v8449 Gov't should see that people who work aren't in poverty	.014	.020
v8451 Gov't should provide decent job of all who want to work	.077	.033
v8452 Gov't should provide more services	.070	.031
v8631 Gov't should see that to jobs and good std. living	.052	.030
v8636 Gov't should see that all have 3 nutritious meals/day	.081	.034
Support for Women's Rights Variates		
v7325 Constitutional Amendment for equal rights	.052	.031
v7326 Affordable child care for all those who need it	.056	.033
v7327 Men should have equal responsibility for children	.021	.024
v7329 Gov't should improve soc/econ position of women	.082	.031
v8125 Women equal role with men in business, industry & gov't	-.035	.034

VI. Head-to-Head Comparisons between the Unipolar and Bipolar Approach

1. The Scales Built from Unipolar Items are about as Reliable as Scales Built from Bipolar Items

If one combines the three bipolar social welfare items asked on the pilot study (the jobs and standard of living; government health insurance; and government services questions) they produce a scale with a reliability of .72. Doing the same thing on the 7-point items that appeared on the '88 NES produces a scale with a reliability of .64. This compares to a reliability of .82 for the five item scale produced from the five unipolar items. Some improvement, but not an overwhelming gain from two additional items.

The Women's Rights scale constructed from 5 unipolar items has a reliability of .64; the bipolar women's rights question has a reliability of .53. Not much gain from four additional items. (More on the reliability of the individual 7-point scales later.)

2. The Reliability of Scales Built from Unipolar Items Vary Across Levels of Political Withitness about the same as do Scales Built from Bipolar Items

We used the nine political information items that appeared on the 1988 NES to construct a measure of political withitness, divided the sample into two a high and low group, and compared the reliabilities of the scales across the two groups. The results appear in the following display:

Scale	Withitness		Ratio
	Low	High	
NDSW Scale constructed from Unipolar Items	.807	.802	1.02
NDSW Scale constructed from Bipolar Items on '89 Pilot	.650	.686	.95
NDSW Scale constructed from Bipolar Items on '88 NES	.609	.660	.92
Women's Rights Scale constructed from Unipolar Items	.581	.642	.90
Women's Rights Bipolar question on '89 Pilot	.507	.567	.89

The reliabilities do not vary much across levels of political withitness and the unipolar approach does not offer a meaningful improvement.

3. Pairs of Unipolar Items Can be Combined to Replicate the 7-Point Scales.

We subtracted the two appropriate unipolar items from each other to simulate the bipolar 7-point scales. Each simulated 7-point scale (based on the '89 unipolar items) is about as strongly correlated with the real bipolar, 7-point scale (asked in 1988) as is the bipolar, branching item (asked in 1989):

Issue Scale	r Between	
	Actual and Simulated 7-Point Issue Scales	Actual 7-point Scale and 5-point Branching Question
Equal Role for Women	.54	.53
Government Services	.48	.56
Government Health Insurance	.45	.59
Gov't Provide Jobs/Std of Living	.39	.39

Two unipolar questions are a fairly good substitute for the bipolar 7-point scale.

4. Scales Built from Unipolar Items Have About the Same Predictive Validity as Scales Built from Bipolar Items

We estimated a series of equations to test the predictive validity of the unipolar and bipolar approach. Each equation controlled for a bunch of other variables and respondents in both halves of the Pilot Study sample were assumed to share the same coefficients on the control variables. Within each equation we estimated a separate coefficient for the effect of the unipolar and bipolar scales and compared the estimated effects. The coefficients are reported in Tables 8 and Tables 9 and are summarized in the following display:

Dimension	Bipolar Coefficient 4% > Unipolar Coefficient		NO Difference	Unipolar Coefficient 4% > Bipolar Coefficient	
	Pr > .9	Pr < .9		Pr < .9	Pr > .9
NDSW	1	1	4	3	0
Women's Rights	0	4	7	1	0

In short, one gets about the same answer whether a scale built from the bipolar or unipolar items is employed.

5. Conclusions

The unipolar policy issue questions perform about as well as the bipolar items, but they clearly do not represent a meaningful improvement in our ability to measure public opinion on political issues nor do they reveal anything new about the origins of candidate evaluations and the vote.

Two points, however, should be kept in our collective memories: the unipolar format will work as well face-to-face as over the telephone and thus provides a way to measure issue preferences in a comparable fashion across modes of interviewing.

Second, as we will see in a moment, the unipolar questions provide a handy way to assess the strengths and weaknesses of the bipolar questions and are a powerful tool for testing the validity and reliability of the alternative anchors that might be cooked up for new issue questions.

Table 8
Head-to-Head Comparison of Predictive Validity of
New Deal Social Welfare Scales Built from
Unipolar and Bipolar Items

Dependent Variable	Coefficient for NDSW Scale Constructed from	
	Unipolar Items	Bipolar Items
Bush minus Dukakis Feeling Thermometer	-.078 (.042)	-.087 (.048)
Reagan Feeling Thermometer	-.157 (.060)	-.148 (.068)
Bush Feeling Thermometer	-.165 (.051)	-.168 (.058)
Dukakis Feeling Thermometer	.050 (.059)	.135 (.066)
Kennedy Feeling Thermometer	.111 (.070)	.021 (.078)
Jackson Feeling Thermometer	.023 (.058)	.075 (.065)
People on Welfare Thermometer	.051 (.058)	.115 (.065)
Poor People Thermometer	.054 (.050)	.041 (.056)
Oppose State Funding for Abortion	-.230 (.122)	-.125 (.137)

Note: The numbers in parentheses are the standard errors of the ordinary least squares coefficients. All variables are coded to the zero-one interval. In each equation, the following variables were held constant: party identification, scales measuring support for equality and moral conservatism, support for women's rights, region, liberal/conservative self-identification, race, gender, age, education, income, religion, belief in the literal interpretation of the bible, and religiosity.

Table 9
Head-to-Head Comparison of Predictive Validity of
Support for Women's Rights Scales Built from
Unipolar and Bipolar Items

Dependent Variable	Coefficient for Women's Rights Scales Constructed from	
	Unipolar Items	Bipolar Item
Bush minus Dukakis Feeling Thermometer	.005 (.038)	.019 (.033)
Reagan Feeling Thermometer	-.027 (.055)	-.045 (.048)
Bush Feeling Thermometer	-.041 (.048)	-.050 (.042)
Dukakis Feeling Thermometer	-.030 (.054)	.003 (.046)
Kennedy Feeling Thermometer	.111 (.062)	.068 (.054)
Robertson Feeling Thermometer	-.191 (.585)	-.560 (.512)
Feminist Feeling Thermometer	.180 (.056)	.156 (.049)
Women Feeling Thermometer	.176 (.052)	.112 (.045)
Opponents to Abortion Feeling Thermometer	-.004 (.077)	.011 (.067)
Opposition to Abortion Rights	-.135 (.080)	-.138 (.070)
Require Parental Consent for Teenagers	-.180 (.118)	-.130 (.104)
Oppose State Funding for Abortion	-.070 (.122)	-.026 (.107)

Note: The numbers in parentheses are the standard errors of the ordinary least squares coefficients. All variables are coded to the zero-one interval. In each equation, the following variables were held constant: party identification, scales measuring support for equality and moral conservatism, support for women's rights, region, liberal/conservative self-identification, race, gender, age, education, income, religion, belief in the literal interpretation of the bible, and religiosity.

VII. Assessment of the Core NES 7-point Issue Scales

We also pursued a bit further the four, 7-point issues scales that appeared on the 1989 Pilot Study. The news here is generally pretty good, but not without a concern here or there. These are our musings.

1. Reliability of 7-point Scales

Comparisons between the 1988 and 1989 responses to the issues scales might underestimate the reliability of the 7-point items because of the switch in mode as well as a switch to branching format to accommodate the telephone interview. Moreover, the face-to-face format produces 7-point scales; the telephone, branching format produces 4 or 5-point scales. To get a fairer idea of the reliability of the 7-point scales, we looked back to the 1984 National Election Study (where some items appeared on both the pre and post-election waves) and to the 1972-74-76 NES panel study where items were repeated over the years:

Issue Scale	Source of Reliability Estimate				
	'88 NES '89 Pilot	'84 Pre '84 Post	'72 NES '74 NES	'74 NES '76 NES	'72 NES '76 NES
Government Services	.56	.52			
Government Health Insurance	.59				.51
Jobs / Std of Living	.39	.52	.49	.51	.44
Equal Role for Women	.53		.51	.61	.52

If the raw measure of response stability can be taken as a measure of test-retest reliability, then these four questions stand up fairly well. The equal role for women, government services, and government health insurance questions all have reliabilities in the .5 to .6 range; the jobs and the standard of living question is the least reliable of the group with a reliability in the range of .4 to .5.

2. Validity of the Poles

Each pole in a bipolar question presumably cues the respondent on how to place herself on the 7-point scale. How well do these cues work and do some cues work better than others? One way to assess the power of each cue is to look at its association with the 7-point issue scale that it helps to define. We can do this by looking at the strength of association between responses to the unipolar questions (asked on the 1989 Pilot Study) and responses to the bipolar, 7-point scales (asked in 1988). One would expect the bipolar question to be highly correlated with each of its poles and the two poles to be very negatively correlated with each other. Table 10 reports the results of this analysis.

All the coefficients are significant and are in the correct direction. In three of the four cases, one pole is significantly more highly associated with responses to the 7-point scale than is the other pole. This suggests

Table 10
Association Between Bipolar Issue Scales
and Their Unipolar Components

Issue Scale	Correlation Between 7-point Scale and Pole	Correlation Between Poles
Government Services Increased vs Decreased		-.20
Fewer	.31	
More	-.45	
Government Health Insurance vs Private Plan		-.25
Gov't Plan	.45	
Private Plan	-.29	
Gov't Provide Jobs/Std of Living vs Ahead on Own		-.27
Jobs/Std Living	.27	
Ahead on Own	-.34	
Equal Role for Women vs Place in Home		-.40
Equal Role	.52	
Place in Home	-.41	

that in these instances there is an imbalance between the anchors and one of the two anchors is doing a better job than the other in cuing the respondent on how to place herself on the scale.

- The "government should provide many more services even if it means an increase in spending" pole is a better cue than is the "government should provide fewer services, even in areas such as health and education in order to reduce spending."
- The "government insurance plan which would cover all medical and hospital expenses for everyone" is a better cue than is the "all medical expenses should be paid by individuals, and through private insurance plans like blue cross and other company paid plans."
- The "women should have an equal role with men in running business, industry and government" pole is a better cue to the respondent than is the "women's place is in the home" pole.

In each case, it appears that the pole that provides the better cue is the one that better approximates the political discourse.

The more powerful and equal the contribution of each cue to the respondent's placing of herself on the 7-point scale, the more negatively correlated the two poles will be with each other. Here the negative associations between the two cues are relatively weak; only the cues for the women's rights question are strongly negatively correlated with each other.

In short, here are some simple guidelines that can be used to aid in the development of new 7-point issue scales:

- Each pole should provide a valid and reliable cue to the respondent about the political position that anchors its end of the continuum.
- Each pole should be strongly and equally associated with the 7-point scale.
- The two poles should be strongly negatively correlated with each other.

One final point concerning the validity of the poles that anchor our 7-point issue scales. It is disturbing that in the factor analysis reported in Tables 5 and 6 that some of the poles that anchor our bi-polar issue questions do not load on the dimensions they are presumably tapping. The government should provide fewer services; medical expenses should be paid by individuals or private insurance; there should be a government insurance plan to cover all medical and hospital expenses; and government should just let each person get ahead on their own polls do not load on the New Deal Social Welfare dimension. The woman's place is in the home pole does not load on the Women's Rights dimension.

3. What Does a "4" Mean on the 7-point Issue Scales?

Respondents might opt for the middle category --"4"-- for a variety of reasons: they prefer both options; they oppose both options; they are really

in the middle of the distribution. To test for these possibilities we again examine the relationship between responses given to the bipolar question asked in the 1988 NES and the unipolar questions asked on the 1989 Pilot Study. For each unipolar item, we estimate the following equation:

$$\text{Unipolar Anchor}_t = b_0 + b_1 * (\text{Bipolar Scale}_t) + b_2 * ("4" \text{ on Bipolar Scale}_t) + u_t$$

If $b_2 > 0$ for both anchors of the bipolar scale then the "4s" on the bipolar scale support both options more than one would expect on the basis of their position on the 7-point scale;

If $b_2 < 0$ for both anchors of the bipolar scale then the "4s" on the bipolar scale oppose both options more than one would expect on the basis of their position on the 7-point scale;

If $b_2 = 0$ then the "4s" are staking out the middle position on the 7-point scale.

The estimated coefficients appear in Table 11 and clearly suggest that as a group, the "4s" are not more supportive nor more in opposition to the options that comprise the two poles of the bipolar question that one would expect. Our best sense is that as a group, the people who stake out the middle position really lie somewhere on the middle on these continuums.⁷

4. Policies versus Principles

There is nothing in our analysis that suggests an empirical bottom line to the question of whether issue items should ask about principles or about policies. A glance back at Tables 5 and 6 reveal that among the items with the biggest loadings and highest reliabilities on the New Deal Social Welfare Liberalism and Support for Women's Rights dimensions were both questions about principles and questions about policies. There is little in that analysis that suggests that one approach dominates the other.

Whether to frame issue items as questions about general principles or specific policies depends on how the debate itself is framed. If the political debate between the candidates is over policies and our items ask about principles, then we are likely to find that little relationship between responses to our survey questions and candidate evaluation. Similarly, if the debate is framed in the symbols of principles, and our items ask about specific policies, then will miss the boat in the other direction.

⁷ Two other possibilities exist, of course. It might be the case that hidden among the "4s" are people who oppose both options and an equal number of people who support both options and that the two groups cancel out in the aggregate. We think this is highly unlikely. It might also be the case that the "4s" are really no opinions and the response are just random (around some fixed mean). Nothing in this analysis precludes this option.

Table 11
The Meaning of Being a "4" on the
7-Point Issue Scales

Unipolar Dependent Variable	Bipolar Independent Variable	Marginal Effect of Being a "4" on the Bipolar Item	
		Coeff	Std Error
Equal Role for Women	Women's Rights 7-point	-.017	.037
Woman's Place in the Home	Women's Rights 7-point	-.035	.054
Fewer Gov't Services	Gov't Services 7-point	-.010	.049
More Gov't Services	Gov't Services 7-point	.115	.047
Private Insurance Plan	Health Insurance 7-point	-.078	.063
Gov't Insurance Plan	Health Insurance 7-point	.007	.055
Get Ahead on Own	Jobs Std Living 7-point	-.073	.050
Gov't Jobs and Std. Living	Jobs Std Living 7-point	.070	.050

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