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IDEOLOGICAL CONSISTENCY AS A COLLECTIVE PHENOMENON

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Researchers ordinarily consider ideological consistency to be a characteristic of individuals; groups are considered to be ideological only if they are composed of ideologically oriented individuals. We show how a group as a whole can be characterized as exhibiting an ideological basis for its preferences even though many, or even most, of its members have preferences that are inconsistent with the supposed unidimensional ideological continuum. As an illustration, we show that the United States electorate of 1980 had collective preferences among the candidates Kennedy, Carter, Ford, and Reagan as if these preferences reflected an underlying left-right dimension among these candidates, despite the fact that a high proportion of individual voters had preferences among these candidates that did not fit the left-right dimension. In general, we show reasons why collectivities are likely to be more ideologically consistent than are the individuals composing them.

Despite the classic sociological recognition that the social whole is more than the sum of its parts (e.g., by Durkheim), the analysis of ideological consistency in collectivities has focused upon the ideological consistency of the individuals who compose them. For example, the well-known fact that individual voters in the United States by and large do not make choices in terms of a consistent left-right ideology (Axelrod 1967; Niemi and Weisberg 1984, 319-28 and references cited therein) has been interpreted to mean that U.S. society is not ideological in its choices.

We propose that "ideological consistency" may properly be considered to characterize collectivities as well as individuals. By choices being "ideologically consistent," we mean that group decisions

are made *as if* the options were arrayed on a left-right continuum with voters choosing the alternative closest to their own preferences. In other words, when we speak of collective choices as being "ideological" or "ideologically consistent," we mean (following social choice terminology) that the preference structure is *the same* as that which would occur if voters had "single-peaked" preferences (Black 1958) along a single left-right dimension. We recognize that the term *ideology* has a plethora of meanings (see, e.g., Williams 1983 s.v. "ideology"), but the narrow meaning we give it is one with a long history of use and is directly relevant to the important empirical question of whether or not the U.S. electorate (and various subsets) can properly be characterized as responding to choices in left-right terms.

We demonstrate that even groups composed of individuals most of whose preferences are not ideologically consistent may be found to exhibit collective ideological consistency. Our central theoretical point is that there is a sensible notion of a collective ideology that is different from simply counting the proportion of individuals with ideologically consistent preferences or with some form of ideological self-identification, as is standard in the political science literature (see, e.g., Conover and Feldman 1984; Fleishman 1986; Hamill and Lodge 1986). We shall demonstrate that it is a "fallacy of composition" to believe that collective decision making will be ideological *only* when all or most members of the collectivity, as individuals, are ideological in their preference structure.

Berelson and colleagues (1954, 312) suggested that certain nonreducible properties of groups might be indispensable to the smooth functioning of the political decision-making process:

Individual voters today seem to be unable to satisfy the requirements for a democratic system of government outlined by political theorists. But the system of democracy does meet certain requirements for a going political organization. The individual members may not meet all the standards, but the whole nevertheless survives and grows. This suggests that where the classic [political] theory is defective is in its concentration on the individual citizen. What are undervalued are certain collective properties that reside in the electorate as a whole and in the political and social system in which it functions.

We believe that *collective* ideological consistency is one property that may be important for the stability and coherence of a political system, because a political system that makes consistent and ideologically predictable choices may be more easily accepted as legitimate than one that appears inconsistent and unpredictable. We believe that collective ideological consistency is commonly found; that is, groups often possess the well-ordered preferences that make it possible to treat a

collectivity as if it had coherent ideological preferences.

The coherence of group ideological preferences has important implications; for instance, many political groups (both manifest and latent) can be treated as if they were single entities by actors in the political process. Political candidates can choose positions in response to "group" preferences even though many or most members of the group are not strictly ideological. Similarly, parties can seek out candidates who reflect the "views" of the parties' constituencies. Thus, we can see how ideologically oriented representatives can nonetheless "faithfully represent" the view of an electorate primarily composed of nonideological voters (Feld and Grofman 1986a) and how newspapers and commentaries might sensibly talk about ideological shifts in the electorate, even though many or most voters never had coherent ideological views to start with.

Conceptualizing Individual versus Collective Ideological Consistency

The standard approaches to defining ideology in groups are methodologically individualistic in perspective, that is, they treat a collectivity as being ideological in the manner that, and to the extent that, its individual members are. For example, in the usual Guttman scaling approach (see Weisberg 1972 for a review), a set of choices can be said to conform to an underlying ideological basis of choice if there is an ordering of items such that each voter can be assigned a position on a continuum that completely determines his or her entire set of choices; essentially all individuals must be ideologically consistent for their choices to "Guttman scale."

Similarly, factor analysis, one common approach to ideological consistency, operates on a matrix of bivariate correlations (Harmon 1976; Weisberg 1974) that indicate the extent to which individuals

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have views that are coherent across choices. Ideological consistency is indicated by the amount of the individual variance that can be attributed to a single (or at most a few) factors.

Common sense might seem to suggest that there is no other way to define a group as being unidimensional than by saying that choice in accord with some single dimension is characteristic of members of the group *as individuals*. Yet we will show that it is perfectly possible to talk intelligibly about a group being ideological in its choices even when most of the group's members lack an ideological basis for their preferences. In fact, the converse is also possible; a group may fail to be ideological in its choices even if almost all of the individuals in the group make perfectly ideologically based choices. While there is some tendency for the extent of ideological consistency of individuals to affect the likelihood of collective ideological consistency (and the specific case of total ideological consistency of individuals necessarily results in group consistency), each form of ideological consistency can be high when the other is low (Feld and Grofman 1986b; Niemi 1969). We now turn to a precise statement of what we mean by individual and collective ideological consistency; then we consider some empirical evidence on ideological consistency in the U.S. electorate.

Definitions of Ideological Consistency in Individuals and Collectives

For a particular set of choices (alternatives) arrayed along a unidimensional continuum (e.g., left-right), we shall say that an *individual* has an ideological preference ordering with respect to that continuum if the individual has a most-desired alternative and prefers each of the other alternatives less as they are further from the "ideal" alternative in either direction. Such ideological preference

orderings have been called "single-peaked" preference orderings (Arrow 1963; Black 1958), because they suggest that each individual has a utility function that is peaked at the ideal point and declines in both directions from that peak.¹ Once we specify such a unidimensional continuum and identify a set of alternatives ordered along it, then for every individual in a society we can in principle determine if that individual has preferences that are single-peaked with respect to the given continuum.

For the rest of this discussion, we will assume that a particular unidimensional continuum has been specified. A preference ordering will be said to be ideological if it is single-peaked with respect to the particular continuum that has been specified. Whenever we refer to a collective ordering we mean the preferences of the majority.

For example, consider the three alternatives A, B, and C along a continuum in that order. Each individual can be thought to have a preference ordering over that set of three alternatives; four of the possible orderings (ABC, BAC, BCA, and CAB) are consistent with single-peakedness for this continuum, and the other two possible orderings (ACB and CBA) are ideologically inconsistent with this continuum. To see that ACB is ideologically inconsistent with the continuum ABC note that if the individual had an ideal point at A, he or she must prefer B to C, since B is closer to A than is C along the ABC continuum. The argument that shows CAB to be inconsistent is analogous.

Suppose that 17 individuals all have single-peaked preference orderings: 8 have ABC, 5 have BCA, and 4 have CBA. Of the 17 voters, a majority (13) prefer B over C, a majority (9) prefer B over A, and a majority (9) prefer C over A. It is clear that B is the median of the voter ideal points; B is majority-preferred to both A and C. Furthermore, the group

majority preference, which is B preferred to C preferred to A, is consistent with a hypothetical group utility function with ideal point at B and next highest utility at C. Such a function is single-peaked with respect to the continuum ABC.

Whenever *all* of the individuals have single-peaked preferences with respect to some continuum, it is well known that there is an alternative that is preferred by the majority of the individuals in the group to each and every one of the other alternatives. Furthermore this majority winner corresponds to the ideal alternative of the median voter in the group (Black 1958); and the majority preferences ordering of the group is itself single-peaked with respect to the underlying continuum (Arrow 1963).² Analogous results occur if *all* individuals have single-troughed preference ordering or if all individuals have what are called polarized preferences over every triple of alternatives (see Feld and Grofman 1986b; Plott 1976; Sen 1966), but we shall neglect these essentially technical complications and focus on single-peakedness.

When all individuals have single-peaked preference orderings the process of collective decision making is dramatically simplified. As long as all voters have such ideological preference orderings there cannot be any cyclical majorities (e.g., where A is majority-preferred to B, which is majority-preferred to C, which in turn is majority-preferred to A); also, the majority choice is consistent with all of the requirements of an ideal decision rule as set forth by Arrow (1963) in his classic consideration of social choice. However, while there are many situations where single-peaked preferences are common, there are few situations where everyone has single-peaked preferences.

Researchers have shown that a higher proportion of individuals with single-peaked preferences increases the probability that a group will have single-peaked preferences (Niemi 1969; Niemi and

Wright 1986); however, there is no necessary connection between these two things. If there is even one individual with non-single-peaked preferences, then the group may have non-single-peaked preferences and there may be cyclical majorities. In the previous example, suppose that one of the voters with CBA preferences had changed to CAB preferences instead. There would then be a majority (9) who preferred A to B, a majority (13) that still preferred B to C, and a majority (9) that still preferred C to A. While there would still be 16 of the 17 individuals with single-peaked preference orderings, there would be a majority cycle, preferring A to B to C but C to A. More generally, as long as there are any individuals in the collectivity whose preference ordering is inconsistent with the posited ideological dimension, there is the possibility that the group will have a preference ordering that is inconsistent with the ideological continuum and even that the group will have no well-defined (i.e., transitive) preference ordering among alternatives.

Ideologically Ordered Margins in Collectivities

Collectivities indicate the *strengths* of their preferences by the sizes of their vote margins (see Feld and Grossman 1984). To the extent that collectivities are ideological, this ideology should be reflected by ideologically consistent regularities among the various vote margins between pairs of mutually exclusive alternatives, as well as by a single-peaked majority preference ordering at the aggregate level. Feld and Grofman (1986a, 103) define what it means for vote margins to be ideologically consistent; we expand upon that definition, consider how such ideologically ordered margins may arise, and specify an important new result about the aggregation of subgroups with ideologically ordered margins.

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If all voters have single-peaked preference orderings over the continuum ABC , then everyone who prefers A to B must also prefer A to C . Therefore, if everyone in a group had single-peaked preferences, the total number of individuals voting for A over C would have to be at least as great as the number voting for A over B . Similarly, single-peaked preference orderings over the continuum ABC imply that everyone who prefers A over C also prefers B over C . Hence, if everyone in the group had single-peaked preferences, the total voting for B over C would be at least as great as the number voting for A over C . Thus the voting margins would have an ordering

$$m(A,B) \leq m(A,C) \leq m(B,C)$$

This can be illustrated in a matrix as shown below:

Alternatives	Alternatives		
	A	B	C
A	—	$m(A,B)$	$m(A,C)$
B		—	$m(B,C)$
C			—

The defining characteristic of this matrix of *ideologically ordered margins* is that in the area of the matrix above the diagonal the margins below and to the right of any cell are always at least as great as the margin in that cell. In other words, margins increase (or stay the same) in every row as we read from left to right *and* increase (or stay the same) as we move down in any column toward the main diagonal. Note that the ordering is the same whether the margins are expressed in terms of the absolute number voting for the row alternative over the column alternative or in terms of the vote margins by looking at the difference in number of voters between those voting for the row alternative over the column alternative and those voting for the column alternative over the row alternative. Also, it makes no difference if we

express the matrix of margins in terms of absolute numbers or in terms of percentages.

For more than three alternatives, the implications of all individuals in the group having single-peaked preferences are the same as for the three alternative cases shown in the matrix above, that is, the alternatives can be represented in a matrix with the alternatives ordered across and down the side. The margins above the diagonal will follow the same pattern as in the matrix above, namely, increasing (or at least not decreasing) as one goes to the right along any row and as one goes down any column.

When margins satisfy the ideological margins condition with respect to a particular continuum, it can be seen that the majority preference ordering of the group as a whole must be single-peaked with respect to that continuum. This follows from the fact that there must be a first alternative, i , that is majority-preferred to the immediately following alternative, $i + 1$ (i.e., i is the first entry in the row whose margin over the alternative $i + 1$ is greater than a majority). Under these conditions the alternative before it, $i - 1$, must get less than a majority when paired against i (since i is the first to be majority-preferred to the next one, $i - 1$ must not be majority preferred to its following alternative); all alternatives before $i - 1$ (all margins above it) must have even lower margins (less than majorities). At the same time, since i receives a majority against the next alternative, $i + 1$, it must receive at least as great a margin (also a majority) against all following alternatives (all margins to the right). Thus, alternative i is majority-preferred to all alternatives before it and after it in the matrix. In like manner, with i deleted, we can find the next most preferred alternative in the majority preference ordering.

Ideological margins may arise even with many non-single-peaked voters. Indeed, in general, even situations where

single-peaked orderings are relatively rare may still give rise to ideologically ordered margins, that is, margins of the sort that would arise if *all* individuals had single-peaked preferences. A simple example can illustrate this point.

Consider 17 voters such that there are 5 ABC, 2 CAB, 4 BAC, and 6 BCA preference orderings; the margins are ideologically ordered with respect to the continuum ABC, as shown in the matrix below, even though only 10 of the 17 individuals, those with the last two preference orderings, have single-peaked preferences with respect to the continuum ABC. Since 4 of the 6 possible preference orderings are single-peaked, this example represents a lower proportion of single-peaked preferences with respect to ABC than would be expected by chance alone (10 out of 17 vs. 4 out of 6); yet as shown in the matrix below, the ordering on margins is exactly the same as could occur if *all* voters were single-peaked with respect to ABC. Eleven voters have single-peaked preference with respect to the continuum BCA, but the group preference ordering BAC is not single-peaked with respect to BCA.

Alternatives	Alternatives		
	A	B	C
A	—	7	9
B		—	10
C			—

Note that if there are only three alternatives, ideological margins require that a majority of voters have single-peaked preferences, but for larger numbers of alternatives there may be ideological margins even if *no* individual has single-peaked preferences. Also note that (if we neglect ties) margins can only be ideological with respect to a single underlying continuum. As illustrated by the above example, the continuum along which the largest number of individuals will be single-peaked need not be the same continuum as that over which the group has

ideological margins. In general, however, we do not expect to find many empirical examples of such a discrepancy between a group-based and an individual ordering-based perspective on what ordering is most characteristic of the group. The context for the individuals in a group is likely to produce tendencies toward single-peakedness on some particular continuum, and that continuum is likely to be the same one which forms the basis for the group's ability to satisfy the ideological margins condition.

The ideological margins condition is important because if it is satisfied for a set of subgroups composing a society, it must also be satisfied for the society as a whole. This is not true for single-peakedness; if we add several subgroups together, each of which has a single-peaked ordering (but without ideological margins), there is no guarantee that the combined group will have a single-peaked ordering.

The example below shows two collectivities that each have single-peaked preferences with respect to some underlying continuum (without ideological margins) that do not combine to produce a collective transitive ordering that is single-peaked with respect to that same underlying continuum. Consider three candidates on the continuum ABC:

Set X below has a hundred people and has majority preferences ordered ABC, which are single-peaked preferences over the continuum ABC, but X does not satisfy the ideological margins condition.

	A	B	C
A	—	60	55
B		—	51
C			—

Set Y below has a hundred people and single-peaked preferences CBA over the same continuum, ABC, but again does not satisfy the ideological margins condition.

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	A	B	C
A	—	45	42
B		—	40
C			—

Sets X and Y combined have two hundred people and majority preference ordering CAB, as shown below.

	A	B	C
A	—	105	97
B		—	91
C			—

The preference ordering of the combined set X and Y is not single-peaked with respect to the continuum ABC. Thus, without ideological margins, the fact that subgroups of a collectivity each have single-peaked preferences does not ensure that the combined group will have single-peaked preferences.

On the other hand, it is easy to see that if we combine two subsets, each of which has ideological margins, the resulting combined group must have ideological margins; clearly, if each of the matrices has the margins ordered from left to right and top to bottom, summing them results in the same ordering. Furthermore, if each of the subsets has mostly ideologically ordered margins and the departures from ideologically ordered margins in each subset are different, combining the subsets may result in margins that are even closer to ideological ordering than was true for the subsets themselves.

We are not claiming that collectivities will inevitably have ideologically ordered margins. We do claim, however, that ideologically ordered margins will be more common than one might think by looking at the bewildering diversity among *individual* preferences. Furthermore, while many or even most of the individuals in a collectivity may have quite nonideological preferences, we expect that many collectivities will at least

approximate the ideological margins condition and will have single-peaked preferences.

We believe that individuals do not make choices consistent with an underlying ideological continuum as often as collectivities do. The aggregate ideological consistency might arise in several ways. One possibility is that there is a relatively ideological elite whose preferences, combined with the self-counteracting "noise" of the nonideological masses, determine the group preferences. Another possibility is that there is a diffuse ideological tendency among a large proportion of the electorate that is sufficient to generate ideology in the aggregate; some individuals might have single-peaked preferences over some subsets of the alternatives while other individuals have single-peaked preferences over other subsets (cf. Feld and Grofman 1986b).

The Extent of Ideology in Margins

In the previous section, we showed that if subgroups have ideological margins, then the entire group necessarily has ideological margins and consequently must have a transitive preference ordering that is single-peaked. In addition, we suggested that if the margins of subgroups closely approximate ideological margins, then it makes it likely that the group as a whole will approximate ideological margins and consequently have single-peaked preferences. Here we will make the notion of "closeness" to ideological margins more precise.

To measure this notion of "strength" of ideological margins we simply measure the average difference between margins. If there are three alternatives, then there are three margins and three margin comparisons ($AC - AB$; $BC - AC$; $BC - AB$).³ For three alternatives, the *average margin difference* is given by $(AC - AB + BC - AC + BC - AB)/6$, which reduces to

$(BC - AB)/3$. If margins satisfy the ideological margins conditions, each of these pairwise margins comparisons should be nonnegative; and even if there is "noise" the average difference in margins should be nonnegative.

If margins rapidly increase in each row or column as we move to the right, away from the main diagonal, or down, toward the main diagonal in some subgroup, then even when this subgroup is combined with other subgroups the pattern of ideological margins is likely to be maintained. The ideologically ordered pattern will tend to stand out over any random variations found in the other subgroups with which it might be combined. (Of course, any subsets drawn randomly from a group with "strong" ideological margins are likely to have ideological margins themselves.)

Recall that ideological margins are ordered so that they are nondecreasing as one moves to the right and down the portion of the margins matrix above the main diagonal. When several subgroups are combined, it should be clear that the margins for the entire group are merely the weighted average of the margins for the subgroups (weighted by the size of the subgroups). Thus if one or another subgroup has one pair of margins slightly out of ideological order (say, 3% in the wrong direction), then when it is combined with other subgroups having this same pair of margins in the right direction, the overall group will have this pair ideologically ordered. So even if some subgroups have slight deviations from ideological margins, there may be ideological margins when subgroups are combined.

Even if the collectivity as a whole does not have strictly ideological margins, it will still have a transitive single-peaked preference ordering so long as a margin above 50% is not followed (to the right or down) by a margin that is less than 50%. Thus as long as the few particular aggregate deviations from ideological ordering

are not in this crucial region (around 50%) in the group as a whole, they will not interfere with the overall single-peaked collective preference ordering.

In the next section, we provide some illustrative empirical data about the extent to which a population and various subsets satisfy the ideological margins condition. Specifically, we analyze the preferences of U.S. society as a whole and a variety of subgroups within it vis-à-vis the top four candidates for president (Kennedy, Carter, Ford, and Reagan) prior to the 1980 elections. We find that most subsets approximately satisfy the ideological margins conditions with respect to the left-right continuum *KCFR*, which would be a left-right ordering by politically sophisticated observers. Moreover, as hypothesized, we find that the society as a whole, as well as virtually all its subsets, had (majority) preferences that were single-peaked with respect to this continuum, despite the fact that only barely more than half of the *individuals* in the society had single-peaked preferences with respect to this continuum *KCFR*.

An Empirical Example of Ideological Consistency of Groups

In January 1980 individual respondents were asked by National Election Studies (NES) interviewers to indicate their feelings towards each of the presidential candidates in the 1980 election by indicating a number from 0 to 100 (where 100 represents the most positive feelings). By using the feeling thermometer rating as a surrogate for utility (Feld and Grofman 1986b; Niemi and Wright 1986; Weisberg 1974; Weisberg and Grofman 1981), these data allow us to determine each voter's preference ordering over these candidates. The NES survey included a long list of candidates; for the present purposes, we confine our attention to the four candidates

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Table 1. Margins of Preference among 1980 Presidential Candidates

Candidates	Candidates			
	Kennedy	Carter	Ford	Reagan
Kennedy	—	38.0	38.0	41.5
Carter		—	48.3	53.0
Ford			—	53.7
Reagan				—

Note: Entries are the percentage preferring the row alternative to the column alternative.

Source: NES 1980 candidate thermometer data ($N = 1,481$).

on the list who were best known: Carter, Kennedy, Ford and Reagan. Most respondents indicated that they knew of each of these candidates and had preferences among them.

Every one of the 24 possible linear preference orderings over these four alternatives was represented in the NES sample of voters. The eight preference orderings that were single-peaked over the continuum *KCFR* tended to be somewhat more common than each of the 16 possible non-single-peaked preference orderings; but overall, almost half (47%) of the preference orderings are *not consistent with* single-peakedness on the posited left-right continuum. No ordering is shared by more than 12% of the voters. The most common are *RFCK* (11.2%), *FRCK* (10.7%), and *RFKC* (7.9%), the first two of which are single-peaked; the least frequent orderings were *RKCF* (.7%), *KFRC* (1.2%), and *RCKF* (1.3%), none of which are single-peaked.

Despite the large proportion of non-single-peaked preference orderings, the margins of pairwise preferences conform to the ordering expected to arise from the situation where *all* voters have single-peaked preferences. Table 1 shows the margins of pairwise preference for the entire sample of individuals who indicated feelings about all of the candidates.

Table 1 illustrates how a society with a very large proportion of non-single-peaked preference orderings can, none-

theless, give rise to ideological margins like those that would occur if the entire group had single-peaked preference orderings. Even though a different majority of voters is on the winning side in each pairwise choice among alternatives, the majority of respondents in the NES sample have preference ordering *FCRK*, which is single-peaked with respect to the *KCFR* left-right ordering. Conformity of these margins to the requirements imposed by ideological margins would obviously be unlikely to occur by chance. Even though a near majority of those respondents in 1980 had preference orderings inconsistent with the underlying ideological continuum, the group margins still perfectly reflect that continuum.

We believe that this aggregate ideology arises from the fact that there is widespread recognition of the ideological continuum. In the next section, we show that there was general agreement on the placement of these candidates and that subsets with a particular self-identified position had preferences and margins consistent with that ideological position. Niemi and Wright (1986), analyzing the same data, find, as did we, that the society as a whole and various subsets of it exhibit far fewer majority cycles than might be theoretically expected. Niemi and Wright (1986) also found that the absence of cycles could not be attributed to the proportion of individuals having single-peaked preferences and concluded that ideological consis-

tency was not an important factor underlying the transitivity of group preferences. We are suggesting that the proportion of individuals with single-peaked preferences does not measure the importance of an ideological continuum to a *group*. We agree, however, with Niemi and Wright's suggestion that widespread agreement on the goodness or badness of particular candidates also contributes to the absence of majority cycles. This line of approach is also discussed in Feld and Grofman (1986b) and is one that we have been investigating.

Ideological Self-Identified Subsets

Respondents in the January 1980 NES Election Survey were asked to identify their own position and the position of each candidate on a seven-point scale ranging from extremely liberal (1) to extremely conservative (7). The frequency distribution of respondent ideological self-identification is clustered around the "moderate" responses, with some tendency toward conservatism. We then analyzed the perceived positions of the candidates from the perspectives of the subsets of individuals in each ideological self-placement category. Due to the relatively small number of respondents in the end categories, in our analysis we combine the two extreme categories at each end of the ideological spectrum. Despite substantial variation among individuals, the mean assigned relative positions for the set of candidates differed as would be expected, with the candidates ordered from left to right as Kennedy, Carter, Ford, and Reagan by the members of each subset.

Having established that there is a general tendency among ideologically self-located subsets to perceive a left-right ideological ordering among the four major 1980 U.S. presidential candidates, we next determined whether the aggregate

ordering of each subset was consistent with the self-identified ideological placement of subset members. Subsets with different ideological self-placement would be expected to differ in their rankings of the candidates if ideology was a relevant determinant of candidate preferences. Moreover, even if all individuals with a given ideological self-placement did not prefer candidates in terms of ideological proximity, we expect that each *set* of ideologically self-identified individuals would have an ordering consistent with that subset's self-placement on the left-right continuum.

If preferences satisfied the ideological margins conditions for the continuum *KCFR*, the expected directionality of marginal comparisons is as follows: $KC < KF$, $KC < KR$, $KC < CF$, $KC < CR$, $KC < FR$, $KF < KR$, $KF < CF$, $KF < CR$, $KF < FR$, $KR < CR$, $KR < FR$, $CF < CR$, $CF < FR$, $CR < FR$.

Table 2 shows information about the preferences of the extremely liberal, the somewhat liberal, the moderate, the somewhat conservative, the extremely conservative, and the self-identified non-ideological. Table 2 also shows the margins of preference for each ideologically self-identified subset. The next to last column in lower part of Table 2 shows the number of ideologically consistent pairs of margins for each subset (out of the possible 14). As expected, each ideologically self-placed subset also has a majority preference ordering consistent with its self-placement; for instance, liberals have the majority preference ordering *CKFR*, moderates have the ordering *FCRK*, the somewhat conservative have the ordering *FRCK*.

Table 2 also shows our measure of strength of ideological consistency, the "average difference in pairs of margins" measure described in the previous section. Using that measure, we find that most ideologically self-identified subsets had pairs of margins which were, *on average*,

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highly consistent with our predictions, with the average differences shown in Table 2 ranging from 18% (for the somewhat liberal and the nonideological) to 33% for extreme liberals. The value of this measure could range (for four candidates) from -57% to 57%. In each subset the *average* difference in pairs of margins

is comparable to, or considerably higher than, the *maximum* difference between pairs of margins in an ideologically inconsistent direction (shown in column 1 in Table 2).

The average strength of ideological consistency across all subsets is considerably higher than the maximum ideological

Table 2. Margins in Pairwise Choices among Individuals with Different Self-Identified Ideological Positions

Ideologically Self-identified Position	Maximum Difference between Pairs of Margins			Matrix of Pairwise Margins of Preferences			
	Ideologically Inconsistent Direction (%)	Ideologically Consistent Direction (%)		Kennedy	Carter	Ford	Reagan
Extremely liberal or liberal	31	76	Kennedy	--	-5	23	46
			Carter	--	41	71	
			Ford	--	--	40	
			Reagan	--	--	--	
Somewhat liberal	5	40	Kennedy	--	-11	1	25
			Carter	--	11	29	
			Ford	--	--	24	
			Reagan	--	--	--	
Moderate	7	36	Kennedy	--	-22	-29	-23
			Carter	--	-4	5	
			Ford	--	--	7	
			Reagan	--	--	--	
Somewhat conservative	19	62	Kennedy	--	-35	-54	-52
			Carter	--	-26	-19	
			Ford	--	--	8	
			Reagan	--	--	--	
Conservative or extremely conservative	24	78	Kennedy	--	-35	-51	-59
			Carter	--	-37	-44	
			Ford	--	--	19	
			Reagan	--	--	--	
Nonideological or no response	12	32	Kennedy	--	-24	-13	-6
			Carter	--	8	20	
			Ford	--	--	8	
			Reagan	--	--	--	
Ideologically Self-identified Position	Ordering	Number of Ideologically Consistent Margin Comparisons	Average Difference in Pairs of Margins (%)				
Extremely liberal or liberal	CKFR	11/14	33				
Somewhat liberal	CKFR	12/14	18				
Moderate	FCRK	12/14	18				
Somewhat conservative	FRCK	12/14	23				
Conservative or extremely conservative	RFCK	8/14	21				
Nonideological or no response	CFRK	12/14	18				

inconsistency between pairs of margins averaged across all subsets. Thus in general, when subsets are combined, we would expect even the most extreme "errors" in directionality between pairs of margins in each subset to be outweighed by the high average level of ideological consistency across all subsets. In other words, the strength of ideological preference calculations shown in Table 2 leads us to expect that almost any combination of subsets would tend to result in a collectivity with strong ideological margins and thus would almost certainly result in a transitive majority preference ordering single-peaked with respect to the posited left-right continuum.⁴

Despite the high aggregate level of ideological consistency in each of the ideologically self-placed subsets shown in Table 2, even within each ideologically self-identified subsets there is tremendous variation in *individual* preferences. Although each subset has a single-peaked majority preference ordering consistent with the subset's ideological self-placement, *individuals* within each subset do not show high ideological consistency. Among the very liberal, there are 16 distinct individual preference orderings and the modal preference (KCFR) is shared by only 37% of the individuals in the set. Only 65% have orderings that are single-peaked. Among the somewhat liberal, there are 21 different individual preference orderings and the modal preference (CKFR) is shared by only 15% of the individuals in the set. Only 52% have orderings that are single-peaked. Among the self-identified moderates, there are 22 different preference orderings, with the two modal categories having only 9% each. We find that 54% of this set of individuals have single-peaked preference orderings. Among the somewhat conservative, there are 19 different preference orderings, with the modal category having 9%. We find that 62% of this set have single-peaked preference orderings.

Among the extremely conservative, the group margins are less consistent with ideology than among the extremely liberal; there are 21 different preference orderings, with the modal category having only 13% each. In this subset only 53% of the individuals have single-peaked preference orderings. Nonetheless, as before, the group as a whole has single-peaked preference ordering RFCK.

When those who claim to have no ideological position are examined, they show more variation among individuals but a similar aggregate result. The set of non-ideologically self-identified individuals exhibits *all* 24 difference preference orderings, with no more than 9% holding any one ordering. Less than half (46%) held preference orderings that were ideologically consistent with the posited left-right continuum. Nevertheless, as we anticipated, even the set claiming no ideological position as individuals *collectively* had a transitive majority preference ordering, CFRK, which was single-peaked with respect to the posited left-right continuum KCFR. That preference ordering indicates an aggregate position just slightly to the left of the self-identified moderates.

What we find striking about the data on the ideological consistency of individuals and subsets as a function of their self-reported position on a liberalism-conservatism scale are that (1) *no* subset had more than 65% of its members with single-peaked orderings and some subsets had only barely above 50% of their members with single-peaked ordering; yet (2) *each* subgroup had a single-peaked transitive majority preference ordering consistent with its self-reported ideology.

Other Types of Subsets

Liberals and conservatives will be found in different proportions among various population subsets. We looked at subsets defined by age, education, social

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class identification, and gender. For each subset (10 in all, because some variables were polychotomies, not dichotomies) we determined majority preferences.

Common sense might lead us to expect that some subgroups might more likely be collectively ideologically consistent than others. On the other hand, we might expect that the perception of a left-right ideological continuum as perceived by the population as a whole will be shared by the various subsets in the population. If this were true, we would expect difference not in the continuum shared by the groups but in the preference ordering held by various subsets for alternatives along that (shared) ideological continuum, of the sort we found for ideologically self-identified subsets. Also we might expect the fit of the ideological margin assumption to be less perfect for most subsets than for the society as a whole because of (1) idiosyncratic differences among subsets, that is, some subgroups, for instance, "Right to Life," might have a consistent ideology that is only partially correlated with a left-right ordering, and (2) the additional sampling error imposed by the smaller size of subgroup samples.

There are four different preference orderings manifested among these 10 subsets (for example, the working class and females have the ordering CFRK; the old and those who did not graduate high school the ordering CRFK; males, the college-educated and the middle class the ordering FRCK; younger and middle-aged voters and those with just a high school degree the ordering FCRK)⁵ and two different majority winners. However, only the two subsets with ordering KCFR were not single-peaked. Thus 80% of the 10 subsets have single-peaked preference orderings, despite their dramatic differences in actual preferences, and all of the subsets had a transitive majority preference ordering.

The fact that virtually all of these subsets have, in the aggregate, single-peaked

preferences with respect to the posited left-right continuum supports the hypothesis that the left-right perceptions of the nature of the presidential choices is diffused throughout the society, rather than found exclusively in one subgroup or another. Thus it seems clear that while ideology is not perfectly uniform across subgroups, some degree of common ideological orientation is present throughout the society. At the same time, the fact that the two subsets whose transitive ordering is not single-peaked with respect to the left-right continuum are the least well educated and the aged suggests these social groupings may reflect the societal ideological perspective less than others.

Conclusions and Implications

We have shown that only a bare majority of individuals in our 1980 sample have single-peaked preferences for presidential candidates, while 80% of all our subsets and the society as a whole have single-peaked preference orderings. Thus, as we had hypothesized, these collectivities are more ideological than the individuals who compose them. A major implication of our work is that the usual individual-based analysis of ideology will often miss a clear-cut ideology that may be present in the group as a whole. In particular, our approach helps to account for Inglehart's (1985) finding that there is stability of belief at the birth cohort (aggregate) level in contrast to seemingly random variations of beliefs over time at the individual level. In addition, our work helps to explain the common tendency for even the most knowledgeable observers to talk about groups as if groups had preferences and why it is reasonable for political observers to characterize political decisions as indications of the ideological tendencies of the electorate even though a high proportion of the electorate is not making decisions based upon ideology.

As we have shown, it is perfectly possible to talk intelligibly about a collectivity being ideological in *its* choices even when *most* of the collectivity's members lack an ideological basis for their preferences. Such a notion can be theoretically well defined without recourse to any "quasi-mystical" notions of emergent group properties. For the mass electorate to have single-peaked preferences (and something close to ideological margins), it is not necessary (or even critical) for most of its members as individuals to see the world primarily in ideological terms.

It is important to distinguish between the question whether members of a society agree with each other about preferences and the question whether they agree with each other about the continuum along which alternatives are to be evaluated. In other words, collectivities can agree, in the aggregate, on what we might call the "terms of the debate," while having great disagreement as individuals about what is the best choice. Moreover, agreement on that shared continuum at an *aggregate* level does not require a high degree of agreement at the *individual* level.

If there is a shared continuum, then the size of the margins conveys useful information about the nature of societal preferences along the left-right dimension. For example, in the situation previously described, in the society as a whole in January 1980 Carter did better against Ford than did Kennedy, even though both lost. Nevertheless, this is interpretable as indicating that the "median" in the population was—and a winning candidate would have to be—to the right of Carter.

The fact that the ideological nature of groups is not a simple function of the proportion of individuals who have single-peaked preferences suggests that the sources of ideological orientation must largely be attributed to tendencies toward ideological perceptions which may be only dimly realized in any single indi-

vidual but which may cumulate across individuals (almost none of whom are perfectly ideological) so as to consistently provide an ideological cast to the decisions of the society as a whole and to virtually all of its subgroups. For example, there almost certainly is a tendency of the mass media to use ideological terms as shorthand labels, creating some diffusion of ideological characterizations even though many individuals are incapable of identifying choices in left-right terms and even though some who are capable of doing so do not make their choices entirely in those terms.

Furthermore, it has been shown (Feld and Grofman 1986b) that if a group has ideological margins it can be perfectly represented by a set of representatives all of whom have single-peaked preferences. Thus group ideology, as we define it, helps us account for an important puzzle about why legislative representatives appear to possess a well-defined ideology in left-right terms even though the voters they supposedly represent (and whose votes they compete for in order to win elections) by and large lack such an ideology.

Our empirical findings are only illustrative and we have not explored the factors underlying the emergence of a collective ideology. What we have accomplished, we believe, is to provide a *collective* perspective on the notion of ideology. If so, then the long-standing question of whether there is ideological consistency in *individuals* (e.g., Converse 1964, 1970) needs to be supplemented with a search for the roots of ideological consistency in *collectivities*.

Notes

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1. Single-peaked preferences are identical to Coombsian I-scales (Coombs 1960). A sufficient but not necessary condition for all voters to have single-peaked preferences is to have voters choosing among alternatives in terms of which is closest to their ideal point along some line.

2. Note that the focus of our work is on ideological consistency, not merely on whether there is majority; of course, ideological consistency, as we have used the term, implies transitivity, thus it implies the existence of a majority winner. Preferences are *transitive* if, whenever alternative *a* is preferred to alternative *b* (denoted a P *b*) and also b P *c*, then a P *c*.

3. In general, for *m* alternatives, there are c_m pairwise comparisons of margins where

$$c_m = c_{m-1} + \left(\sum_1^m x^2 \right) - (m) = 2c_{m-1}c_{m-2}$$

+ $m^2 - 1$.

4. It should also be noted that the departures in Table 2 from an ideological ordering of margins are by and large ones that are least likely to interfere with single-peaked preferences for the collectivity. Respondents appear to distinguish more clearly among alternatives near to them than among alternatives far from them (a variant of the well-known "assimilation-contrast" effect). Thus, self-identified liberals did not prefer Ford over Reagan as much as we might have expected from comparisons of their margins; similarly self-identified conservatives did not prefer Carter over Kennedy as much as we might have expected. Reductions in strength of ideological margins caused by an assimilation-contrast effect of this sort do not generally affect the collective preference ordering. Since these inconsistent margins will differ across subsets, lessened ideological consistency of this sort in any given subset will tend to be cancelled out when we combine subsets composed of individuals with different ideological perspectives.

5. It should, however, be noted that these are not independent comparisons; each individual is included in five different subgroups (one for each variable). However, since many individuals do not have single-peaked orderings, it is possible for some subgroups to have ideologically consistent margins while others do not.

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