# Clothing as a symbol of status: Its effect on control of interaction territory 

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#### Abstract

Based upon status ratings by 154 adults, three types of attire (clothing typical of a student, a priest, and a businessman) were selected for use in a field study investigating control of interaction territory. Two male confederates, one neatly but casually dessed, the other dressed as a student, priest, or businessman, were situated in a department store doorway either 42 or 54 in . apart. During half of the 600 observations, the confederates were conversing. At the close distance, people tended to detour around all dyads; neither attire nor conversation affected the number of territorial invasions. At the far distance, shoppers frequently invaded the space between the nonconversing confederates; when conversing, however, dyads with a member dressed as a priest or businessman (higher status ratings) detoured significantly more shoppers than the dyad with a member dressed as a student (lower status rating). The results indicate that cues to the status of one's social role provided by attire are important determinants of the sanctity of one's interaction territory.


Just as an individual can be conceived as having an invisible body boundary, the approximate size of which is specified by societal norms dictating the closeness with which others may approach (Sommer, 1969), so too can groups be conceived as having invisible boundaries that vary in sharpness and permeability (Milgram \& Toch, 1969). Hall (1966) delineated four zones of interaction that reflect the degree of intimacy the people in a given situation perceive themselves and are perceived by others as sharing. Focusing primarily on a group size of two, Hall's zones indicate a progressively less intimate relationship between members of an interaction as distance increases.

That subtle differences in interaction distance have stimulus value for persons external to the interacting group has been demonstrated in a number of studies by Cheyne and Efran. For example, Cheyne and Efran (1972; Efran \& Cheyne, 1973) found that when two people were conversing at distances within Hall's (1966) personal zone boundary of 48 in . ( 122 cm ), significantly more people walked around the dyad than was predicted by a chance model. When the members of the interacting dyads stood just outside of the personal zone boundary, people began invading the space between them at frequencies not significantly different from chance. Whether or not conversation is ongoing has also been

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shown to affect the probability that persons will walk between the members of a dyad. Cheyne and Efran (1972) found that at a distance of 41 in . ( 104 cm ), conversing pairs detoured significantly more pedestrians than nonconversing dyads. These authors observed that the sex composition of the dyad also affected whether others walked between or around the members of the group. Male-female dyads detoured more passers-by than did male-male or female-female pairs.

Group size and the status of group members appear to independently affect the perceived permeability of group boundaries (Knowles, 1973). In a campus setting, an interacting group of older, formally dressed confederates experienced fewer territorial invasions than an interacting group of younger, informally dressed confederates. In both status conditions, a group of four experienced fewer territorial invasions than did groups of two.

The present study, employing a single indicator of status (that of dress) investigated the effects of (1) the status of one member of a dyad, (2) the presence of conversation, and (3) interaction distance on the permeability of group boundaries. It was predicted that when conversing at a distance within Hall's (1966) personal zone boundary, all dyads, regardless of perceived status of their members, would experience few invasions. At a social distance, however, it was predicted that low-status dyads would lose territorial control, while the space between members of a conversing dyad containing a high-status interactant would remain inviolate.

Prior to determining how status, as broadcast in dress, affects the permeability of group boundaries, a scaling study was undertaken to collect data on the perceived status of our confederates dressed in various types of clothing. Using the method of magnitude
estimation (D'Amato, 1970; Torgerson, 1958), 154 adults ( 84 males and 70 females) encountered individually in a downtown shopping area were asked to rate the status of the person depicted in each of four $5 \times 7 \mathrm{in}$. color photographs relative to that of a modulus photograph. The photographs contained full-length shots of one of the confederates who was used in the territorial control portion of the study dressed in five types of attire: (1) a businessman's standard attire of suit and tie; (2) a Catholic priest's traditional black suit and white collar; (3) a security guard's uniform; (4) a white mechanic's overall; (5) clothing that would be typical of a college student, a pair of blue denim jeans and a colorful athletic t shirt. Each photograph was arranged to show the person in a body orientation approximately 135 deg counterclockwise from a face-on view, enabling the subject to see critical aspects of each attire (e.g., words, insignia, etc.), while minimizing facial cues. For one-half the subjects, the picture of the businessman was presented as the modulus. For the remaining subjects, the picture of the mechanic was used as the modulus.

The data revealed the same rank order of the mean status ratings in both modulus sets. The rank order (from high to low) was security guard, businessman, priest, mechanic, student. Mixed-model unweighted means analyses of variance showed a main effect of uniform $[\mathrm{F}(3,225)=15.55, \mathrm{p}<.001$, for the businessman modulus; $F(3,225)=8.27, p<.001$, for the mechanic modulus] and no difference due to subjects' sex ( $\mathrm{Fs}<1$ ). Subsequent tests revealed that in both modulus conditions, the ratings of the confederate dressed as a security guard, businessman, or priest did not differ significantly from each other. Each of these photographs was rated significantly higher in status ( $p<.05$ ) than the photograph depicting the mechanic or the student, and the latter two photographs did not differ significantly. Based on these results, we could not select a high-, a medium-, and a low-status attire as we had hoped. We elected instead to use two higher status attires (those of the businessman and priest) and one lower status attire (student) for the territorial control portion of the study. Although rated the highest in both modulus conditions, the security guard's uniform was not selected because of problems that might have arisen with this attire, such as potential subjects stopping to ask directions or misconstruing the situation as one of an arrest.

## METHOD

## Experimental Field

Behavioral observations were made near the entrance of a large department store. A main aisle led from inside the store to a $129-\mathrm{in}$. ( $328-\mathrm{cm}$ ) wide open doorway that exited into the mall of a climate-controlled shopping center (see Figure 1). A subject entering the experimental field from the main aisle and walking straight through the delineated area would traverse 158 in . $(401 \mathrm{~cm})$. A number of small floor display objects bordered the aisle near the entrance. Near one side of the


Figure 1. Pictorial diagram of the experimental area. Broken lines indicate experimental field boundary. Arrows indicate possible routes of travel around or between the dyad. (1) Position of casually dressed confederate. (2, 3) Positions of uniformed confederate.
doorway, a mark was placed on the floor. One confederate, always neatly dressed in slacks and a sport shirt or sweater, leaned against the doorjamb and kept the edge of his shoe that was closest to the second confederate on this mark. Two other marks were made, one 42 in . ( 107 cm ) and the other 54 in . $(137 \mathrm{~cm})$ from the first. The second confederate, dressed in the attire demanded by the experimental condition, kept the edge of his shoe that was closest to the first confederate on one of these marks. The confederates stood with their backs partially turned to the flow of exiting traffic. Subjects thus had a view of the confederates that was similar to that in the photographs used in the status rating task.

The narrowest route for passage around the dyad was between a small sign and the back of the confederate wearing the appropriate uniform. Allowing 15 in . ( 38 cm ) for body size, the width of this passage was about 32 in . ( 81 cm ) when the confederates stood 54 in . apart. This distance was approximately 39.5 in . $(100 \mathrm{~cm})$ when confederates stood 42 in . from each other. An alternate route around the dyad was also possible by exiting via a second doorway after having entered the experimental field. Subjects taking either route around the confederates were counted as having walked around the dyad.

## Subjects

The sample was composed of 231 males and 569 females. As in the rating study, only individuals judged to be 16 years of age or older were considered to be potential subjects. The following criteria were utilized to increase the objectivity of the subject-selection process and to minimize the effects of modeling and physical interruption by others on a subject's course of travel. Each person defined as a subject was (1) exiting from the store; (2) entering an unoccupied experimental field; (3) unaccompanied or carrying a small child; (4) uninterrupted in his or her course of travel by someone entering any portion of the experimental field anterior to his position. In each instance, the observer (the first author) had to make a yes-no decision on the inclusion of a given individual in the study
before the individual committed himself to a course of travel. The observer was aware of the hypotheses being tested in the study; hence, the subject-inclusion decision had to be made before a subject entered the experimental field. Fixed landmarks within the store were selected and the data on all persons on whom a positive selection decision was made prior to the subject's reaching these landmarks were included in the study.

## Confederates

Both confederates were males of medium height, weight, and build, with no distracting physical characteristics. One confederate had posed for the photographs used in the status assessment portion of the study. Each confederate wore the experimental attire for half of the observations under each condition. The confederates were not informed of the experimental hypotheses until the conclusion of the study.

## Design and Procedure

The experimental design was a 2 by 2 by 3 design with two external control groups. Confederates stood at one of two distances: $42 \mathrm{in} .(107 \mathrm{~cm})$ or $54 \mathrm{in} .(137 \mathrm{~cm})$. For half of the observations at each distance, the confederates were conversing; for the other half, they were not. The confederate standing directly in the flow of traffic was dressed as a businessman, priest, or student. Fifty observations were made under each of the 12 experimental conditions, 25 on each of 2 days. An additional 200 control observations ( 100 at each of the two distances) were obtained in the absence of confederates. For the control subjects, selected as described previously, the observer merely noted whether the subjects walked between the marks on the floor corresponding to the positions assumed by the confederates in the experimental conditions. While it would have been preferable to observe traffic patterns in the presence of inanimate objects such as wastebaskets, we could not obtain permission for such observations.

During the nonconversing conditions, the casually dressed confederate read a book while leaning against the doorjamb with his back to oncoming pedestrian traffic. The uniformed member scanned the mall as if looking for someone and, as a consequence, his orientation occasionally shifted so as to present a more direct view of his back to the traffic. However, the appropriate distance between confederates was maintained at all times.

The order of data collection for the various conditions was randomly determined. All observations were made during late morning or afternoon hours. The length of time required for a single session of 25 observations ranged from 15 to 30 min . No more than two observation sessions were done on a given day, and one session never followed another without at least a 2-h interruption.

## RESULTS

The raw data for all conditions are presented in Table 1. Initial chi-square analyses for sex of subject revealed no significant differences in the responses of male vs. female shoppers to any experimental or control condition. Hence, male and female data were combined for all subsequent analyses. An overall analysis was performed on the data using the method of multiple contingency analysis outlined by Sutcliff (1957).

Although the main effects of distance $\left[\chi^{2}(1)=163.04\right.$, $\mathrm{p}<.001$ ], conversation [ $\chi^{2}(1)=13.22, \mathrm{p}<.001$ ], and uniform [ $\left.\chi^{2}(2)=8.26, p<.02\right]$ were all significant, the significant interaction of the three independent variables $\left[\chi^{2}(2)=9.02, p<.02\right]$ indicated that subsequent chi-square comparisons between individual cells were warranted. As would be expected from the

Table 1
The Number of People Who Walked Around (A) or Between (B) the Confederates Under the Different Conditions

| Uniform | Conversing |  |  |  | Nonconversing |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 42 in. |  | 54 in . |  | 42 in. |  | 54 in . |  |
|  | A | B | A | B | A | B | A | B |
| Businessman | 46 | 4 | 25 | 25 | 43 | 7 | 16 | 34 |
| Priest | 49 | 1 | 34 | 16 | 45 | 5 | 10 | 40 |
| Student | 44 | 6 | 13 | 37 | 38 | 12 | 16 | 34 |
| Total | 139 | 11 | 72 | 78 | 126 | 24 | 42 | 108 |
| Control |  |  |  |  | 41 | 59 | 31 | 69 |

Note-42 in. $=107 \mathrm{~cm} ; 54 \mathrm{in} .=137 \mathrm{~cm}$.
highly significant effect of distance, every individual comparison of a dyad with another that differed only by the distance at which interactants stood was significant at the .001 level [all $\chi^{2} s(1)>13.89$ ]. Of the 300 subjects encountering confederates standing at the $42-\mathrm{in}$. ( $107-\mathrm{cm}$ ) distance, only 35 violated the space between the confederates. However, 186 of 300 subjects walked between members of the dyad when the distance between the pair was 54 in . $(137 \mathrm{~cm})$.

At the 42 -in. distance, whether a dyad was conversing or not made little difference; the nonconversing dyad was as effective as its conversing counterpart in detouring pedestrians around it. Likewise, at the $42-\mathrm{in}$. distance, the uniform worn by the confederate standing in the flow of traffic had no significant effect on the ability of the dyad to control the interaction territory.

The main effects of conversation and uniform were primarily due to observations made under the $54-\mathrm{in}$. condition. At this distance, the confederate dressed as a priest and his partner detoured significantly more pedestrians while conversing than when not conversing $\left[\chi^{2}(1)=23.38, p<.001\right]$. Although the conversing "businessman" and his partner also tended to detour more pedestrians around them than their nonconversing counterparts, this difference failed to reach significance $\left[\chi^{2}(1)=3.35, \mathrm{p}<.07\right.$ ]. At the $54-\mathrm{in}$. distance, whether the student dyads were conversing or not had no effect on the dependent variable.

At the 54 -in. distance, both the conversing "priest" and "businessman" dyads detoured significantly more pedestrians than the conversing student dyad $\left[\chi^{2}(1)=17.70, p<.001\right.$, and $\chi^{2}(1)=6.11, p<.02$, respectively]. The former dyads did not differ significantly from each other. When not conversing at this distance, the type of clothing worn had no effect on a dyad's ability to avert oncoming pedestrians.

Each of the 12 cells was also compared to the external control. At the $42-\mathrm{in}$. distance, all dyads, regardless of uniform worn or ongoing conversation, significantly altered traffic patterns observed in the external control condition [all $\chi^{2} s(1)>16, \mathrm{ps}<.001$ ]. When standing 54 in . apart and not conversing, no dyads altered traffic patterns observed in the absence of confederates. When dyads conversed at the $54-\mathrm{in}$. distance, however, significantly more people than
predicted by control observations routed paths of travel around both the priest and businessman dyads $\left[\chi^{2}(1)=18.58, p<.001\right.$, and $\chi^{2}(1)=5.14, p<.05$, respectively]. The conversing student dyad, however, did not alter the traffic pattern observed in the control condition ( $\mathrm{p}>\mathrm{20}$ ).

## DISCUSSION

Consistent with previous work (Cheyne \& Efran, 1972; Efran \& Cheyne, 1973), the present study found that when confederates were within Hall's (1966) personal zone (1.5-4 ft), pedestrians were less likely to walk between the dyads than when they stood at a social distance ( $>4 \mathrm{ft}$ ). In the present study, conversation between dyad members had no significant effect on a dyad's ability to control interaction territory within the personal zone. Both conversing and nonconversing dyads were able to alter typical traffic patterns at the $42-\mathrm{in}$. ( $107-\mathrm{cm}$ ) distance. Cheyne and Efran (1972) found conversation necessary for control of interaction territory at a distance of 41 in . $(104 \mathrm{~cm})$. Minor procedural differences between the two studies, such as orientation of the confederates with respect to the approaching subjects and the width of the passage space around the dyad, presumably underlie this discrepancy. Regional differences, however, may also be involved.

Altman (1976), among others, argues that optimal levels of privacy are partly obtained by individuals' maintaining personal space boundaries. Given the low frequency of invasion of the space between any of the dyads in the nonconversing $42-\mathrm{in}$. condition in the present study ( $16 \%$ vs. $59 \%$ in the control condition), it can be argued that, for our subjects, a reluctance to invade the personal space of either of our confederates caused the majority of subjects to walk around the nonconversing dyad. Given our situation (subjects dressed for winter weather in a northern and sparsely populated state), perhaps the personal space bubbles of two individuals standing $42 \mathrm{in} .(107 \mathrm{~cm})$ apart were perceived as too nearly overlapping to permit the average subject to be comfortable in walking between the two strangers when it was easy to detour around them.

Cheyne and Efran (1972) found that at a social distance, conversing dyads, regardless of sex, had little control over interaction territory. In the present study, the conversing "student" dyad was ineffective in altering typical traffic patterns when standing at a social distance. The conversing "priest" and "businessman" dyads, however, showed considerable control over their interaction territory at this distance. Cheyne and Efran's dyads'were presumably not readily identifiable as other than students in a campus setting or a shopping center setting. The present study shows that, when a member of a conversing dyad is wearing clothing that symbolizes the high-status social role of priest or businessman, pedestrians are reluctant to cross the "talk lines," even at an interaction distance well outside of Hall's (1966) personal zone.

Since uniforms convey information about many different characteristics of the wearer (e.g., status, power, authority, and past achievements) and these attributes are in turn quite complex, it is difficult to determine what specific factors contribute to the reluctance of pedestrians to invade the interaction territory of conversing high-status dyads at the $54-\mathrm{in}$. ( $137-\mathrm{cm}$ ) distance.

Lindskold, Albert, Baer, and Moore (1976) suggest that social norms of courtesy are what create interaction territories, not imperatives to defend space. In line with this reasoning, we lean toward interpreting our data under the $54-\mathrm{in}$. conversing condition as indicating that the low-status "student" dyad was perceived as less deserving of privacy and of courtesy than the two higher status dyads. Consistent with this interpretation was an unexpected trend in the present data. Although in the initial ratings, the businessman was rated somewhat higher in status than the priest, the conversing "priest" dyad tended to exert greater control over its interaction territory at 54 in .
than the conversing businessman dyad. Although this difference was not significant, cultural norms might make it more likely that the average individual would avoid intruding upon a conversation between a priest and a young man than a conversation between a businessman and a young man.

Undoubtedly, more unidimensional stimuli achieved by manipulating the quality of dress without identifying the wearer with a particular occupation, would provide a more specific manipulation of the of the status variable. A military setting would seem to lend itself ideally to the solution of this problem. Dean, Willis, and Hewitt (1975) utilized such a setting in an examination of the interaction distance deemed appropriate by the initiator of a conversation. They observed that military personnel utilized greater distances when initiating conversations with superiors than when initiating conversations with those equal or lower in rank. Further, interaction distance increased with discrepancy in rank. One would likewise expect invasion frequency to be related to the military ranks of both those engaged in conversation in a public area and those faced with the decision of invading or detouring.

Other variables that have not been systematically investigated which are likely to affect the frequency with which strangers cross the "talk lines" of an interacting dyad include the body orientations of the conversants with respect to the potential invaders, the facial expressions of conversants facing the potential invader, and the difficulty of detouring around rather than walking between the members of the dyad. The results of such studies, taken together with studies of the relative status of conversants and potential invaders, should enable us to determine the relative influence of social power, the operation of social norms of courtesy, and purely physical aspects of the setting in preserving the sanctity of interaction territory.

## REFERENCES

Altman, I. The environment and social behavior. Monterey, Calif: Brooks-Cole, 1976.
Cheyne, J. A., \& Efran, M. G. The effect of spatial and interpersonal variables on the invasion of group controlled territories. Sociometry, 1972, 35, 477-489.
D'Amato, M. R. Experimental psychology: Methodology, psychophysics, and learning. New York: McGraw-Hill, 1970.
Dean, L. M., Willis, F. N., \& Hewitt, J. Initial interaction distance among individuals equal and unequal in military rank. Journal of Personality and Social Psychology, 1975, 32, 294-299.
Efran, M. G., \& Cheyne, J. A. Shared space: The cooperative control of spatial areas by two interacting individuals. Canadian Journal of Behavioral Science, 1973, 5, 201-210.
Hall, E. T. The hidden dimension. Garden City, N.Y: Doubleday, 1966.
Knowles, E. S. Boundaries around group interaction: The effect of group size and member status on boundary permeability. Journal of Personality and Social Psychology, 1973, 26, 327-331.
Lindskold, S., Albert, K. P., Baer, R., \& Moore, W. C. Territorial boundaries of interacting groups and passive audiences. Sociometry, 1976, 39, 71-76.
Milgram, S., \& Toch, H. Collective behavior: Crowds and social movements. In G. Lindzey \& E. Aronson (Eds.), Handbook of social psychology (2nd ed.) (Vol. 4). Reading, Mass: Addison-Wesley, 1969. Pp.507-610.
Sommer, R. Personal space. Englewood Cliffs, N.J: PrenticeHall, 1969.
Sutcliff, J. P. A general method of analysis of frequency data for multiple classification designs. Psychological Bulletin, 1957, 54, 134-137.
Torgerson, W. S. Theory and methods of scaling. New York: John Wiley, 1958.
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