Endorsement of Formal Leaders: An Integrative Model

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Keywords
formal leaders, endorsement, payoff distribution, fairness, competence, group success-failure, support, vulnerability

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Abstract

This experiment develops an integrative, path-analytic model for the endorsement accorded formal leaders. The model contains four independent variables reflecting aspects of group structure (i.e., group success-failure, the payoff distribution, the degree of support by others members for the leader, and the vulnerability of the leader). Also included are two intervening variables reflecting perceptual processes (attributed competence and attributed fairness), and one dependent variable (endorsement). The results indicate that endorsement is greater when the group's success is high, when the payoff distribution is flat rather than hierarchical, and when the leader is not vulnerable to removal from office. Other support had no significant impact on endorsement. Analyses further demonstrate that the effect of success-failure on endorsement is mediated by attributed competence, while the effect of the payoff distributed is mediated by attributed fairness. These results suggest that moral and task evaluations are distinct bases of endorsement.
Endorsement of Formal Leaders: An Integrative Model

Treatments of legitimacy (French & Raven, 1959; Michener & Burt, 1974; Weber, 1947) have distinguished between the formal position occupied by a leader and the person occupying the leadership position. The attitudes of group members toward both position and person are important in establishing and maintaining regularized patterns of influence within a group. The present study investigates one of these attitudes, the endorsement accorded a formal leader. By definition, a lower-status member is said to endorse a high-status leader if he expresses satisfaction with the leader's performance in directing the group, supports his use of control prerogatives, and wants him to continue in a position of leadership within the group. The goal of the present article is to develop an integrative model of factors determining the endorsement accorded formal leaders.

Factors Affecting Endorsement

Previous research has identified various determinants of endorsement. These fall into two broad classes: social structural factors (i.e., properties of the group as a unit) and perceptual factors (properties of individuals in the group). Although prior research has investigated both classes, no study has yet integrated them in a single theoretical framework.

The present article simultaneously incorporates six determinants of endorsement in an integrative causal model. Four of these factors are social structural (i.e., the degree of collective success, the distribution of payoffs within the group, the degree of support for the leader from other members, and the leader's vulnerability to removal from office), while the other two factors are perceptual (i.e., competence attributed to the leader and fairness attributed to the leader). In
the present study, the perceptual variables mediate the impact of the structural variables on endorsement.

**Collective success-failure.** Research has documented the impact of both success-failure (a collective property) and attributed competence (a perceptual variable) on endorsement. Leaders receive greater endorsement when the group achieves its goals (Hollander & Julian, 1970; Suchner, 1972) and when they are perceived as competent on group-related tasks (Hollander & Julian, 1970; Julian, Hollander, & Regula, 1969).

However, the interrelationship between these determinants is unclear. One might argue that collective success-failure affects endorsement merely because it serves as a basis for ascribing competence (or incompetence) to the high-status leader. To investigate this issue, the present study incorporates both variables in a multicausal framework. It hypothesizes that the effect of collective success-failure on endorsement is mediated by attributed competence, such that if competence were held statistically constant, success-failure would have little or no effect on endorsement.

**Payoff Distribution.** A second structural variable that may affect endorsement is the distribution of rewards within the group. This distribution can range from a skewed (hierarchical) pattern giving greater rewards to the leader than to the lower-status members, down to a "flat" distribution giving the members rewards equal to those of the leader. This variable should affect endorsement because the leader's reward disbursements provide a means whereby members can infer his motives and his concern for the welfare of the group.

Research by Hollander and Julian (1970) demonstrated that subjects in low-status roles perceive a leader as more fair and group oriented when he allocates a substantial portion of the
group's rewards to the members rather than to himself. This study also demonstrated that leaders interested in group members receive greater endorsement than those not interested in the members. However, previous research has not determined whether the payoff distribution had a direct effect on endorsement, nor has it investigated the degree to which attributed fairness mediates any impact of payoff distribution on endorsement.

The present study extends earlier work by investigating these issues. It hypothesizes that endorsement is lower under a highly skewed payoff distribution favoring the high-status person than under a flat distribution, and that this effect (if it appears) is mediated by attributed fairness, such that payoff distribution has little or no effect if attributed fairness is held statistically constant.

**Support for the leader from other members.** Blau (1964) has suggested that the overall degree of collective support for a leader within a group may determine the extent to which a given low-status member endorses him. In other words, if a member believes other low-status members endorse the leader, he will endorse the leader to a greater extent than if he believes they oppose (or refuse to support) him.

Some research substantiates this hypothesis. Michener and Tausig (1971) reported that low-status subjects endorsed a leader to a greater extent when they believed that another low-status member endorsed him. Michener and Lyons (1972) demonstrated that a high level of support for a formal leader from other members suppresses a subject's inclination to overturn the group's status structure.

Nevertheless, the processes that mediate the impact of other members' support on endorsement remain unclear. Some research suggests that low levels of other support lead to
dissatisfaction with the group's goal attainment (and possibly with the leader's competence) and hence to low endorsement (Michener & Tausig, 1971). Other research suggests that low support leads to low levels of ascribed fairness and, in turn, to low endorsement (Michener & Lyons, 1972). Choosing between alternative explanations is difficult because these studies were run with different fixed parameters.

The present study seeks a clearer picture of the effects of other support on endorsement by manipulating other support, collective success-failure, and payoff distribution in a single design. Simultaneous manipulation of all three structural variables provides a basis for assessing the effects of other support, independent of the effects of success-failure and payoff distribution.

**Vulnerability.** The leader's vulnerability is a fourth structural variable in the present design. Vulnerability reflects the extent to which a high-status person lacks security in office and can be ousted if low-status members no longer endorse his incumbency. Prior studies have investigated the impact of vulnerability on the leader's liking for the group and concern for his own status (Berkowitz & Macaulay, 1961) and on his use of social influence (Michener & Burt, Note 1). In contrast, the present study treats vulnerability from the viewpoint of low-status members and investigates whether a leader's vulnerability affects the endorsement accorded him by the group's members.

Although this issue has not been studied previously, vulnerability may have an important impact on authority-subordinate relations. Members in a group with a vulnerable leader may experience a heightened awareness of their ability to induce change by deposing him. If this causes them to adopt a more vigilant and critical stance toward his policies, one would predict that members accord less endorsement to a leader under high vulnerability than under low. Given
the paucity of previous research on this issue, the present study constitutes an exploratory treatment of vulnerability's impact on endorsement.

**Summary of predictions.** Overall, the present study hypothesizes that endorsement is higher when collective success is high, when the payoff distribution is flat (as opposed to hierarchical), when other low-status persons support the leader, and when the leader is not vulnerable to status loss. Further, attributed competence is expected to mediate the effects of collective success-failure, while attributed fairness is expected to mediate the effects of the payoff distribution. To demonstrate mediation, the present research employs a simultaneous-equation causal model, rather than a single-equation model such as those used in previous research on endorsement.

**Method**

**Experimental Procedures**

One hundred forty male undergraduates at the University of Wisconsin participated as paid, volunteer subjects. Serving in three-person groups, they believed that their rate of pay would depend on the triad's performance.

Upon arriving, subjects were placed in separate rooms and given written instructions that characterized the study as an investigation of problem solving under varying conditions of communication. The instructions indicated that the experiment was structured into two parts during which subjects would work on a collective task. In part one, they would remain in separate rooms where they could neither hear nor see one another; in the subsequent part, they would work face-to-face in one room. In actuality, the experiment terminated after part one. The
fiction concerning the second part served as a rationale for isolating the subjects from one another and facilitated the manipulation of the independent variables.

The written instructions also described the group's task. These indicated that on each of three trials comprising part one, every subject would receive several cards depicting black and white geometric patterns. The task was to judge what proportion of each card's surface was black. These individual judgments were to be combined (on each trial) to yield a collective decision by the group. As documented in earlier studies (Michener & Lawler, 1971; Michener & Lyons, 1972; Michener & Tausig, 1971), the complexity of these geometric patterns made it difficult for subjects to estimate their own performance and permitted the experimenter to manipulate bogus performance feedback.

The instructions further explained that the triad would be structured into a two-level status hierarchy, with one high-status (HS) person and two lower-status (LS) persons. The ostensive purpose of this status differentiation was to enhance the group's problem-solving efficiency by placing the person with the greatest skill in the leader role. To this end, all the subjects took a "judgment test" consisting of geometric patterns similar to those they would later encounter during the regular judgment trials. This test was administered in a central room, with subjects sitting face-to-face. Upon completion of the test, subjects returned to their separate rooms. Shortly thereafter, the experimenter gave subjects fictitious feedback regarding the test. Each subject learned that his performance placed him significantly below one of the other subjects and slightly ahead of the third. The high performer was to be installed in the HS role, the subject in one of the low-status roles (LSI), and the third member in the other low-status role (LS2). In fact, all subjects were placed in identical LSI roles; no one actually occupied the HS role or the LS2 role.
After installation into role, subjects read another set of instructions. These indicated that HS had two major prerogatives. First, he was responsible for combining the subjects' individual judgments into collective decisions. He could combine these individual judgments in any way he saw fit, so the judgments by LSI and LS2 were advisory opinions. Second, HS distributed the monetary winnings achieved by the group's performance on the collective decisions. He had complete discretion in disbursing the rewards among the group's members.

**Experimental Manipulations**

The independent variables were manipulated during the three identical trials that comprised what subjects believed to be part one of the experiment. Subjects were randomly assigned to levels on the four manipulated variables (collective success-failure, payoff distribution, support from other members for HS, and vulnerability of HS). In contrast to most experimental research, these variables were conceptualized as continuous, not as categoric, variables. Operationally, each independent variable had nine possible levels (i.e., 10, 20, 30, 40, 50, 60, 70, 80, 90), and a table of random numbers was used to assign subjects to levels on each of the four manipulated variables. This procedure means that the independent variables are uncorrelated in the (hypothetical) infinite population of subjects, although not necessarily in a sample. In virtually all cases, of course, the subjects comprising a given triad received different treatment combinations based on the random assignment.

Precautions were taken to assure that the experimenter remained blind to all experimental manipulations. Independent variables were manipulated via written messages prepared in advance of the experimental sessions and packaged so the experimenter would not see the contents.
Collective success-failure. At the beginning of each of the three trials, subjects made individual judgments on five cards portraying geometric figures. The experimenter collected these and ostensibly transferred LSI's and LS2's judgments to HS, who was to make the final group decisions. After waiting several minutes, the experimenter distributed bogus feedback regarding the group's performance. Each subject received a message (called the performance score) which stated the following: "On this trial your group won cents. Scoring is adjusted so an average performance wins 50 cents; superior performances get higher scores." Depending on the experimental condition, subjects learned the group won an amount ranging from 10 cents to 90 cents (in 10-cent increments). Subjects knew that a group could win a maximum of $1 on each trial, and this information enabled them to gauge their group's success. Collective performance feedback remained constant over three trials (although slight perturbations were introduced to preclude suspicion from excessively consistent scores).

Payoff distribution. After receiving the bogus feedback on collective performance, subjects received a "money distribution form" indicating how the group's winnings were to be divided among its members for that trial. This written message, ostensibly from HS, was transferred to the subjects by the experimenter. The message stated the following: "On this trial, our group won_______ cents. I have decided to divide the money as follows: HS gets_______ per cent; LSI gets_______ per cent; LS2 gets_______ per cent." The percentage of the collective winnings that HS distributed to LSI and LS2 constituted the payoff variables. This value ranged from 10% to 90% (in 10% increments). In all cases, the money not kept by HS was divided equally between LSI and LS2. For example, if HS gave away 40% (retaining 60% for himself), each LS person received 20%.
**Other support for HS.** Next, LSI and LS2 exchanged opinion messages expressing the extent to which they supported HS's leadership. The experimenter intercepted the subject's (LSI's) messages and returned prefabricated ones that manipulated LS2's apparent support for HS. This manipulation consisted of LS2's answers to the following three questions: "To what extent are you satisfied with HS's leadership of the group? To what extent do you endorse and support HS as leader? How much confidence do you have in HS's leadership?" LS2 answered these questions by circling the appropriate numbers on a scale ranging from low (1) to high (9). LS2's answers varied depending on the experimental condition, and this manipulation, like the others included in this study, had nine levels.

**Vulnerability of HS.** At the end of the second trial, subjects completed a brief questionnaire measuring the intervening variables—that is, HS's competence and fairness. At the end of the third trial, subjects completed a longer questionnaire that included manipulation checks and the measure of endorsement. Immediately after this longer questionnaire, each subject completed a written form to indicate whether he wanted to retain HS in office during part two or preferred to remove him from office. The prerogative of making this decision rested with LSI rather than LS2, because LSI (the subject) had ostensibly demonstrated greater task- competence on the test than LS2.

A decision to remove HS, however, did not automatically guarantee the leader's overthrow. The instructions informed subjects that attempts to remove him carried a specific probability of success. These probabilities constituted the manipulation of vulnerability, and ranged from 10% to 90% (in increments of 10%). Higher probabilities of successfully deposing HS designated higher levels of vulnerability.
This probabilistic component simulated natural situations, in which attempts to oust authorities often fail. Subjects believed that if they opted for removal, the experimenter would in effect draw lots from a hat to determine whether the ouster was successful. In the event of HS's removal, LSI and LS2 would jointly decide which of them would assume the position of leadership during part two. Subjects believed that the leader knew he was vulnerable, but that he had not been told the exact probability of losing his hegemony.

**Measurement of Intervening and Dependent Variables**

The questionnaire completed by subjects after trial two contained semantic differential measures of the two intervening variables—competence and fairness. Indices were constructed by summing the scores on the semantic differential items (9-point scales), weighting each item equally. Competence was measured by the following bipolar items: unskillful-skillful, incompetent-competent, bungling-proficient, inefficient-efficient, low ability-high ability, inept-masterful, inexpert-expert, incapable-capable. Fairness was measured by the following items: unfair-fair, inequitable-equitable, selfish-generous, self-interested-altruistic, biased-impartial, unjust-just.

The measure of the dependent variable (endorsement) was on the second questionnaire, administered after trial three. Endorsement was measured by five questions:

Consider the person occupying the position of leadership. How legitimate is it for him to occupy this position?
How satisfied are you with the leader's use of his power in arriving at group decisions?

How willing would you be to have the person who served as leader this time head the group again?

How satisfied are you with the performance of the leader in directing the group?

To what extent do you support or oppose the leader.

Subjects responded on 9-point scales. To construct the index of endorsement, responses to the five questions were summed. A similar measure has been used in other studies of endorsement (Michener & Burt, in press; Michener & Tausig, 1971; Michener & Burt, Note 1). Upon completion of the second questionnaire, subjects were fully debriefed and paid $2 for participation.

Results

Checks on Experimental Manipulations

Success-failure. An item on the second questionnaire checked the success-failure manipulation. Subjects were asked the following: "Compared with the other groups, how successful or unsuccessful was your group at the problem-solving task?" Subjects' interpretation of their own group's performance correlate highly with the actual manipulation of success-failure, \( r = .927, p < .001 \).
Payoff distribution. To check this manipulation, an item on the second questionnaire asked: "In your opinion, how prone was HS to distribute the group's winnings to LSI and LS2?" Responses correlate highly with the manipulation, $r = .907, p < .001$.

Other support. One item asked: "Overall, to what extent does LS2 support and endorse HS as leader?" Responses show a strong correlation with the manipulation, $r = .930, p < .001$.

Vulnerability. An item on the second questionnaire asked: "If LSI wants to impeach HS, what are the chances that HS will actually be removed from his position of leadership?" Subjects' responses correlate highly with the actual manipulation of vulnerability, $r = .939, p < .001$.

Overall, the checks indicate that all the manipulations proved salient to the subjects and that appropriate conditions were established to test the research hypotheses.

Reliability of measured variables. Coefficients of reliability based on internal-consistency criteria (Cronbach's alpha) reveal high levels of reliability for each measured variable. The reliability of the endorsement measure is .923, which compares with figures of .924 and .884 for the same instrument in previous research (Michener & Burt, in press; Michener & Tausig, 1971). The reliability coefficient for the index of competence is .958 and that for the measure of fairness is .919.

Basic Causal Model

The technique of path analysis is used to analyze the experimental results for endorsement. This technique combines an explicit causal model with multiple regression

insert figure 3 about here
estimation procedures (see discussions by Costner, 1971; Duncan, 1970; Heise, 1969; Land, 1969). Table 1 presents the zero-order correlations among the seven variables in this study, and Figure 1 depicts the basic causal model for these data. This model postulates that endorsement is caused by the four manipulated variables (with competence and fairness omitted, for the time being). The four independent variables are represented as uncorrelated. Given the procedures for sampling experimental treatments, this condition should hold true in the underlying population.

The predictive equation for endorsement, with the partial regression coefficients expressed in standardized form, is:

\[
E = .360S + .425P + .018O - .137V + .804e_1. \tag{1}
\]

In this equation, E is endorsement, S is success-failure, P is payoff distribution, O is other support, V is vulnerability, and \(e_1\) is the error term. The coefficients for success-failure and payoff distribution are significantly different from zero, \(p < .0001\), and the coefficient for vulnerability achieves marginal significance, \(p = .07\), and the coefficient for other support is nonsignificant. The proportion of variance in endorsement explained by this model \((R^2)\) is .3530.

The importance of these results is clear. First, they replicate the earlier finding of Julian, Hollander, and Regula (1969) that low-status members accord more endorsement to a leader under collective success than under collective failure. Second, they extend prior research by demonstrating that endorsement varies as a function of the payoff distribution; endorsement is lower when the leader usurps large payoffs for himself than when he allocates payoffs more evenly. Third, these results show that endorsement is a negative function of vulnerability, although this effect is small.

Surprisingly, the data also indicate that other support does not affect endorsement.
ENDORSEMENT OF FORMAL LEADERS

This result contrasts with the findings of earlier studies (Michener & Lyons, 1972; Michener & Tausig, 1971), where other support heightened endorsement. Apparently, the difference occurs because success-failure and payoff distribution were varied over their entire range in the present study, while they were established as fixed parameters (at moderate-to-low levels) in the earlier research. Subjects in the present study based their judgments of the leader directly on information about success-failure and payoffs, rather than on the opinion of the other low-status member. In fact, high levels of other support did not lead to increased endorsement, but to derogation of the other low-status member. Semantic differential measures show that subjects rated the other member as less intelligent, less perceptive, and less influential under high support than under low support ($p < .05$ for each of these items). Evidently, the presence of another member supporting the leader is not sufficient to affect endorsement when definitive information on performance and rewards is directly available.

**Expanded Casual Model**

Figure 2 portrays an expanded causal model incorporating attributed competence and fairness. This model treats competence and fairness as intervening between endorsement and the four independent variables. This causal sequence is established by the experimental design, with the measurements of competence and fairness coming after the manipulation of the independent variables, but before the measurement of endorsement. As in the previous model, the independent variables are assumed to be uncorrelated in the population. A direct causal relation is not postulated between competence and fairness, so the residual association between these variables is represented as a correlation between their error terms (the curved arrow in Figure 2).
This expanded causal model involves three simultaneous equations, one each for competence (C), fairness (F), and endorsement (E). Expressed in terms of standardized partial regression coefficients, these equations are the following:

\[
C = .720S + .076P + .067O + .367V + .687e_2 \tag{2}
\]

\[
F = -.032S + .785P - .024O - .018V + .618e_2 \tag{3}
\]

\[
E = -.058S + .159P - .013O - .158V + .580C + .318F + .713 e_1 \tag{4}
\]

Significance tests for Equation 2 indicate that only the effect of success-failure on competence differs from zero, \( p < .001 \); no other effects are significant. Tests for Equation 3 show that payoff distribution is the only significant determinant of fairness, \( p < .0001 \), while tests for Equation 4 indicate that vulnerability, \( p < .01 \), competence, \( p < .0001 \), and fairness, \( p < .001 \), are all significant determinants of endorsement. Despite its apparent size, the direct effect of payoff distribution on endorsement (Equation 4) is not significantly different from zero. The results indicate correlated error between competence and fairness, with \( r_{e_2 e_5} = -.204 \).

Interpretively, this means that some (unknown) variable not explicitly entered in the model is causing both competence and fairness; this variable is taken to be uncorrelated with the four independent variables. The coefficient of determination (\( R^2 \)) for endorsement in Equation 4 is .4911, which means that the variables in this model are, explaining about half the variance in endorsement.

These results are important substantively, for they show that competence and fairness mediate the effects of the manipulated variables on endorsement.\(^1\) As indicated by the pattern of

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\(^1\)The causal model in Figure 2 assumes that \( r_{e_1 e_2} = 0 \) and \( r_{e_1 e_3} = 0 \). A critic might question this assumption because subjects were obviously not randomly assigned to "levels" of competence and fairness. If this assumption of
regression coefficients, competence mediates the effect of success-failure on endorsement (Equations 2 and 4), while fairness mediates the impact of payoff distribution on endorsement (Equations 3 and 4). Moreover, mediation is almost complete, because the direct effects of success-failure and payoff distribution on endorsement drop virtually to zero when competence and fairness are included in the model (Equation 4). Only the small effect of vulnerability on endorsement is not mediated to any appreciable degree by competence and fairness.

**Discussion**

The expanded causal model corroborates and extends prior research on endorsement. The finding that competence determines endorsement accords with results reported by Julian, Hollander, and Regula (1969) and by Hollander and Julian (1970). The finding that fairness affects endorsement is new. More important, this research reveals two distinct causal chains producing endorsement. Collective-success-failure affected endorsement through attributed competence. And, consistent with the theoretical reasoning of Hollander and Julian (1970), the payoff distribution affected endorsement through attributed fairness. These patterns demonstrate that low-status subjects assimilated the group's structure in terms of the personal attributes of the leader. Depending on the group's structural situation, the leader was viewed as competent.
(or incompetent) and as fair (unfair), and these perceptions in turn led to differences in endorsement.

Overall, these causal chains suggest that group members apply two distinct criteria when assessing formal leaders. The task criterion concerns a leader's ability to advance the interests of the group and its members. The moral criterion concerns a leader's commitment to higher social ideals transcending personal interests (Kelley, 1971), and reflects his desire to act on behalf of the collective welfare. In the present study, the measures of competence and fairness reflect the leader's standing on the task and moral dimensions, respectively.

One final note. A critic might argue that knowledge of endorsement is of little practical use, unless endorsement relates to some important behavior or outcome. Data in the present study, however, show that highly endorsed leaders were less likely to be removed from office than poorly endorsed leaders. The zero-order correlation between the leader's endorsement and the subjects' ouster attempts is substantial, $r = -.742, p < .001$. Knowledge of endorsement would forecast tenure in office.

**Reference Note**

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Table 1. Zero-Order Correlations

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<td>2. Payoff distribution</td>
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<td>3. Other support</td>
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<td>4. Vulnerability</td>
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<td>7. Endorsement</td>
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<td>— .137</td>
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$M$  

4.99  4.61  4.90  5.26  41.14  35.26  20.63

$SD$  

2.60  2.59  2.63  2.64  13.84  12.17  10.15

Figure 1. Basic casual model.
**Figure 2.** Expanded casual model with mediating variables.

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