

Territorial Dominance: The Influence of the Resident Advantage in Triadic Decision Making

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Theories of human territoriality suggest that a resident may have an advantage over a visitor. Three studies have suggested that indeed a resident advantage does accrue to the person on home ground. It is not clear from these studies, however, (a) whether the resident advantage is specific to dyads and not relevant to other group structures and (b) whether persons averse to acting in a dominant manner can exercise this advantage. In the present study we hypothesized that the resident advantage would surface in triads and that it would accrue to low-dominance as well as high-dominance persons. Triads, each composed of a low-, medium-, and high-dominance male, met in either the high- or low-dominance person's room to reach consensus on a budget problem. In support of the hypothesis, the group's solution most closely reflected the resident's original solution to the problem, regardless of whether he was a high- or low-dominance person. Parallel results were also obtained from questionnaire data. These findings underscore the robustness and generality of territorial dominance, thereby providing an important extension of earlier work. They also suggest the possibility of melding dyad-centered work on residential advantage with group-centered work on territorial behavior and position in a dominance hierarchy. Such a merger would more closely reflect the nested nature of small-group interaction within larger-sized social groupings.

Territorial dominance refers to the advantage accruing to a resident during resident-visitor interactions. The phenomenon is well documented in animal studies (Carpenter, 1958; Howard, 1920/1964; Lorenz, 1966). Some have suggested that it also operates for groups of humans, such as athletic teams (Altman, 1975; Schwartz & Barsky, 1977). And many historical analysts have proposed that it is relevant to understanding the outcomes of epic human struggles (cf.

Tolstoy's [1957/1869] discussion of the battle of Borodino and the French retreat from Moscow). Nonetheless, despite the aura surrounding the notion of "home-court" advantage, it has received surprisingly little empirical attention as a small-group phenomenon. In fact only three published studies are extant. (The reader should not confuse studies on territorial dominance with studies that focus on territorial behavior *and* dominance in a hierarchy. Studies of the latter sort are much more numerous and will be discussed later in the article).

Martindale (1971) investigated the verbal interaction of resident-visitor dyads who were placed in a competitive situation. Specifically, one person in each dyad was assigned the role of prosecuting attorney, and one was assigned the role of defense attorney in the case of a convicted criminal. There were two major dominance measures: floor time and whether the length of sentence agreed on was greater than or less than the overall average. Martindale also investigated the influence of dominance as a personality

Portions of an earlier version of this paper were presented at the annual meeting of the American Psychological Association, New York City, September 1979. The two authors were partially supported by National Institute of Justice Grant 78-NI-AX-0134 during the conduct of this research. The first author also received partial support from National Institute of Justice Grant 80-IJ-CX-0077 during the course of preparing this article.

The authors are indebted to an anonymous reviewer for helpful comments on an earlier draft of this article.

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trait. Dominance scores of each individual were assessed and related to outcomes. Results indicated that territoriality (i.e., being a resident or a visitor) was the main influence on the outcomes of interest, with the resident talking more and negotiating a sentence in keeping with his role of prosecutor or defense attorney (i.e., respectively, a longer or shorter sentence). Although we agree with Martindale's conclusion that territoriality was clearly an important influence, we suggest that her test of personality dominance may not have been appropriate. To exhibit dominance one must have someone to dominate. Since subjects were not paired up in high-dominance/low-dominance groupings, it is possible in several dyads that two high-dominance subjects may have been vying with each other. (In fact the author reports that four dyads were deadlocked and unable to reach agreement.)¹ A more appropriate test of personality dominance could be achieved by pairing up high- and low-dominance dyads. Thus from Martindale's study it is clear that a resident advantage exists, but it is not clear whether this advantage is tempered by personality dominance.

Another study of territorial dominance in a competitive situation was carried out by Edney (1975). He placed resident-visitor dyads in superordinate-subordinate relationships by randomly assigning one member of the dyad to be the controller, directing the other member of the dyad through a series of tasks. On a self-report instrument residents were higher on the Shutz FIRO-B passive control scale. The author concluded that residents were more resistant to the control attempts of visitors than vice versa. The author suggested that the resident advantage phenomenon be interpreted in the context of concepts of control, instead of the narrower concept of dominance.

In contrast to these two earlier studies that focused on competitive or largely zero-sum interactions, Conroy and Sundstrom (1977) investigated the resident advantage in a cooperative situation. Members of resident-visitor dyads were assigned a cooperative task (preparing a class presentation on the issue of recognizing a gay campus group). Members of the dyad either held similar or

dissimilar opinions about the issue. Examining verbal outcome measures such as floor time and simultaneous control, they found the expected resident advantage when the two members of the group held dissimilar opinions. When the two held similar opinions, however, the resident *acceded* to the visitor, letting him talk more. Conroy and Sundstrom termed this a "hospitality effect" (p. 574). They suggest that in agreeable situations "cultural norms may impel a host to let the visitor do most of the talking" (p. 575). In short, the Conroy and Sundstrom study suggests that beyond the competitive, zero-sum situation, the emergence of the resident advantage is contingent on particular interpersonal factors.

Looking back over these three studies, they appear fairly supportive of the notion of territorial dominance as an overriding feature influencing resident-visitor interactions. Nonetheless there are two important limitations of these studies. First, these investigations have been limited to one group size—the dyad. A dyad is a very special social group (Simmel, 1950), and the process of interaction in dyads may be quite different from the process in triads or other-sized groups (Taylor, De Soto, & Lieb, 1979). In a resident-visitor context the binary structure of the dyad may almost force, or at least facilitate, the emergence of superordinate-subordinate relationships. In larger groups these asymmetries may not emerge so quickly.

In fact there have been studies that have investigated territoriality in groups of different sizes. In an experimental study Edney and Uhlig (1977) allowed individuals or groups of four to territorialize (e.g., decorate and anticipate future visits in) a room. They found that individuals felt a stronger sense of ownership of the environment than did the

¹ Furthermore, Martindale's (1971) finding of no effect for personality dominance was not actually correct. The author used a stepwise regression in which personality dominance was entered first. For the outcome measure of total floor time, dominance accounted for 7% of the variance, and this increment *is* significant, $F(1, 58) = 4.43, p < .05$. Thus the author's conclusion (p. 306) that "the stability of this personality trait (dominance) is challenged by the findings of this investigator" is not fully supported by her data.

persons in groups of four. In a field study Edney and Jordan-Edney (1974) examined the territorial claims made by groups of various sizes on a beach. They found that the space per person and number of markers per person decreased as group size increased. They also found that triads claimed unexpectedly small spaces, compared to other-sized groups. Thus although these two studies do not directly address the issue of territorial dominance, they suggest that the functioning or consequences of territoriality may vary across groups of different sizes.

Returning to the issue of control, it seems plausible that a resident advantage may become a resident disadvantage in groups larger than dyads. The image of the tired host whose last guests refuse to go home is a familiar one. That is, in a triad it seems quite possible that a resident may find himself or herself at least outnumbered by his or her visitors, if not overwhelmed. In short, the resident advantage may be limited to dyadic interactions and may fail to appear in larger groups.

A second limitation of the research is that the link between personality dominance and territorial dominance is not yet clear. Martindale's (1971) study, as discussed above, was not totally clear on this point, and other studies have not addressed this issue. This question would seem to be important in that the behaviors postulated as a function of personality dominance (cf. Murray, 1938) are quite similar to those expected to flow from the resident advantage. The possibility exists that personality dominance may augment or attenuate or fail to influence behaviors resulting from territorial dominance.

In the present study we sought to address the issue of territorial dominance and at the same time overcome the limitations of prior research. We hypothesized that the resident advantage would appear in groups larger than dyads, such as triads, and that the advantage would accrue to low-dominance residents as well as high-dominance residents. Support for such a hypothesis would provide strong evidence for the vigor and generalizability of the resident advantage. We sought also to extend prior research by examining territorial dominance in the context of collective decision making. Such a task

has elements of cooperative interaction, as in the task used by Conroy and Sundstrom (1977), but it also has elements of persuasion, as in the task used by Martindale (1971).

Method

Subjects and Procedures

Male students living in freshman dormitories at Johns Hopkins University were contacted in the dorm by the experimenter and were asked if they would be willing to participate in a survey of student opinions concerning the university budget ($N = 90$).² Those who were willing to participate ($N = 68$) were given a list of 10 areas in which university budget cuts might be made to help the university cope with increasing budget costs. They were asked to rank order the 10 items listed, with the highest rank going to the area where the first cut should be made. Subjects were also asked to complete the 60-item Gough, McClosky, and Meehl (1951) dominance inventory. The inventory was titled *Student Attitudes*. Subjects were told that the purpose of the inventory was to assess how student attitudes influenced opinions about budget priorities. The experimenter asked subjects if they would be willing to participate in later group discussions about the university budget so that group opinions could be formed and assessed. Fully informed consent was obtained from all respondents.

Subsequently subjects were allocated to a low-, medium-, or high-dominance group, based on a tercile split of dominance scores. Groups of three persons each (a low-, medium-, and high-dominance subject) were then compiled. The experimenter verified that the people in each group were all strangers and that each person in the group ranked the budget cuts differently. Groups were randomly assigned to meet in the low-dominance person's room (low-dominance condition) or the high dominance person's room (high-dominance condition).³

Subsequently the experimenter recontacted the subjects to be in each discussion and arranged a time for the meeting. The host for each group was simply told that his room would be the most convenient location. When groups convened at the appointed time, the experimenter explained that the purpose of the meeting

² Prior research on the resident advantage has been limited to males. This is due to the expectation (Ardrey, 1966) and the observation (Taylor, Gottfredson, Brower, Drain, & Dockett, 1980) that males hold stronger territorial attitudes than females. By limiting our study to males, we are obviously restricting its generalizability as well. Nonetheless, and in our opinion more importantly, we are facilitating the comparability of our study with the previous studies in this area.

³ We verified that the amount of disagreement on budget priorities within each group, was not appreciably different for groups in the low- and high-dominance conditions. The average pairwise correlation (i.e., agreement on rankings) in each group, averaged across groups, was .15 in the low-dominance condition and .28 in the high-dominance condition.

was to reach a consensus on budget priorities, that is, to arrive at a consensual ranking of first-to-last areas in which the budget should be cut. They were also told that in the group with the best solution, that is, one that most closely matched general student opinion, each member would receive a \$2 bonus. Fully informed consent was again obtained. Groups were given 15 minutes to achieve consensus. This time limit created a speeded task, since prior work with this problem, using comparable groups, had yielded an average time to solution of 24 minutes.

The budget problem we used has been studied extensively in the area of human factors and communication (Krueger, 1977; Weeks & Chapanis, 1976). It is an involving problem for participants. And given the current financial crisis on many campuses, the task can be seen as important and realistic.

The experimenter left the room after answering questions and then returned after the 15-minute period was up, or earlier if summoned. He handed out a postdiscussion questionnaire that explored participants' reactions to the group process, affect for group members, and feelings about the group's final solution. All subjects were then debriefed, paid \$1 for their participation, and asked not to discuss the experiment with others. (The group with the best solution was later awarded the promised bonus of \$2 per person.)

A total of 10 groups of three were run—5 in the low-dominance condition and 5 in the high-dominance condition. (The ending of the academic year prohibited running more groups.) Group solution times ranged from 5 to 14 minutes, and average time to solution was 9.90 minutes.

Design

Following Page (1975) the data were analysed using a 2×3 (High vs. Low-Dominance Person's Room \times Low-, Medium-, or High-Dominance Subject) split-plot or mixed design, treating dominance scores as pseudo-replications within room condition.⁴

Although our design is a traditional mixed design with one between and one within factor (see Myers, 1972, Table 8-2), the application of such a design to data such as ours is novel. The original context in which Page (1975) discussed this design was classroom research. In that realm it was not desirable to treat each student as an independent subject because the results were not replicable. It was also not desirable just to analyze classroom means because this resulted in the loss of much information. He therefore proposed, "Treat each such classroom . . . as if it were a single subject. Then treat the interesting sub-categories within the classroom as if they represented repeated measurements of the same subjects, made under different pseudo-conditions" (p. 342). He then goes on to describe how such a treatment "is extremely useful and permits more or less rigorous treatment of the statistical aspects of such experimental materials" (p. 342).

In the present case we are treating groups as Page proposed to treat classrooms. Our between-group factor (A) is whether subjects met in the high- or low-dominance person's room. The within-group factor (B) is whether the subject was a low-, medium-, or high-dominance person. Degrees of freedom, with $a = 2$, $b = 3$,

and $n = 5$, are as follows: For the main effect of A, $df_1/df_2 = (b - 1)/a(n - 1) = 1/8$. For the main effect of B, $df_1/df_2 = (b - 1)/a(n - 1)(b - 1) = 2/16$. For the AB interaction, $df_1/df_2 = (a - 1)(b - 1)/a(n - 1)(b - 1) = 2/16$. Total df are, therefore, $(abn - 1) = 29$.

Note also that the design, like other nested factorial designs, does result in total orthogonality ($r = .000$) between the two factors of the design.

Outcome Measures

Outcome measures fall into two clusters. The first cluster consists of our measure of persuasion or influence—the difference between each subject's initial ranking of budget cuts and his group's final ranking of these cuts. Difference scores were computed for each subject by summing, over the 10 items, the squared difference between his original ranking and the final group ranking of budget items (in both instances no ties were allowed).

The second cluster of outcomes consists of responses to the postdiscussion questionnaire. The very low correlations among the items on the questionnaire suggested that univariate analyses of variance would not be inappropriate. (For 10 questionnaire items the average interitem correlation was .06.)

Results

If our hypothesis is correct and a resident advantage accrues to the host, regardless of whether he is a high- or low-dominance personality, then the results should yield a Room Condition \times Dominance Score Interaction, indicating that the low-dominance person does best when he is at home and the high-dominance person does best when he is at home.⁵

Difference Scores

The analysis of difference scores yielded the expected interaction effect, $F(2, 16) = 6.78$, $p < .01$, and the relevant means appear in Table 1. There were no main effects for dominance score or room condition ($F_s < 1$). Thus even when he is outnumbered by visitors, and even if he is not a very dominant personality, the resident wields an advantage over his guests. The group solution most closely resembles his original solution.

One might object that the difference scores of each of the three subjects in a group

⁴ The authors are indebted to Julian C. Stanley for bringing this design to their attention.

⁵ The study was conducted in the spring, after each respondent had been living in his room for more than 7 months.

Table 1
Means for Interaction Effect on
Difference Scores

Dominance score	Room condition	
	Low-dominance person's	High-dominance person's
Low	44	137
Medium	123	57
High	93	55

Note. A higher score means a greater difference between the respondent's original ranking and the group's final ranking.

are correlated. If so, this would be a form of carry-over effect (Keppel, 1973), which is undesirable but can crop up in a repeated-measures design. (Remember, we are treating the individuals in each group as pseudo-replications.) The problem in our case may be that some subject in a group has a low difference score because another subject in a group has a high difference score. We would particularly expect this trade-off to occur between the low- and high-dominance subjects. Internal analysis of the data indicated, however, that this was *not* a problem. The correlation between the low- and high-dominance subjects' difference scores was .06. The correlation between medium- and high-dominance subjects' difference scores was .02. The correlation was somewhat larger between the difference scores of the low- and medium-dominance subjects ($r = -.52$), but if each between-group condition is examined separately, the correlation is nil ($r = -.06$ in low-dominance person's room; $r = -.09$ in high-dominance person's room). Thus there is no support for the idea that the pattern of means we have obtained is a result of a carry-over effect. Furthermore, even if we drop out the middle-dominance person in each group to achieve more independence between the various difference scores in a group, the interaction effect is still significant, $F(1, 8) = 7.98, p < .025$.

Questionnaire Results

The questionnaire data yielded a significant interaction effect that mimicked the interaction effect obtained in the analysis of

difference scores. Subjects were asked, "Do you think that your group could have come up with a better solution if you had been allowed five more minutes of discussion time?" Since groups were working under time pressure, agreement with this question reflects a subject's feeling that he was working well with group members and that the group could have done even better with more time.⁶ The significant interaction effect, $F(2, 16) = 6.04, p < .025$ found low-dominance subjects agreeing most strongly with this item in the low-dominance condition and high-dominance subjects agreeing most strongly with this item in the high-dominance condition.⁷ This parallels the difference score analysis because respondents on their home territory obtain or report the most positive outcome. No main effects for room condition or dominance score were obtained (both F s < 1). Thus the resident advantage impacts the cognitive/affective realm as well as the behavioral. This is in keeping with prior suggestions about and observations of human territoriality (Bakker & Bakker-Rabdau, 1973; Edney & Uhlig, 1977).

The questionnaire data yielded one main effect for dominance. Dominance scores were positively associated with willingness to get together again with the group to discuss another university problem, $F(2, 16) = 3.84, p < .05$.

Discussion

Consistent with our hypothesis the present results suggest that a host may influence his guests, even if outnumbered by his visitors and even if he is not constitutionally disposed toward being a persuasive person. The resident advantage is reflected in feelings about the group process as well as in behaviors, suggesting that although this phenomenon is subtle (cf. Conroy & Sundstrom, 1977, p. 575), it is not unnoticed.

⁶ Our interpretation of this item is buttressed by its positive marginal correlation with a question about how enjoyable it was to work with other people in the group ($r = .28, p < .20$).

⁷ Another question ("How much opportunity did you have to convey your opinions?") yielded a similar interaction effect, but failed to attain accepted levels of statistical significance ($p < .20$).

The present results harbor three important implications. First, the resident advantage is applicable to multiple-group structures and is not just limited to dyads, which are in many respects very special groups. Thus the influence of setting may be more relevant to understanding group outcomes than previously suspected. Second, setting cues for dominant behaviors, such as persuasion, may override intrapersonal dispositions to emit those same behaviors.⁸ Third, the possibility of bridging the dyadic work on territorial dominance and the group-centered work on territorial behavior and dominance position appears feasible.

To expand on this last implication, in human territorial research there exists a very sizable body of work on territorial spatial behavior and position in dominance hierarchy in a group. Such group-centered work stands in stark contrast to the dyadic work in several respects. In the former area predictors of interest are social variables, outcomes of interest are spatial behavior, group members have prior acquaintance, and the populations are by and large institutionalized. In the latter area predictors of interest are environmental variables, outcomes of interest are social behaviors, group members have no prior acquaintance, and the populations are largely college students. Examples of the group-centered work include DeLong (1973); Esser (1968, 1970, 1973); Esser, Chamberlain, Chapple, and Kline (1965); Paluck and Esser (1971); and Sundstrom and Altman (1974). The work has been reviewed by Edney (1974) and Taylor (1978). Despite some conflicting findings the studies suggest that under certain conditions (e.g., given desirable spaces, or given a stable group structure), persons higher in a dominance hierarchy will make more frequent use of a wider range of space.

Thus there is a very substantial gap between the dyad-centered work and the group-centered research. The gap is methodological as well as conceptual. The gap is unfortunate for two reasons. First, territorial theory is applicable over a range of groups (e.g., Bakker & Bakker-Rabdau, 1973). Second, perhaps more importantly, dyadic and other small groups are nested within and interact in the context of a larger grouping. Such

nesting is evident in a host of settings: dorms, fraternities, warships, military installations, camps, prisons, and so forth. It seems likely that this hierarchical arrangement results in the group's social climate having an impact on smaller group interactions. Thus, to take a fraternity example, when a person is visiting someone, the visitor's status in the residential group may be more important than his or her position as a visitor per se. Or it could be that as we move up to larger groups comprised of a resident (or residents) and visitors, going from triads to quadruplets to pentads, the relevance of resident versus visitor status diminishes and the salience of social position in the group increases. In short, it is important to understand how large-group context influences small-group outcomes, and vice versa. These two types of processes may meld into each other more than suspected.

In sum, the present results indicated that a resident may exert influence over his visitors even if they outnumber him and even if he is not predisposed to being a dominant person. These findings underscore the generality of the phenomenon of resident advantage. Furthermore, these results suggest that links may exist between resident advantage processes and influences of social dominance on territorial behavior.

⁸ Some may object that a better measure of influence or persuasion would have been floor time or some other verbal measure. Verbal measures were not assessed for two reasons. First, with three people in a group, it would have been difficult to reliably attribute particular utterances to particular persons. Second, and more important, we felt that the results of the group decision making were a more important outcome than verbal behavior, since the verbal behavior, in one respect, may be treated as merely the process that leads to the final decision. Thus by focusing on the difference between the individual and the group decisions, we are focusing on an outcome of influence and not the mediator of influence.

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Received May 1, 1981 ■