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The Challenges of Political Psychology: Lessons to Be Learned from Research on Attitude Perception

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Political psychology is a relatively young empirical enterprise. As dated by research involving quantitative techniques such as sample surveys and laboratory experiments, political psychology does not begin to approach the long histories of chemistry, physics, and astronomy. And even considering the application of typically qualitative analytic methods such as case studies and historical document analysis, our enterprise is in its relative youth (see, e.g., Hermann 1986).

Partly as a result of our youth and partly as a reflection of it, we have not experienced the dramatic paradigm shifts that other sciences have (see, e.g., Kuhn 1970). Whereas other disciplines have seen the rise and fall of major organizing theoretical perspectives, we have shown no signs yet of rejecting old overarching perspectives in favor of new ones. There have also been no dramatic shifts during the history of political psychology in terms of the methods we employ to evaluate our hypotheses empirically. This is not to say that methods are uniformly employed by investigators across the subfield; clearly, this is not the case. But the current state of affairs seems to be one of tolerance of a multiplicity of methods, rather than a universal sense that some methods have proven not to be useful while others are.

Yet a close look at the history of studies in some areas of political psychology suggests that there might be some useful lessons to be learned about the value of certain methods over others. A few prominent political psychology hypotheses have been the focus of many empirical studies over a relatively long time period, and the testing approaches employed have shifted in interesting, systematic ways. In each case, the methods initially used were found to be inadequate in retrospect, and more appropriate approaches were employed in later stages of investigation.

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Yet when new hypotheses are tested for the first time these days, the same initial methods of inquiry are employed again and again, only to set the stage for more informative analyses using different approaches later. Instead of skipping over the uninformative methods and going right to the more useful ones, we continue to start in the same place each time. In this light, it seems useful to chronicle the common progression, as a way to accelerate progress from less informative approaches to more informative ones in future work.

This chapter offers such a chronicling of research on one particularly prominent hypothesis in political psychology: the projection hypothesis. In short, it proposes that democratic citizens systematically distort their perceptions of competing candidates' positions on controversial issues of public policy. The roots of this idea are in psychological theories of the late 1950s, and it has inspired an unusually large number of tests in the political psychology literature. After first addressing the political significance of candidate perceptions, I will outline the theoretical basis of the projection hypothesis and review and critique the evidence generated to test it over the years.

THE POLITICAL SIGNIFICANCE OF CANDIDATE PERCEPTIONS

Theories of electoral behavior view citizens' perceptions of candidates' stands on public policy issues as playing important roles in voters' decision making. According to this view, voters evaluate candidates by assessing the match between their own policy attitudes and those of each candidate. The candidate whose positions most closely match those of a given voter is most likely to receive that voter's support. Obviously, such calculations cannot be performed unless voters are able to discern which policies each candidate favors and which each candidate opposes.

Election analysts have long recognized that candidates might be better off making it difficult for citizens to discern their issue positions. Downs (1957), Page (1976, 1978), Shepsle (1972), and Bartels (1988) have asserted that candidates have incentives to be ambiguous and that they win more votes through vagueness than they do by taking clear stands on policy issues (but see Macdonald, Listhaug, and Rabinowitz 1991; Patton and Smith 1980; Rabinowitz and Macdonald 1989). And indeed, ambiguity is more the norm than the exception because candidates rarely state their positions on issues (Page 1978). Candidates frequently endorse the "end states" they find desirable, such as peace and prosperity, but they rarely describe the policy *means* by which they would achieve those end states (McGinniss 1969).

Challenges of Political Psychology

The ambiguity inherent in candidate behavior represents a challenge to voters. Citizens who wish to evaluate candidates on the basis of their stands on policy issues are likely to be frustrated if they search for direct information about candidates. These voters must therefore assess those stands through self-generated or cue-guided inferences. That is, candidate perception is likely to be a task in which voters "go beyond the information given" (Bruner 1957). Psychologists' theories of social cognition suggest a wide variety of inference procedures that citizens might employ to make such inferences, and the projection hypothesis is one of them.

THEORETICAL BACKGROUND

The Projection Hypothesis

According to cognitive dissonance theory (Festinger 1957), balance theory (Heider 1958), and congruity theory (Osgood and Tannenbaum 1955), people prefer to maintain psychological consistency (Abelson and Rosenberg 1958) among their cognitions. Cognitive inconsistency occurs when two cognitions do not fit together, that is, when one does not follow from the other. Salient inconsistencies between cognitions are uncomfortable, and this discomfort presumably motivates individuals to instigate repair strategies. The magnitude of the discomfort is a function of the personal importance of the two cognitions to the individual (Festinger 1957; Newcomb 1961; Singer 1968). The more important both are, the more discomfort will be experienced, and the more similar the two are in terms of importance, the more discomfort will be experienced. The most straightforward approach to resolving cognitive inconsistency is to change one of the inconsistent cognitions, though if both cognitions are strongly supported by other cognitions, strategies such as bolstering, differentiation, or transcendence may be implemented (Abelson 1959; Festinger, Riecken, and Schachter 1956).

This reasoning can be readily applied in an analysis of political candidate perception. Consider three cognitive elements: a voter's attitude toward a particular government policy, his or her attitude toward a particular candidate, and his or her perception of the candidate's attitude toward the policy. Cognitive consistency exists when the voter's attitude toward the policy agrees with the perceived policy attitude of a liked candidate. Cognitive consistency also exists when the voter's own policy attitude disagrees with the perceived policy attitude of a disliked candidate. If the voter believes he or she disagrees with a liked candidate or agrees with a disliked candidate, inconsistency exists. An inconsistency will presumably become salient (1) if an individual is induced to think about an

existing inconsistency in his or her cognitions about a candidate's policy stand, (2) if an individual's attitude toward a candidate or policy changes, thus inducing inconsistency, or (3) if an individual encounters a piece of information that reveals a candidate's attitude on a policy issue and thus induces inconsistency.

Such an inconsistency can be most easily resolved in one of three ways. First, sentiment toward the candidate can be changed, a process called "policy-based evaluation." That is, sentiment can become more positive when agreement exists, and sentiment can become more negative when disagreement exists. Second, the voter's own attitude toward the policy can change through persuasion. That is, a voter may come to adopt the policy attitude of a liked candidate or to reject the policy attitude of a disliked candidate. If a voter's sentiment toward the candidate is firmly established on other grounds, the voter's own policy attitude is highly resistant to change, and the voter has relatively little direct information about the candidate's policy attitude, inconsistency can be resolved by altering the voter's perception of the candidate's policy attitude, a process called "projection." That is, the voter may come to believe that a liked candidate shares his or her attitude toward the policy (a process I will call "positive projection") or that a disliked candidate disagrees with him or her regarding the merits of the policy (a process I will call "negative projection").¹

Projection is not only regulated by sentiment toward candidates. According to Heider's balance theory, projection is also regulated by "unit relations" with candidates. A unit relation specifies the degree to which a voter is linked to or associated with a candidate, regardless of liking. One possible unit relation between a candidate and a voter would be determined by the voter's belief about the likelihood that the candidate will be elected (Kinder 1978). Voters who see a candidate as likely to be elected will have a unit relation and will be disposed toward positive projection of that candidate's policy attitudes. Voters who see a candidate as unlikely to be elected will not have a unit relation and may be likely to displace that candidate's attitude away from their own (see Heider 1958:202). Alternatively, a unit relation might be established by

1 Some authors have used the terms "assimilation" and "contrast" to refer to the processes I call "positive projection," and "negative projection." However, I prefer to use these alternative terms to differentiate the projection hypothesis from the predictions derived from social judgment theory that are described later. Of course, one might shy away from using the term "projection" here because it has been used in psychoanalytic theory to refer to the process of denying one's own undesirable thoughts and actions and attributing them to others (e.g., Freud 1938). But this use of the term is so different that confusion in the current context is unlikely.

Challenges of Political Psychology

shared political party affiliation, shared racial or ethnic identity, or some other shared characteristic.

According to cognitive dissonance theory, projection is also regulated by choices such as voting decisions (Festinger 1957). Once a voter has decided to vote for a given candidate, the likelihood of positive projection is increased in order to reduce any postdecisional dissonance that might be experienced. Similarly, voters presumably displace away candidates whom they decide not to vote for.

Mechanisms of Projection

There are a number of mechanisms by which projection may occur (see Kinder 1978). First, it may occur by "selective attention" during encoding when individuals are exposed to new information about a candidate. Voters may pay close attention to and devote extensive thought to statements that reinforce their preferred view of a candidate's attitude. And voters may devote relatively little attention or thought to statements that challenge their preferred views of candidates. Second, projection may occur as the result of "selective retention." Citizens may strategically forget pieces of information that challenge their preferred perceptions of a candidate's attitude, and they may remember information that reinforces preferred perceptions of candidate attitudes well. Third, projection may occur through selective "rationalization." When a voter acquires a piece of information that is inconsistent with his or her beliefs regarding where a candidate stands on an issue, the voter may spend an unusually large amount of time and cognitive effort reinterpreting the information so that it is consistent with the voter's preference (Hastie and Kumar 1979).

Asymmetry

Early research on the cognitive consistency theories' predictions found evidence of a possible asymmetry in the effects of sentiment toward others. Laboratory and field studies of agreement and attraction revealed that, although people clearly prefer to agree rather than disagree with others they like, they are not as concerned about disagreeing with others they dislike. Newcomb (1953, 1968) argued that this occurs because people disengage from others they dislike and are therefore less aware of and bothered by cognitive inconsistencies involving attitudes toward and perceptions of these individuals. This is the theoretical justification for the "asymmetry hypothesis" in candidate perception, which states that positive projection onto liked candidates will be a stronger and more common process than negative projection onto disliked candidates.

TESTS OF THESE HYPOTHESES

Studies Using Cross-Sectional Data

Nearly every causal hypothesis of significance in political psychology is tested initially using cross-sectional data. Such data are easily available to investigators, especially through such mechanisms as the National Election Study (NES) surveys. Although we all know that a correlation does not document causality, there is a tendency at times to describe a correlational result as documenting causality, especially when it is based on a multivariate regression in which the association of interest is a partial correlation (see, e.g., the literature on symbolic racism: Kinder and Sears 1981; Sears, Lau, Tyler, and Allen 1980). Nonetheless, demonstrating that a suspected cause is correlated with its supposed consequence is a necessary step in providing scientific evidence on behalf of the hypothesized influence process.

The literature on the projection hypothesis is typical of political psychology in that its initial tests were nearly exclusively based on cross-sectional data.² However, it took quite a while for the ambiguities of this sort of evidence to be recognized, and indeed, the results of cross-sectional studies are still sometimes reported and interpreted as documenting the hypothesized process. Yet as we shall see, there are numerous alternative interpretations for this sort of evidence, some of which have been recognized and others not.

Some cross-sectional tests of projection have examined the relation between sentiment toward a candidate and agreement between a respondent's issue position and his or her perception of the candidate's position (Berelson, Lazarsfeld, and McPhee 1954; Brent and Granberg 1982; Shaffer 1981; Sherrod 1972). In these studies, agreement was assessed by computing the difference between a voter's self-placement on an attitude dimension and his or her placement of a candidate on that dimension. Relative to voters who did not favor a candidate, voters who favored the candidate were found to perceive greater agreement between their own attitudes and the candidate's. As would be expected, this tendency was greater among voters who had stronger candidate preferences.

2 A number of studies have explored projection effects on perceptions of the policy attitudes of political parties and of the federal government (Granberg 1985b; Granberg and Robertson 1982) and on the perception of others' voting behavior (Granberg 1987b; Granberg and Brent 1983). Because the dynamics of these perceptions are likely to vary significantly from the dynamics of perceptions of candidates' issue positions, these studies are not considered in this chapter.

Challenges of Political Psychology

Consistent with the asymmetry hypothesis, the departure of level of agreement from what would be expected on the basis of chance alone was greater for liked candidates than for disliked candidates.

The majority of cross-sectional projection studies, however, have computed measures of linear association between voters' own policy attitudes and their perceptions of a candidate's position separately for groups of voters differing in sentiment toward or unit relations with the candidate (Conover and Feldman 1982; Enelow and Hinich 1985; Franklin 1991; Granberg 1985a; Granberg and Brent 1974, 1980; Granberg, Harris, and King 1981; Granberg and Holmberg 1986b; Granberg and Jenks 1977; Granberg, Kasmer, and Nanneman 1988; Granberg and Seidel 1976; Kinder 1978; King 1977-8; Page 1978:184-91; Page and Brody 1972; Shaffer 1981). These studies consistently found strong positive associations between respondents' own positions and their perceptions of liked candidates' positions, a result that has been viewed as supportive of the positive projection hypothesis. Also consistent with this hypothesis, this positive association was enhanced among voters who considered an issue to be highly important personally (Granberg and Seidel 1976). Furthermore, the positive association (measured near the election) between voters' policy attitudes and their perceptions of liked candidates' attitudes were stronger among voters who had decided for whom to vote *early* in the campaign, as compared to those who decided late. This result is consistent with the claim that the positive association is the result of projection that evolves gradually over time. Contrary to the unit relation hypothesis, the positive relation was no stronger after an election than before (Granberg and Jenks 1977).

Consistent with expectations, these studies discovered negative correlations between voters' attitudes and their perceptions of disliked or non-preferred candidates' attitudes. However, these negative correlations were smaller in absolute value than the positive correlations found in perceptions of liked or preferred candidates. Furthermore, the magnitudes of the negative correlations were found to be unrelated to the personal importance of the policy issue to the voter. These findings have been interpreted as evidence that negative projection with disliked candidates is a weaker process than positive projection onto liked candidates, consistent with the asymmetry hypothesis.

Critiques of Cross-Sectional Data Analyses

Although the results of these studies are consistent with the projection and asymmetry hypotheses, there are compelling alternative explanations for these results as well: (1) perspective effects, (2) policy-based

evaluation and persuasion, (3) variation in candidates' attitude statements, and (4) the agreement principle. Because these effects are likely to cause problems in many other cross-sectional studies of public opinion and political attitudes, it is useful to review them here.

Perspective Effects. Perspective effects on attitude reports occur because different people define the endpoints of attitude rating scales differently (e.g., Judd and DePaulo 1979; Ostrom and Upshaw 1968). Consider, for example, a 7-point rating scale ranging from "strongly pro-abortion" to "strongly anti-abortion." When survey respondents rate themselves on such a scale, they must conceptually define each of the scale points in order to decide which best matches their own attitudes. According to the large literature on perspective effects, an important component of this defining process is deciding just how extreme the endpoints are. These definitions are what this literature calls respondents' "perspectives."

This body of research has made it clear that different respondents bring different perspectives to each attitude-reporting task; that is, they reach different conclusions about the extremity of the scale endpoints. Some respondents feel that one must take a very extreme stand on an issue in order to fall at one of the endpoints of a scale, whereas other respondents see the scale endpoints as corresponding to more moderate stands on the issue. Even if two individuals have identical attitudes, they will rate themselves differently if they have different interpretations of the meanings of the response scale points. The more extreme an individual views the endpoints as being, the more moderate his or her ratings on the scale will be.

Perspective effects can affect only one of the scale endpoints, thus shifting some perceivers' ratings in one direction. In such cases, a group of people would all assign the same meaning to one end of the rating scale but differ in their interpretations of the other end. For example, people might all agree on what it means to favor pulling U.S. troops out of Bosnia immediately and completely, but they might have varying views about what it means to favor continued involvement strongly. The more extreme the "continued involvement" endpoint is perceived to be, the more toward the "pull out" end of the scale will be a perceiver's ratings of others' attitudes.

Perspective effects induce correlations between attitude reports made on a single response scale by the same individual. Consider, for example, a respondent who indicates his attitude toward increased defense spending on a 7-point scale, as well as his perceptions of various presidential candidates' attitudes toward increased defense spending. Respondents who define the endpoints as representing very extreme attitudes will tend

to cluster their ratings near the scale midpoint. In contrast, respondents who define the endpoints as representing more moderate attitudes will tend to cluster their ratings more near the endpoints. This will induce a positive correlation between ratings across individuals. Thus, variation across respondents in terms of perspective causes positively correlated errors of measurement to appear in two attitude reports made on the same response scale.

This has important implications for the study of projection (see Judd, Kenny, and Krosnick 1983). All past studies have asked voters to report their own attitudes and their candidate perceptions on the same scale. Therefore, the positive correlation between self-ratings and candidate ratings induced by perspective effects will combine with other, substantively induced correlations between these ratings. Consequently, perspective effects can enhance the appearance of asymmetry of positive and negative projection if both processes occurred. That is, perspective effects would enhance the expected positive correlation among people who like a candidate, depress the expected negative correlation among dislikers, and induce a positive correlation among people neutral toward the candidate. Or perspective effects can create the appearance of positive projection among all respondents, even if none actually occurred.³

Policy-Based Evaluation and Persuasion. A second alternative explanation for previous results involves the effects of candidate perceptions on voters' own attitudes (Brody and Page 1972; Judd et al. 1983). Voters derive their evaluations of presidential candidates partly from how much they agree with the candidates on policy issues (e.g., Krosnick 1988; Nie, Verba, and Petrocik 1979; Pomper 1972; Rosenstone 1983). This process is called "policy-based evaluation" or "policy voting." Also, numerous psychological experiments suggest that persuasion is likely to be a common phenomenon in daily life generally (see, e.g., Petty and Cacioppo 1986), and persuasion of voters by political candidates, by presidents, and by government is well documented (e.g., Abramowitz 1978; Jacoby 1988; Jordan 1993; Lorge 1936; Page and Shapiro 1983, 1984, 1987; Shaffer 1981; c.f. Anderson and Avery 1978; Markus 1982; see also Carmine and Stimson 1989; Gerber and Jackson 1993; Markus

3 Granberg and Holmberg (1986a) have argued that the use of verbally labeled response categories overcomes the problem of perspective effects. It does seem likely that verbally labeled response categories are less ambiguous than numerically labeled ones, so perspective effects may be somewhat reduced in the case of the former. However, Ostrom and Upshaw's (1968) theoretical account of perspective effects suggests that they are unlikely to disappear completely in the case of verbally labeled response categories.

and Converse 1979; Zaller 1992). Via such persuasion, citizens are led to adopt the policy positions advocated by liked candidates and presidents and to adopt policy positions opposite to those advocated by disliked political figures. In cross-sectional data, projection is confounded with policy-based evaluation and persuasion. Therefore, it seems most sensible to consider policy voting and persuasion to be possible confounds in any study of projection and to use analytic methods that take them into account.

Policy-based evaluation and persuasion each produce a positive association between voters' attitudes on an issue and the position they perceive a liked candidate to hold. Similarly, policy-based evaluation and persuasion increase the strength of the negative association between voters' attitudes and their perceptions of disliked candidates' attitudes. To infer that an increase in the positivity of this correlation with increasing sentiment is the result of projection may therefore be inappropriate.

The magnitudes of policy-based evaluation and persuasion are likely to vary, depending partly on the personal importance of the policy issue to the voter. Policy attitudes that voters consider personally important are especially resistant to change, so persuasion is most likely to occur when a policy attitude is unimportant to a voter (Krosnick 1988a). On the other hand, policy-based evaluation is most likely to occur when a voter considers his or her policy attitude to be highly important (Krosnick 1988b). Therefore, the observed increase in the correlation between voters' policy attitudes and their candidate perceptions under conditions of high importance may reflect an increase in policy-based evaluation instead of an increase in projection.

Furthermore, the evidence for asymmetry could be due to persuasion. Theorists (e.g., Festinger 1954) have argued and empirical evidence (Osgood and Tannenbaum 1955) has shown that persuasion toward liked people is more potent than persuasion away from disliked people. Therefore, the association between voters' attitudes and their candidate perceptions in traditional tests of projection may have appeared larger in the case of liked candidates because persuasion is stronger.

Variation in Candidates' Attitude Statements. A third possible explanation for prior findings is variation in candidates' attitude statements (Judd et al. 1983). A variety of observers have asserted that candidates express different attitudes to different voters, perhaps to maximize their public appeal (Graber 1976:181; Mueller 1969:189). Anecdotal evidence indicates that, for example, Ronald Reagan's 1980 campaign involved fine-tuning his statements of his policy attitudes to suit audiences' proclivities (Williams 1980). Furthermore, Miller and Sigelman (1978)

found that Lyndon Johnson varied the strand he took on U.S. involvement in Vietnam, depending upon the attitude of the audience to which he was speaking. He expressed more dovish attitudes to dovish audiences and more hawkish attitudes to hawkish audiences. Googin (1984) found the same pattern across a range of issues for Johnson and documented such variation for Ronald Reagan as well. Page (1978:143-9) found evidence of similar shadings in various presidential election campaigns, as did Wright and Berkman (1986) among senators. Also, laboratory studies of attitude expression indicate that people routinely tailor statements of their attitudes to be consistent with the attitude of their audience (Manis, Cornell, and Moore 1974; McCann, Higgins, and Fondacaro 1991; Newton and Czerlinsky 1974).

If candidates do state different policy attitudes when speaking to different audiences in ways that maximize their appeal, a positive correlation between expressed attitude and the attitude of the audience would be induced. And this would produce a positive correlation between voters' attitudes and their perceptions of a candidate's attitude. This correlation would enhance the apparent strength of positive correlations in the case of liked candidates, and it would suppress the apparent strength of negative correlations in the case of disliked candidates. Thus, traditional tests of projection could be distorted so as to produce the appearance of asymmetry.

In fact, this sort of distortion can result from another mechanism as well: de facto selective exposure (see, e.g., Freedman and Sears 1965). Even if candidates do not strategically shade their attitude statements, voters are nonetheless especially likely to encounter statements made by a candidate with whom they agree. By the same token, voters are especially unlikely to encounter statements made by a candidate with whom they disagree. This sort of selective exposure is not driven by voters' desire to avoid attitude-challenging information, but instead is a by-product of many other determinants of information exposure. The result of this would again be a positive correlation between voters' own policy attitudes and their perceptions of candidates' policy attitudes, though this correlation would not be evidence of projection.

The False Consensus Effect. A fourth possible explanation for the results of previous projection studies is the false consensus effect. When asked to describe the attitudes of a group of people, individuals tend to believe that they agree with others, regardless of their sentiment toward the group (see, e.g., Marks and Miller 1987; Mullen et al. 1985; Ross, Greene, and House 1977). This exaggerated perception of the commonness of one's views has been dubbed the "false consensus" effect. Some of the possible reasons for this tendency are motivational in character.

For example, people may enjoy agreeing with others more than disagreeing because agreement validates one's own views, whereas disagreement challenges the wisdom of one's views (Festinger 1954; Zajonc 1968). Purely cognitive explanations have also been offered, one of which involves *de facto* selective exposure. People tend to affiliate with those who share their views and tend to avoid affiliating with those who have very different views (Berscheid and Walster 1978; Newcomb 1961). Therefore, it is presumably easier for people to bring to mind instances of others with whom they agree than images of others with whom they disagree.

All this suggests that voters will be biased toward assuming that all candidates share their own attitudes, *regardless* of whether they like or dislike the candidates. If this is true, it would bias projection estimates just as correlated measurement error and variation in candidates' attitude statements would. That is, it would cause conventional cross-sectional estimates of positive projection to be biased upward, and it would make conventional estimates of negative projection appear to be more negative.

Overcoming These Problems with Cross-Sectional Data

Correcting for Correlated Measurement Error. In order to overcome the problem of correlated measurement error, Judd et al. (1983) specified a multiple-indicator structural equation model that permitted extraction of correlated measurement error from estimates of the association between voters' attitudes and candidate perceptions. This model was applied to cross-sectional data from the 1968 election. As expected, Judd et al. found significant and substantial correlated measurement error in the NES survey data they examined. Consistent with positive projection, they found significant positive associations between voters' attitudes and perceptions of liked candidates' attitudes. And consistent with negative projection, Judd et al. found significant though a bit weaker negative associations between voters' attitudes and perceptions of disliked candidates' attitudes.

Judd et al. argued that the effect of variability in candidates' attitude statements can be overcome by not examining the absolute magnitudes of the regression coefficients. Instead, they argued, researchers should examine the linearity of the relation between sentiment and an unstandardized regression coefficient estimating the effect of voters' attitudes on perceptions of candidates' attitudes. A positively accelerating relation, they claimed, would confirm the asymmetry hypothesis. Because the relation was linear, Judd et al. (1983) concluded that the asymmetry hypothesis was disconfirmed.

Challenges of Political Psychology

Judd et al.'s methods have some advantages over the traditional, simpler correlational approach. However, Judd et al.'s approach confounded projection with persuasion, policy-based evaluation, and false consensus. Consequently, although their evidence is consistent with positive and negative projection and inconsistent with the asymmetry hypothesis, there remained important confounds yet to be eliminated. Second, Judd et al. (1983) ignored the potential impact of variation in candidates' attitude statements. Had this been controlled for, the positive associations they viewed as evidence of positive projection might have dropped substantially. Furthermore, Judd et al. did not examine voters' perceptions of candidates' stands on issues *per se*. Rather, these investigators examined latent perceptions of candidates' ideological orientations by treating attitudes toward U.S. involvement in Vietnam and toward methods of reducing urban unrest as indicators of ideology. A great deal of evidence suggests that ideological orientations are generally only very weakly related to specific issue stands (see Kinder 1983), so Judd et al.'s findings may not be directly applicable to perceptions of candidates' issue stands *per se*.

Correcting for False Consensus and Candidates' True Attitudes. Ottati, Fishbein, and Middlestadt (1988) and Bartels (1988) both recognized the potential bias caused by the false consensus effect in studies of projection. They therefore incorporated estimates of this effect in their statistical analyses of cross-sectional data. As expected, both studies revealed evidence of a false consensus bias presuming agreement with candidates regardless of sentiment toward them. Even after correcting for this effect, both studies yielded significant evidence of projection.

In Ottati et al.'s (1988) analysis, the expected asymmetry in positive and negative projection appeared even when false consensus was controlled for. However, Ottati et al. took a step further and attempted to gauge asymmetry by comparing voters' perceptions to the candidates' actual positions on the issues in question. This was done by treating the average perception of a candidate across voters (controlling for attitudes toward the candidate and toward the policy) as the candidate's true attitude. When this was done, the previously apparent asymmetry effect disappeared.

Because this approach ignores many potential biases in such perceptions that were not controlled, and because it ignores potential variation in candidates' expressed attitudes across voters, it may not be fully effective in accomplishing its intended goal. Furthermore, both Ottati et al. (1988) and Bartels (1988) failed to adjust for the impact of correlated measurement error, persuasion, and policy-based evaluation.

Correcting for Persuasion and Policy-Based Evaluation. A few studies attempted to eliminate the confounding of projection with persuasion and policy-based evaluation. For example, Page and Jones (1979) specified an extensive, nonrecursive structural equation model of the relations among a host of variables thought to be antecedents of vote choice. This model hypothesized that having a more positive evaluation of one candidate than the other leads voters to perceive that their preferred candidate's policy attitudes are more similar to their own than are the nonpreferred candidate's policy attitudes. As the notion of policy-based evaluation anticipates, attitudes toward the candidates appeared to be derived importantly from voter-candidate similarity in terms of issue stands. And as the projection hypothesis predicts, the effect of sentiment on perceived relative proximity was large, positive, and statistically significant.

This analysis was potentially problematic, however, partly because conclusions about the directions of causal relations between variables are always difficult to derive from cross-sectional data with any confidence. In Page and Jones's case, the validity of their conclusions depends on the validity of assumptions made about the instrumental variables included in their analytic model. Unfortunately, these assumptions seem quite tenuous (see also Asher 1983). The most important and questionable of these assumptions is the claim that demographic variables, including education, income, age, race, and gender, as well as ideological orientations, did not have any direct influence on candidate preferences. Instead, Page and Jones assumed, these variables only affected candidate evaluations indirectly by shaping perceptions of similarity between voters' and candidates' policy attitudes and by shaping voters' political party identifications.

This seems highly unlikely. In some of the earliest quantitative research on voting, Lazarsfeld, Berelson, and Gaudet (1948; see also Berelson et al. 1954) demonstrated that demographic variables are powerful proximate determinants of candidate preferences. Furthermore, regression equations predicting candidate preferences with numerous psychological variables (including party identification, policy preferences, and assessments of the national economy), as well as ideology and demographics, show significant independent direct effects of these latter variables (e.g., Kinder, Adams, and Gronke 1989). Therefore, because the most important assumptions underlying Page and Jones's analyses seem implausible, the validity of their conclusions regarding projection seems questionable.

Even if Page and Jones's (1979) assumptions were more reasonable than they appear to be, the effect of sentiment on perceived similarity they documented could have reflected persuasion instead of projection.

Challenges of Political Psychology

Consequently, there is still a confound present that prevents clear interpretation.

An attempt to unconfound projection from both policy-based evaluation and persuasion in cross-sectional data was reported by Granberg and Holmberg (1986b, 1988; Granberg 1987a). Their analyses focused on two correlations. The first is the usual estimate of positive projection: the correlation between voters' own attitudes on a policy issue and their perceptions of a liked candidate's attitude on the issue. Granberg and Holmberg recognized that in addition to projection, this correlation (which they called the "subjective agreement coefficient") reflects policy-based evaluation and persuasion. The second correlation is between voters' own policy attitudes and their overall evaluations of the candidate. Granberg and Holmberg argued that this second correlation (which they called the "rational democratic coefficient") is only a reflection of policy-based evaluation and persuasion. Further, they asserted that what remains after subtracting the second correlation from the first is an indication of the amount of projection. Granberg and Holmberg (1986b, 1988; Granberg 1987a) found positive residuals after this subtraction process, which they took to be evidence of projection.

This approach may be misleading for three primary reasons. First, the subjective agreement coefficient is calculated using data only from voters who like a candidate. In contrast, the rational democratic coefficient is calculated using data from all voters. If the asymmetry hypothesis is correct in predicting less projection among voters who dislike a candidate than among those who like him or her, the subjective agreement coefficient would be an overestimate of the amount of projection taking place for likers and dislikers combined. Therefore, the positive difference between the subjective agreement coefficient and the rational democratic coefficient may be a result of this overestimation.

A second possible problem with this approach is that, as Judd et al. (1983) pointed out, the subjective agreement coefficient reflects perspective effects and variation in candidates' attitude statements, in addition to projection, persuasion, and policy-based evaluation. Therefore, what is left over after Granberg and Holmberg's (1986b, 1988; Granberg 1987a) subtraction exercise may represent perspective effects or variation in candidates' attitude statements instead of projection.

Third, the rational democratic coefficient may underestimate the amount of policy-based evaluation that has occurred. According to spatial modeling theories of voting (e.g., Enelow and Hinich 1984), a voter's attitude toward a candidate is a function of the amount of distance between the voter's own attitude on a policy issue and his or her perception of the candidate's attitude on that issue. Given that

candidates' policy attitudes are almost never at the extreme of the dimension (Page 1978), this view predicts a nonmonotonic relation between voters' own policy attitudes and their evaluations of a candidate. Compared to the voters who are extremely opposed to the policy option, increases in positivity toward the policy option should be associated with increased liking for the candidate up to the point at which voters' attitudes toward the policy match the candidate's attitude toward it. At this point, liking should reach a maximum. Beyond that point, increases in voters' positivity toward the policy should be associated with *decreased* liking of the candidate.

Instead of estimating the strength of this nonmonotonic relation, Granberg and Holmberg's rational democratic coefficient simply estimates the linear relation between voters' own policy attitudes and their candidate evaluations. Therefore, this coefficient probably does not fully capture the amount of policy-based evaluation present.⁴ Consequently, what is left over after Granberg and Holmberg's (1986b, 1988; Granberg 1987a) subtraction exercise may represent policy-based evaluation instead of projection.

Granberg and Holmberg (1986b, 1988) conducted another set of cross-sectional analyses that is similarly problematic. They compared two sets of regressions, one that regressed voters' candidate evaluations on perceived similarity between voters' policy attitudes and the candidate's, and the other that regressed perceived similarity between voters' policy attitudes and the candidate's on voters' candidate evaluations. Granberg and Holmberg (1986b) viewed these two analyses as allowing them to assess the strength of the two causal processes. However, because the data being analyzed were cross-sectional, simply altering which variable is specified as the dependent variable and which is specified as the independent variable does not permit the differentiation of the reciprocal causal effects between pairs of variables (Kenny 1979). Furthermore, any apparent effects on voter-candidate similarity could reflect adjustments of either voters' own attitudes or of their candidate perceptions. Therefore, these analyses are not informative about the sizes of projection effects per se.

The efforts made by Page and Jones (1979) and Granberg and Holmberg (1986b, 1988; Granberg 1987a) are admirable attempts to use sophisticated analytic approaches in efforts to overcome the confounding of various causal processes in yielding cross-sectional data. But unfortunately, both undertakings yielded results that are easy to counterargue

4 Although this argument has been phrased with regard to the case of voters attitudes toward a single candidate, it applies equally well to the case in which voters express a preference for one candidate over another (see Krosnick 1988b:198).

Challenges of Political Psychology

and consequently are not as clear as one might hope. Consequently, researchers in this area turned their attention to longitudinal data in the hope that time sequencing could allow them to get a better handle on what causes what in the minds of voters (see, e.g., Kessler and Greenberg 1981).

Summary. The four principal critiques of cross-sectional tests of projection have been recognized by various investigators, and various studies have attempted to eliminate one or more confounds in traditional analyses. All of these studies demonstrated that the confounds are real and therefore threatening to any projection analysis, but no single study eliminated all confounds. This is presumably so partly because it is very difficult to separate projection from persuasion and policy-based evaluation with cross-sectional data. However, as a number of other investigators have recognized, this can be accomplished using longitudinal data.

Analyses of Longitudinal Data

The Logic of Longitudinal Analysis. Longitudinal analysis is valuable because it offers an opportunity to get an empirical handle on particular causal processes. Specifically, one tracks the dependent variable of interest over time and attempts to predict changes in it based upon values of independent variables assessed at prior time points. As long as the independent variables are measured prior to the changes in the dependent variable, it is unlikely that the latter caused the former (see Kessler and Greenberg 1981; Markus 1979). In research on projection, this approach allows one to overcome persuasion, policy-based evaluation, and correlated measurement error (assuming that such error is uncorrelated over time) by using initial measurements of voters' candidate preferences (and perhaps issue preferences) to predict later shifts in perceptions of candidates' issue stands or voter-candidate similarity.

Predicting Candidate Stands. Although the value of longitudinal data thus lies in the study of change over time, Markus and Converse (1979) employed such data in an attempt to unconfound projection and persuasion, but they did not study change per se. Rather, these investigators proposed a nonrecursive structural equation model of electoral choice that modeled perceptions of candidates' position as follows:

$$\begin{aligned} \text{Perceived Cand. Stand}_i &= \text{Actual Cand. Stand}_i + b_1(R\text{'s Stand}_{i-1}) \\ &\quad - \text{Actual Cand. Stand}_i + e_i \end{aligned} \quad (1)$$

This equation views perceptions of a candidate's attitude as adjusted perceptions of the candidate's actual attitude. Candidate perceptions are presumably adjusted so as to minimize the distance between a voter's policy attitude and his or her perception of the candidate's. Furthermore, this adjustment is proposed to be greater as sentiment toward the candidate becomes more positive.

Markus and Converse found b_1 to be small but statistically significant for each of five policy issues they examined and interpreted this as evidence in support of the projection hypothesis. However, because candidate evaluations were measured at time t instead of at time $t - 1$, b_1 may reflect either changes in perceptions of candidates resulting from projection or changes in attitudes toward candidates resulting from policy-based evaluation. That is, voters may have adjusted their candidate evaluations between time $t - 1$ and time t in order to maximize liking of candidates with whom they agreed and to minimize liking of candidates with whom they disagreed. This process would produce a significant b_1 coefficient, just as adjustments of candidate perceptions between time $t - 1$ and time t would. Had candidate evaluations been measured at time $t - 1$ instead, this alternative explanation could have been ruled out.

Markus and Converse (1979) treated candidate evaluations measured at time t as endogenous in their system of equations. This might at first appear to eliminate any problem with the fact that these evaluations were measured at time t instead of time $t - 1$. However, all of the causes of candidate evaluations at time t were also measured at time t . Thus, it seems quite plausible that this approach did not fully resolve the simultaneity problem as effectively as would have been the case had candidate evaluations at time $t - 1$ been used instead.

Predicting Voter-Candidate Similarity. Granberg and King (1980) conducted just such analyses testing the hypothesis that positive sentiment leads to perceived similarity. Regressions of perceived policy stand similarity (averaged across five political issues) at time t on perceived policy stand similarity and sentiment toward the candidate measured at time $t - 1$ indicated that sentiment caused changes in perceived similarity, such that liked candidates were perceived as becoming more similar to voters over time.

Swindel and Miller (1986) did a similar analysis and reached similar conclusions. They found that respondents who voted for a candidate perceived that candidate's attitude as closer to their own than did respondents who did not vote for the candidate. This pattern was stronger among respondents who decided early in the campaign for whom to vote, which is consistent with the hypothesis that the pattern is due to pro-

jection. During the campaign, respondents' attitudes became closer to their perceptions of their preferred candidates' attitudes, and respondents' attitudes became more different from their perceptions of non-preferred candidates' attitudes. Contrary to the asymmetry hypothesis, though, the increase in closeness between voters and preferred candidates was equal in magnitude to the decrease in closeness between voters and non-preferred candidates. These shifts were found to be greatest for individuals with the least exposure to campaign news, which supports the claim that this movement is reduced by a voter's having more direct information about candidates' attitudes.

Granberg and King's (1980) and Swindel and Miller's (1986) evidence is consistent with the projection hypothesis. However, the changes they documented in voter-candidate proximity could reflect persuasion instead. That is, voters' own attitudes might have changed, while candidate perceptions remained constant. Therefore, these studies are again ambiguous with regard to the projection hypothesis.

Predicting Changes in Candidate Perceptions. The most effective way to overcome the problems caused by persuasion and policy-based evaluation is to examine the effect of voters' attitudes on changes in perceived candidates' attitudes using longitudinal data collected from a panel of respondents over time. Evidence that changes in candidate perceptions can be predicted by prior measurements of voters' policy attitudes and candidate evaluations cannot be explained by persuasion or policy-based evaluation. Furthermore, the effect of voters' attitudes measured at time $t - 1$ on candidate perceptions at time t does not reflect correlated measurement error if one controls for candidate perceptions at time $t - 1$. This is so because any correlated measurement error between voters' attitudes at time $t - 1$ and their candidate perceptions at time t is likely to be mediated by candidate perceptions at time $t - 1$. Thus, analysis of longitudinal data in this fashion permits an investigator to overcome this drawback of the traditional method as well.

One investigation that attempted this type of analysis of panel data was reported by Feldman and Conover (1983). They estimated equations of the following form:

$$\text{Perceived Cand. Stand}_t = a + b_1(\text{Perceived Cand. Stand})_{(t-1)} + b_2(R\text{'s Stand}_{(t-1)})(\text{Eval}_{t-1}) + e_t \quad (2)$$

Here b_2 estimates the effect of a respondent's attitude on changes in his or her perception of a candidate's attitude between time $t - 1$ and time t . If b_2 is positive and statistically significant, that would suggest that as sentiment toward a candidate becomes more positive, respondents' attitudes cause changes in perceptions of the candidate's attitudes that

increase their correspondence. In all of Feldman and Conover's analyses, b_2 was substantial and statistically significant, which they interpreted as evidence of projection.

In another study, Conover and Feldman (1986) used a similar approach to test the asymmetry hypothesis by examining perceptions of liked and disliked candidates separately (see also Conover and Feldman 1989). For this study, they estimated equations of the following general form:

$$\begin{aligned} \text{Perceived Cand. Stand}_{it} = & a + b_1(\text{Perceived Cand. Stand})_{it-1} \\ & + b_2(R\text{'s Stand}_{it-1})(\text{Pos Eval}_{it-1}) \\ & + b_3(R\text{'s Stand}_{it-1})(\text{Neg Eval}_{it-1}) + e_t \end{aligned} \quad (3)$$

These analyses produced strong and statistically significant estimates of b_2 , indicating positive projection. And consistent with the asymmetry hypothesis, estimates of b_1 were negative but relatively weak.

Martinez (1988) estimated an equation that was equivalent to Feldman and Conover's (1983), with one exception. Instead of using measured candidate evaluation at time $t-1$ as an independent variable, Martinez created an estimated "true" candidate evaluation at time t using respondents' demographics and party identification as instrumental variables. Contrary to Feldman and Conover's (1983) evidence, Martinez's estimates of b_2 were all zero for respondents low in political involvement, and, among respondents high in political involvement, they were positive but weak for two issues and zero for two other issues. When Martinez included an additional interaction term to assess asymmetry, he found it to be sizable for only one of the four issues. Thus, Martinez's findings are very different from Feldman and Conover's (1983; Conover and Feldman 1986, 1989). However, as is true of Page and Jones's (1979) study, Martinez's assumption that demographics and party identification do not have direct effects on other variables in his equation (particularly voters' own policy attitudes) seems tenuous. This may explain the discrepancy in findings to some degree.

More important, however, Feldman and Conover's analyses (1983; Conover and Feldman 1986, 1989) and Martinez's (1988) all suffer from a drawback that renders their interpretation ambiguous. In order for the estimates of b_2 in Equation (2) and of b_2 and b_3 in Equation (3) to represent the interactions of respondents' stands and candidate evaluations, lower-order main effect terms for respondents' stands and candidate evaluations must be included in the predictive equations (see Arnold 1982; Arnold and Evans 1979; Cohen 1978; Cohen and Cohen 1975; Evans 1991; Judd and McClelland 1989; Schmidt 1973; Schmidt and Wilson 1975). Omitting these terms, as was done in all these studies, causes the main effects to be confounded with the interaction. Thus,

instead of reflecting projection, the observed b_2 and b_3 values may reflect either or both of these main effects. Even though the main effects are not theoretically directly relevant to the study of projection, it is statistically necessary to include them in the equation. Therefore, this evidence, though in some cases consistent with projection, may be due to this confound instead.

If all of the main effects in equations such as Equation (3) are zero, omitting them is not a problem for estimating the projection interactions. However, Feldman and Conover (1983; Conover and Feldman 1986) and Martinez (1988) reported no evidence to indicate that this was the case. In their 1989 article, Conover and Feldman did include main effects for respondents' stands in their regressions, and they offered a justification for omitting candidate evaluations (see footnote 9, p. 927). They argued that when they reestimated their equations including main effects for candidate evaluations, those main effects were never statistically significant at $p < .05$.

Unfortunately, simply presenting tests of the statistical significance of the individual main effects may not be sufficient to validate omitting them when estimating interactions. First, if the main effects are tested in equations that also included the interactions, the full main effects are not being tested correctly (see Arnold 1982; Arnold and Evans 1979; Cohen 1978; Cohen and Cohen 1975; Evans 1991; Judd and McClelland 1989; Schmidt 1973; Schmidt and Wilson 1975). In such an equation, a main effect term simply indicates the variable's effect at one particular level of each interacting variable. In Conover and Feldman's (1989) case, their main effect tests apply only to the respondents whose candidate evaluations were neutral. Obviously, testing the main effect under this limited condition cannot serve as a basis for concluding that the main effect is not significant when combining across all levels of candidate evaluation.

Even if the main effects had been tested in an equation including no interaction terms, relying only upon tests of statistical significance may be problematic. Consider the case in which a set of variables each has relatively weak main effects, not strong enough to be detected at $p < .05$ with typical survey sample sizes. Nonetheless, these main effects can be real, and when confounded together, they can yield a statistically significant and substantial distorting confound. Similarly, a small and non-significant omitted main effect, when confounded with a small and nonsignificant interaction, could yield an apparently significant overall effect that would be attributed to the interaction. Therefore, the most appropriate approach to testing projection using longitudinal data is to include all of the main effects in any equation estimated. This point has been made numerous times by data analysis specialists in recent years

(see Arnold 1982; Arnold and Evans 1979; Cohen 1978; Cohen and Cohen 1975; Evans 1991; Judd and McClelland 1989; Schmidt 1973; Schmidt and Wilson 1975) because investigators so often make mistakes in this regard in published papers.

In footnote 9 on page 927, Conover and Feldman (1989) indicated that including the main effects in their equations caused their standard errors to increase. This may imply that some of their previously statistically significant projection effects were no longer significant, which might explain their preference for omitting the main effects from the equation. But the preceding argument makes it clear that this increase in standard errors is unlikely to be problematic; instead, it reflects the fact that more effects are being estimated, all of them necessary. Thus, the possibly reduced number of statistically significant projection effects may have constituted a more accurate estimate of the presence or absence of these effects.

A similar investigation by Markus (1982) using panel data overcame all of the problems associated with Feldman and Conover's (1983; Conover and Feldman 1986, 1989) and Martinez's (1988) analyses. Separately for liked and disliked candidates, Markus regressed candidate perceptions at time t on candidate perceptions at time $t - 1$ and voters' own attitudes at time $t - 1$. This analysis included the necessary lower-order main effects, and candidate evaluations were measured at time $t - 1$, so policy-based evaluation was not a confound. Furthermore, because Markus examined changes in candidate perceptions from the very beginning of the 1980 presidential election campaign (January) to the very end (October), he was unlikely to have missed any substantial amount of projection that might have occurred outside of his time frame.

Markus found some evidence of projection. Of the thirty-two projection coefficients he estimated, eight were statistically significant and all were relatively small. Three of the significant coefficients reflected positive effects of voters' attitudes on perceptions of liked candidates, and five reflected negative effects of voters' attitudes on perceptions of disliked candidates. Thus, a negative effect for disliked candidates appeared to be more common than a positive effect for liked candidates, disconfirming the asymmetry hypothesis. In general, though, these analyses indicated some positive projection and some negative projection.

One problem with Markus's analytic approach is that it did not take into account variability in candidates' attitude statements. As Judd et al. (1983) argued, such variability is likely to enhance the appearance of positive projection and mask the appearance of negative projection. Thus, negative projection may have been stronger than Markus's evidence indicated, and positive projection may have been even weaker than his evidence suggested. However, as we shall consider next, his method

and those used in every other longitudinal study suffer from additional methodological problems.

Problems with Linear Association Measures

Given that Markus's (1982) study and nearly all other past studies of projection effects have used measures of the linear association between voters' attitudes and candidate perceptions, the value of these studies hinges on the degree to which linear associations represent the causal processes of interest. And unfortunately, careful consideration of the properties of linear association measures and of the projection hypothesis reveals that these measures are inappropriate for testing this hypothesis. Although measures of linear association are well suited to estimating the magnitude of positive projection onto liked candidates, assessing negative projection with a measure of linear association is wholly inappropriate.

First, consider why the linear association method is appropriate for testing positive projection.⁵ Assume that a respondent's own position on some issue and his or her perception of a candidate's position on that issue are both measured on the same 7-point scale, as has usually been the case. If complete positive projection were to occur, each respondent would perceive a liked candidate to hold the same position he or she holds. Therefore, as long as there is some variation in respondents' own attitudes, the correlation between the two variables would be +1. If positive projection is not perfect, but each unit that a respondent is away from the candidate's true position is associated with a constant fraction of a unit of positive projection, the correlation will still be +1. An unstandardized regression coefficient would reflect the incompleteness of positive projection in this situation by taking a value less than 1. Thus, a large positive measure of linear association validly indicates positive projection as it is conceived theoretically.

Next, consider negative projection. In all the research reviewed previously that involved computation of linear association measures, it has generally been assumed that a negative correlation between the respondent's own position and his or her perception of a disliked candidate's position indicates negative projection. This is true at a very general level: for negative projection to occur, respondents who are in favor of some piece of legislation would perceive the candidate to be opposed to it. However, because attitudes and perceptions are most often measured on

⁵ All of the arguments in this section apply equally well to monotonic, nonlinear measures of association for use with ordinal data, such as tau-b (used by Brent and Granberg 1982) or eta (used by Granberg and Holmberg 1988).

7-point scales, a negative correlation indicates a more refined relation. It indicates that respondents who are further away from a candidate's true position distort the candidate *more* than do respondents close to the candidate's true position. An unstandardized regression coefficient of -1 would indicate that respondents at the extremes of the scale see the candidate at the opposite extreme, and moderates see the candidate at moderate positions.

However, cognitive consistency theories anticipate no such relation but rather make a very different prediction. People who dislike a candidate are presumably uncomfortable if they perceive themselves to agree with him or her. Consequently, people who dislike a candidate and perceive that they agree with him or her would be expected to displace his or her position away from their own. People who dislike a candidate and disagree with his or her true attitude would have no reason to distort his or her position at all. The further one's own policy attitude is from the true attitude of a disliked candidate, the less one would be expected to distort his or her position. Thus, among people at a given level of sentiment for the candidate, those whose positions are close to a candidate's true position would feel more motivated to displace the candidate away than would respondents whose positions are further from the candidate. These latter individuals already disagree sufficiently with the candidate's true attitude in order to maintain cognitive consistency and have no need to distort perceptions of him or her. This suggests that negative projection would not produce a negative linear relation between the two variables among people who dislike a candidate. Instead, we should expect to observe a discontinuous relation, the shape of which depends in part on the candidate's true attitude.

According to cognitive consistency theory, the expected relation among people who dislike a candidate when the candidate's true position is at the midpoint of the scale is depicted in Curve #1 in Figure 4.1. Respondents at position 2 are closer to the candidate's true position than are respondents at position 1 and would therefore be expected to distort the candidate's position more. Similarly, respondents at position 3 are closer than are respondents at position 2, so the former should distort more. A similar argument explains the predictions for respondents at positions 5, 6, and 7.

It might appear that this curve implies that respondents at position 4 do not distort the candidate's position at all. But, of course, it is these people who are closest to the candidate's true position and who would be expected to distort his or her position the most. However, the direction in which they should distort is not clear a priori. If we assume that about half of these respondents displace the candidate toward position 1 and half distort him or her toward position 7, the resulting average

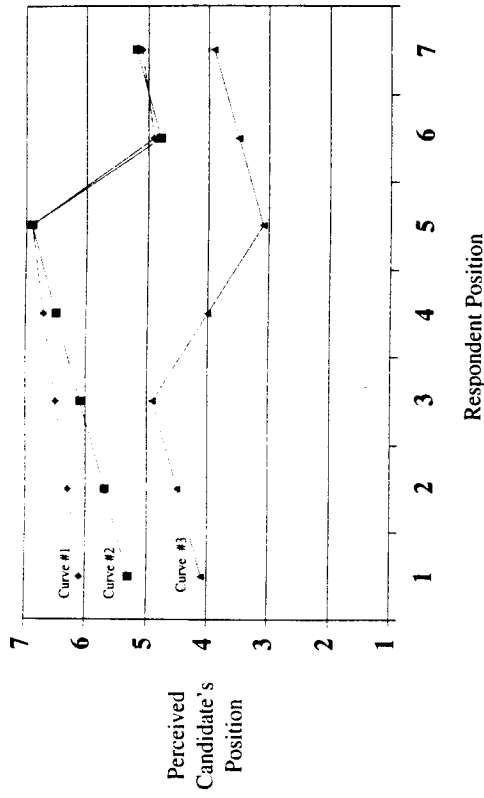


Figure 4.1. Negative projection onto a disliked candidate.

across these respondents is near the midpoint of the scale, the candidate's true position.⁶

If the candidate's true position departs substantially from the scale's midpoint, a differently shaped curve should occur. An example for a candidate whose true position lies between 5 and 6 appears in Curve #2 of Figure 1. The closer respondents' positions are to the disliked candidate's true position, the more they should be motivated to distort it away from themselves: respondents at 2 more than those at 1; respondents at 3 more than those at 2; respondents at 4 more than those at 3; and respondents at 5 more than those at 4. Respondents at positions 6 and 7 must displace the candidate in the opposite direction from the distortions of the other respondents so as to increase the discrepancy between their own positions and the candidate's true position. The shape of the curve is essentially the same as that in Curve #1, but its center is displaced to the right.

If candidates' true positions are variables that are correlated with respondents' own positions, the predictions embodied in Curve #2 are not drastically altered. Curve #3 in Figure 4.1 is a translation of Curve #2 treating the candidate's true position as a variable that is positively

⁶ Note that this reasoning suggests that, among people who dislike a candidate and whose own attitude on an issue matches the candidate's true attitude, there should be increased variance in candidate perceptions.

correlated with the respondent's position. The shape of the curve remains the same, but the two sections with positive slopes are more steep. No matter where the candidate's true position is, however, a negative correlation should not appear. If a nonzero correlation were to appear at all, it should be slightly positive and should occur only when the candidate's true position is extreme.

Thus, the evidence reported by most past cross-sectional studies of negative projection (i.e., weak negative correlations among people who dislike a candidate) is actually inconsistent with the cognitive consistency view of projection. So why have such negative relations appeared so often? The most likely explanations are that other processes are operating in addition to projection, or that some artifact is present, or that negative projection is occurring in some other form.

One possible explanation involves the relations among attitude importance, attitude extremity, and sensitivity to cognitive imbalance. Theoretical expositions of cognitive consistency theories proposed that the more important an attitude is for a person, the more he or she will be sensitive to inconsistency and motivated to resolve it (Zajonc 1968). Empirical evidence examining positive projection effects (Granberg and Seidel 1976), judgments of attitude position statements (e.g., Judd and Harackiewicz 1980), and perceptions of others' attitudes (Judd and Johnson 1981) is all consistent with this notion. Furthermore, because individuals for whom an attitude is highly important tend to endorse extreme attitude positions more often than individuals for whom it is less important (e.g., Judd and Krosnick 1982), extreme respondents should displace a disliked candidate disproportionately more than moderate respondents do.

A tendency of individuals who endorse extreme positions to displace disliked candidates more would produce the weak negative correlation researchers have discovered in the past. Figure 4.2 displays how this would occur. Curve #1 here is Curve #1 from Figure 4.1 after adjusting the degree of negative projection for attitude importance, assuming a positive correlation between extremity and importance. On average, the predictions of respondents at position 4 would not change. But respondents at the other positions would displace the candidate more for each unit closer to the extreme of the scale where their own position is located. These adjustments produce a curve with a negative slope. If the correlation between extremity and importance is less strong than is assumed here, the curves connecting the perceptions will become more horizontal, as is shown in Curve #2 of Figure 4.2. The correlation between the respondent's position and the perceived candidate's position implicit in this curve is slightly negative, if not zero.

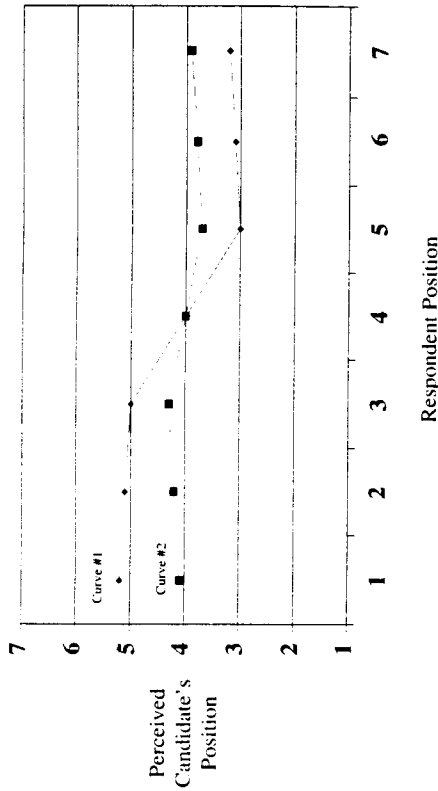


Figure 4.2. Negative projection with high importance at the scale extremes.

In summary, then, a measure of linear association between a citizen's position on an issue and his or her perception of a candidate's position is appropriate for testing positive projection but is inappropriate for testing negative projection. The weak negative correlation among people who dislike a candidate that is typically found and interpreted as evidence for asymmetry probably results from the tendency of people at the scale extremes to displace candidates more. Therefore, previous studies of negative projection using measures of linear association between voters' attitudes and candidate perceptions provide at best ambiguous information about the validity of the negative projection hypothesis. In fact, the negative correlations usually taken to be evidence of negative projection are not conceptually consistent with this hypothesis.

Longitudinal Studies Using Nonlinear Measures

Only three studies have examined changes in candidate perceptions over time without using measures of linear association; remarkably, none of them yielded compelling evidence of projection. In Anderson and Avery's (1978) four-wave longitudinal study, respondents' policy attitudes and their candidate preferences remained quite stable, so persuasion and policy-based evaluation did not occur to any substantial degree. For almost 37% of the sample, perceptions of the preferred candidate's position moved closer to the respondent's, and perceptions of the opposing candidate's position moved further away. This pattern of movement is

clearly consistent with the projection hypothesis. However, as many respondents perceived the two candidates' positions moving away from them as perceived the candidates moving toward them. Similarly, many perceived the preferred candidate as moving farther from them and the opposing candidate moving closer. Thus, these data do not permit rejection of the hypothesis that the pattern associated with projection occurred more often than would be expected by chance movement in perception reports (due, e.g., to random measurement error) alone.⁷

Shaffer (1981) conducted a similar investigation and produced comparable results. He constructed Heiderian triads for each respondent, calculated the proportion of respondents reporting balanced triads, and examined changes over time in balanced and unbalanced triads. About 40% of the respondents who were not balanced at time 1 achieved balance at time 2 by changing their perceptions of candidates' attitudes. However, essentially comparable proportions of respondents achieved balance through persuasion or policy-based evaluation. And most importantly, the proportion of respondents reporting balanced triads did *not* increase over time. Thus, it appears, there was no systematic movement toward balanced states via projection over and above what would be expected by chance alone.

Krosnick (1990) conducted multiple regressions with longitudinal data predicting changes in voters' perceptions of candidates using prior assessments of voters' own attitudes toward the candidates. As is appropriate, positive projection was modeled as a linear association, and negative projection was modeled as a linear association based upon the deviation of a respondent's perceptions of a candidate from his likely true position on the issue.⁸ Remarkably, Krosnick found essentially no evidence of either positive or negative projection across two candidates (Reagan and Mondale in 1984) and three issues (government spending, U.S. involvement in Central America, and federally guaranteed jobs).

Krosnick's (1990) analyses focused only on changes in candidate perceptions between preselection interviews and postselection interviews, the

7 One might argue that controlling for schema-based inferences would interfere with the assessment of the *total* effect of voters' own attitudes on candidate perceptions via projection (i.e., the sum of direct and indirect effects). However, it would be a mistake to characterize total effects on candidate perceptions as summarizing only distortions in those perceptions per se motivated by the desire to maintain cognitive consistency.

8 One particular challenge for Krosnick (1990) was to determine the candidate's true positions. He experimented with a variety of possibilities and found no change in the substantive implications of his analyses. Thus, his conclusions do not seem to be especially dependent on this aspect of the analysis.

average time between them being forty-seven days in his study. This is a relatively short time period, and one might argue that it was too short to detect the effects of interest. Perhaps as well, projection effects occur relatively early in a campaign, and candidate perceptions become fixed midway through. Consequently, Krosnick's (1990) focus on the latter part of the campaign may have missed projection that occurred earlier.

Another potential problem with Krosnick's (1990) approach is that he ignored the likely positive correlations between candidate-expressed positions and respondents' own positions. If such correlations evolved during the period of his study's focus, they may have masked negative projection effects occurring simultaneously. However, if systematic variation in candidates' expressed attitudes changed voters' perceptions of them, one would also expect to see positive correlations appearing in longitudinal tests of positive projection. The fact that they did not appear in Krosnick's (1990) study suggests that such correlated error was not evolving and did not mask evidence of negative projection.

Thus, the three studies that succeeded in separating projection from persuasion and policy-based evaluation and that avoided measures of linear association provided no compelling evidence of positive or negative projection.

CONCLUSION

General Implications

If we are simply in the business of generating evidence consistent with hypotheses, then the literature on projection clearly stands as a solid accomplishment. Working simultaneously, political scientists and psychologists have produced a great many findings consistent with the projection hypothesis. Unfortunately, however, most of this evidence is also just as consistent with other hypotheses that are based on equally compelling theory. And when these alternative hypotheses – or processes – have been tested cleanly, they have been supported handsomely. Consequently, eliminating the impact of *all* such processes *simultaneously* is necessary in order to provide a compelling test of projection. And this has yet to be done.

Why has no such unconfounding work been done to date? First, it took a while for investigators in this arena to recognize the various confounding processes. Diffusion of knowledge is not as fast as we all would like, and work in progress gets published even when doubt is cast on its informativeness by recent insights of other investigators. Second, unconfounding these various processes poses a great conceptual challenge. If this unconfounding were easy to do, investigators would undoubtedly

have done it already. Third, although panel data seem to hold the promise of solving major problems here, such data are harder to access and harder to analyze than cross-sectional data. Finally, the projection idea is so conceptually compelling that people may be disinclined to be skeptical about empirical support for it: such a good idea *must* be right, some observers might presume.

Another impediment to useful projection tests has been the failure to represent the theoretical hypotheses appropriately in mathematical terms. This is no doubt partly a function of the habitual reliance of social scientists on statistical techniques presuming linear relations among variables. Because so much software is available for linear analysis, and because we are all so practiced at using it, our first inclination is to stick with what we know. And when early studies produced results that seemed sensible, analysts were presumably even less motivated to scrutinize the correspondence of hypotheses being tested to mathematical representations being employed.

If we are to generate convincing evidence about projection or any other psychological processes in politics, the pitfalls identified here must be avoided. Most obviously, when we propose and test causal hypotheses, it makes little sense to assert that cross-sectional data (even when analyzed with multivariate techniques) yield compelling support. Many causal hypotheses in the political psychology literature are currently being treated as empirically validated, despite the fact that only cross-sectional evidence is available to date. These all-too-strong assertions are likely to cause substantial delays for the field if they are taken to be definitive.

There is no doubt that cross-sectional data can be informative regarding the validity of a causal hypothesis. If an expected correlation fails to appear, this certainly casts doubt on the causal process that implied it. But even a supportive correlation is not very informative if the impact of correlated measurement error has not been eliminated. And once an initial convincing demonstration of correlational support is provided, it seems essential to move quickly on to employing either longitudinal data analysis methods (Kessler and Greenberg 1981) or experimental methods (Kinder and Palfrey 1993) in order to determine the hypothesis's plausibility more effectively. Furthermore, evidence on mediators and moderators makes the generated case all the more compelling. With regard to the projection literature and many other areas of political psychology, it seems fair to say that not nearly enough such work has been done.

Implications Regarding Projection

With regard to the notion of projection, it is probably most appropriate to conclude that although this hypothesized process may well occur in

the perception of political candidates, it has yet to be demonstrated in a sufficiently convincing manner. Despite the tone of this conclusion, however, it is not my intention to discourage the field from carrying out research on projection in the future. Furthermore, it makes no sense to erect such a high standard for clarity of interpretation that we can never hope to achieve it. But it does seem clear that we can do a much better job at analyzing currently available data in order to increase confidence in the conclusions of projection research.

Projection may never be conclusively demonstrated in any single study, because plausible alternative interpretations might exist for any given empirical demonstration. However, evidence varies in the degree to which it convinces readers, so future studies that attempt to rule out the many obvious and plausible alternative explanations for the observed effects can leave readers quite a bit more certain about the meaning of their results. This will certainly be a more desirable state of affairs, even though possible alternative explanations may never completely disappear.

Rather than being discouraging, I hope that this chapter will reinvigorate projection research. Research in this area has all but died out in recent years, presumably because political scientists view the projection hypothesis as having been conclusively validated. What recent work exists has usually involved application of the same analytic methods over and over again to new data sets without questioning their validity. Instead, we should be approaching old data sets with new analytic methods. I hope this chapter highlights the challenges that might attract researchers to this area to do work that is useful and constructive.

It may be somewhat unfulfilling to read a chapter filled with criticisms that does not conclude with more concrete, constructive suggestions regarding solutions to the outlined problems. However, the problems to be addressed are exceedingly complex, and will require substantial conceptual and analytical advancements. In order to spur researchers to recognize and address these many problems, it seems most appropriate at this point to clarify their details, to highlight their significance, and to make clear that a hypothesis many have long taken for granted as valid now deserves closer scrutiny.

Most importantly, however, we must not lose a sense of the forest for the trees with regard to candidate perception. Perhaps the most significant substantive/normative question here is how accurate such perceptions are. If projection exerts a dominant influence, then we would not expect to see high levels of accuracy, and voters are ill-equipped to function as democratic citizens according to the ideals of political theorists.

But as Krosnick (1990) showed, representative samples of American adults were remarkably accurate in their perceptions of the stands the

candidates took on major issues in 1984. Furthermore, perceptions were especially accurate among people who are highly involved in politics, presumably because of their regular exposure to useful information about the candidates through the media and through interpersonal interactions. Larson (1990) reported a similar result and demonstrated as well that voters can accurately learn the positions of candidates if they are conveyed by the media. Thus, it seems, the responsibility for inaccuracy in candidate perception may lie with inadequate media coverage of issues (Patterson and McClure 1976) rather than with the handicapping psychodynamics of projection generated within the human mind.

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Challenges of Political Psychology

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