THE EFFECTS OF SEX AND RACE NORMS ON PERSONAL SPACE

by

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CHAPTER I

FORMULATION OF THE PROBLEM

In their everyday transactions with other objects in the environment, both animate and inanimate, men and animals develop consistent patterns of behavior in their use of space. In the case of man, despite the fact that individuals are largely unaware of their behavior in relation to space, they exhibit an impressive ability to make mutually satisfying adjustments of their bodies in relation to each other. Pairs of strangers and intimates alike automatically assume physical distances and configurations in their interactions, each feeling certain that the other will act in concert. This "silent language," as Hall (1959) calls it, permits interactions which are both functional to and richly imbued with information about a relationship.

These lawful arrangements in space have often been attributed to or explained in terms of the individual's "personal space." In general, personal space is conceived of as an expanding and contracting ring or bubble surrounding the individual which defines the physical separation he requires in relation to others with respect to specific activities and defined relationships. Although personal space may be conceptualized as a special form of territoriality, it is unique in that it moves with the individual, it is highly elastic and rapidly altered, and it is not ordinarily linked to permanent physical referents in the environment.

While there is an apparent consensus on the general meaning of personal space, it seems to have become a catch-all term for a variety of variables with different conceptual and operational definitions. These definitions are dissimilar enough to alter significantly the concept itself, and as a result, there is a lack of precision in the meaning of personal space. For one, the concept has been used to describe both physical zones and, on a more abstract level, cognitive structures and implicit schemata. In addition, while all of the measurement techniques involve some form of physical distance or posture, the specific dimension considered to be a measure of personal space has differed considerably. We will consider these variations in approach by summarizing the reported investigations in terms of two general categories: studies in which human subjects are observed while they space themselves, and studies in which subjects spatially arrange miniature representations of people. The actual results of these studies will be discussed in a later section; here it is only relevant to discuss the ways they define and measure personal space.

In the first category, where individuals spatially arrange themselves, data have been collected in a variety of ways, ranging from nonobtrusive observations in natural settings to specific instructions to subjects to place themselves physically in relation to others. Edward Hall's cross-cultural naturalistic observations (1959, 1963, 1966) resulted in a great deal of evidence for consistencies in the use of space in normative settings for given cultures and in given relationships. Thus, Hall specified four

interaction zones---intimate, personal, social-consultive, and public---and reported on cultural differences in the use of these zones. Hall also developed "proxemics"---a notational system to categorize various physical elements in an interaction, i.e., linear distance between individuals, posture, and available sensory information. Thus, for a given interaction one could specify the physical distance between the participants, the amount of eye contact they engage in, the degree to which they face one another, etc.

Following Hall's lead, a variety of investigators (e.g., Horowitz et al., 1964; Kinzel, 1969; Dosey and Meisels, 1969) studied interpersonal distance or body-buffer zone in the laboratory. Generally, subjects in these studies are asked to walk towards another person "until they reach him" or until they feel comfortable. Consistent differences between different populations have emerged from these studies; for example, schizophrenics stayed further away from people than did normals, violent prisoners preferred spatial boundaries different from nonviolent prisoners, etc. However, since subjects were instructed to consciously focus on space in terms of "reaching someone" or feeling comfortable, it is not clear what the derived interpersonal distances indicate nor whether they are analogous to the more natural interactions observed by Hall.

Combining laboratory techniques, naturalistic observation, and questionnaires, Robert Sommer shifted the emphasis from interpersonal distance per se to interpersonal configuration. By interpersonal configuration we mean body position or angle that individuals

assume in relation to each other. His studies (summarized in Sommer, 1969) deal primarily with the seating preferences of individuals in different kinds of relationships and in different contexts. Although distance is clearly an element in seating configuration, the more significant aspect in his approach is mutual body orientation (e.g., face-to-face, side-by-side, catty-cornered). Thus, Sommer's work adds information about the preferred body orientations during different kinds of interaction; for example, conversing pairs are more likely to face one another than to sit side-by-side.

The second category of studies defines personal space as the linear placements made by an individual when he is asked to locate miniature representations of people. In the typical study, subjects are given felt or cardboard silhouettes representing different individuals and are simply told to place two or more of them on a background. Personal space is taken to be either the distance the individual places between two figures or his tendency to group together certain figures and not others. Thus, the observed tendency of subjects to place figures representing friends closer together than those representing strangers, and to group friend-silhouettes apart from stranger-silhouettes are interpretted as reflections of consistent differences in social distance and personal space for friends and strangers. What is not apparent is whether the physical proximity of particular silhouettes can be presumed to predict the interpersonal distance individuals will assume during actual interactions, i.e., whether what is operationally defined as personal space here can be considered analogous

to what is operationally defined as personal space in the first category of studies.

This brief summary of the two experimental approaches to personal space is by no means exhaustive. A more comprehensive description and analysis of the literature will be presented later. Our purpose here is to demonstrate the variation in the dependent variables subsumed under the rubric of personal space and to point to the unnecessary imprecision that results. While most of the studies deal with some measure of physical distance between objects, the variation in experimental technique makes the meaning of personal space different from case to case. That the various techniques seem to be measuring different things is substantiated by the results of Dosey and Meisels (1969). They found very poor correlations between three measures of personal space: approaching another person, seating across a table, and silhouette placement.

To illustrate the differences in measurement, let us look at the findings of two of these studies and let us examine their relationship to each other and to their apparent definitions of personal space. Dosey and Meisels (1969) asked subjects to physically arrange themselves in relation to another individual, placing their study into our first category of research on personal space. They found that subjects placed themselves at a mean distance of about fifteen inches from another person when they were told to approach him while he observed and rated them on sex appeal and appearance. Does this distance represent the personal space of the subject in relation to the other's characteristics, or is it

simply a function of his standing far enough away from the other individual so as to be easily observed? It appears that the instructional set given to subjects in these kinds of experimental situations is highly influential on the behavior they will exhibit.

As an example of our second category of studies, Little (1965) found that subjects placed figures representing friends closer together than figures representing strangers. Is this a reflection of behavioral intentions with respect to defined social relationships, or is it the result of perceptual and cognitive grouping principles, or both? More important, will these subjects who place figures of friends in proximity also stand or sit closer to their own friends than to strangers when they interact with them?

Looking at these two examples together, it hardly seems justified to consider the two as measurements of the same phenomenon. Furthermore, there is no real evidence to indicate that either of these measures are predictive of actual or potential behavior outside of the laboratory under natural conditions of interaction. If personal space is to be taken as a zone surrounding the individual which determines the distances he keeps from others, then neither of the above studies adequately measures this zone. If, on the other hand, personal space can mean different things to different sets of experimental conditions, then it is misleading to call it by the same name in each case.

A further difficulty with the current definitions of personal space is the tendency to stress its physical aspects. As a result, one is left with an image of personal space as a concrete

zone or no-man's-land with an invisible boundary separating the individual from others. This is damaging as it encourages operational definitions that seek only to quantify personal space, rather than focusing on it as a broader concept. The emphasis on simple operational definitions and the absence of more theoretical concepts have resulted in a series of isolated findings which empirically but not theoretically relate specific antecedent conditions to specific interpersonal distances.

We will present a simple model here in an attempt to relate systematically antecedent events to behavioral consequences, and as a result, will discuss many more variables than are actually relevant to the proposed study. The focus of the model will be psychological, i.e., events will be viewed from the phenomenal world of the perceiving individual and will be interpretted in terms of the meaning he attributes to them. In addition, interpersonal distance, i.e., the amount of physical space between individuals, will be considered a significant but not the exclusive nonverbal response to a situation. Furthermore, unlike physical measures in other studies, in the present study they will be derived from a theoretical framework which is capable of dictating particular operational definitions and not others.

In the present formulation, personal space is conceptualized as a psychological variable which intervenes between antecedent conditions and consequent interpersonal behavior. It can be defined as that set of expectations held by the individual that his own and other's behavior related to distance and position in space

will satisfy interpersonal goals in the most appropriate ways possible. By interpersonal goals we mean those that involve the presence or absence of others. However, not all interpersonal goals are relevant to personal space, and we are concerned only with those which require for their fulfillment translation into spatial terms.

Most frequently, the interpersonal goals which are relevant to personal space involve some desired level of psychological distance, i.e., kinds of relationships and interactions. For example, formality, intimacy, and privacy are common interpersonal goals associated with personal space. Personal space can also involve the expectation of behavior not directly related to psychological distance. Thus, the mutual performance of some task by two individuals involves physical distances and configurations specific to the task as well as spacing related to the desired level of psychological distance. While both kinds of interpersonal goals can be involved in personal space, we will address ourselves primarily to those which involve levels of psychological distance as these are the principal ones.

Essentially then, personal space is the way in which individuals expect the immediate space around them to be used. The particular interpersonal goals aroused at any given moment are determined by the nature of the antecedent conditions in the situation, e.g., task, mood, presence of others, etc. When antecedent conditions result in a desire for extensive separation and psychological distance from others, then the individual will enter

the interaction with expectations that behavior, spatial and non-spatial, will be directed towards establishing a sense of distance. If, on the other hand, the individual's goal is to be closer and more intimate with others, then he will enter the interaction with expectations that behavior will be aimed at reducing the sense of distance and separation.

Personal space translates the more general interpersonal goals into spatial and behavior terms. It thus provides a bridge between antecedent events and eventual spatial behavior. Each momentary definition of personal space prescribes the set of behavioral expectations that the individual has in his physical and spatial relations to others that must be met for him to freely move towards some goal. Defined in this way, personal space describes an individual's psychological experience of the environment. The definition of personal space we proposed above specifies that the expectations involve distance and positional behavior. By position or configuration we mean physical placement and angle of body in relation to others. By distance we mean both physical and symbolic. Physical distance and position, which are components of most other definitions of personal space, are just two of many ways the individual expresses and satisfies his personal space. Since our focus is on the phenomenal world of the perceiver with his particular expectations and goals, personal space can be satisfactorily established in the absence of physical separation. Any behavior on the part of the individual or others which fulfills his interpersonal goals is sufficient to satisfy his personal

space needs. For example, riding shoulder to shoulder in a crowded elevator prohibits any physical zone or bubble of territory; however, personal space as we have defined it can be satisfied by behavior which creates a sense of symbolic separation, distance, and remoteness. Under these circumstances of reduced physical distance, the individual's goals are likely to be no more than to travel between floors and to maintain his anonymity, and he can achieve these goals nonspatially as well as spatially (by averted eyes, motionlessness, etc.). An outside observer might conclude that personal space is being violated under these circumstances, but the participants are likely to feel that their behavioral expectations have been met.

We will frequently call the expectation of a great deal of physical and symbolic distance a "large personal space," and the expectation of more intimate behavior a "small personal space." These are not meant to indicate physical size; rather, they are shorthand devices to indicate the kinds of behavioral expectations involved. Thus, for example, when we say that antecedent conditions prescribe a "large" personal space, we might mean that the individual desires formality and aloofness from others and that he, therefore, expects spatially-related behavior consistent with this goal.

The particular types of behavior that individuals expect and ultimately engage in during interpersonal encounters can be spatial or nonspatial and physical or psychological. A given momentary personal space does not specify the particular behavior which is

necessary to fulfill the personal space and interpersonal goals. It describes the behavioral expectations relevant to the individual's goals, but theoretically, a variety of different behaviors could satisfy a given personal space. What our definition of personal space does specify is that the individual will expect behavior to be the most appropriate available. As we will discuss shortly, appropriateness of behavior is a function of the goals and the restraints in the situation.

To summarize briefly, personal space is a psychological variable which translates interpersonal goals into spatial behavior. The expectations which comprise a momentary personal space involve behavior which is appropriate to the situation and which utilizes space directly or symbolically. The following diagram roughly describes the manner in which an antecedent condition affects behavior in space:

ANTECEDENT CONDITIONS--->INTERPERSONAL GOALS--->

PERSONAL SPACE--->BEHAVIOR

By defining personal space clearly as a psychological rather than a physical concept, we intend both to change the present orientation which tempts one to look for physical boundaries, and to broaden the concept to include behavior other than physical spacing. The notion of carrying something around with you is an appealing one. We have maintained this notion by substituting a psychological "thing" for the physical bubble of previous definitions.

As we have discussed, physical distance is just one of many interrelated dimensions of personal space. It is the most immediate and most common way to satisfy personal space because it provides for a direct translation of psychological distance into physical terms. When individuals interact in space, they come to feel that they can extend their self-concepts beyond their bodies into the space around them. As a result, the interpersonal distances and body configurations they exhibit are consistent with their interpersonal goals. As a rule, spatial distances and configurations will reflect personal space when the situation allows them to and when they are appropriate to the individual's immediate goals in the situation. We will consider all measures of personal space which involve physical separation between individuals or representations of them to be "interpersonal distance." The adequacy of any given measure will be assessed in terms of how well it reflects psychological distance and personal space.

The remaining behaviors relevant to personal space and psychological distance tend to fall into the category of "symbolic distance." Symbolic distance is the result of behavior on the part of the individual or others in the situation which does not involve physical spacing but which, nonetheless, creates a feeling of closeness or distance. For example, averted eyes, restricted body movements, soft-breathing, limited conversation, etc. increase psychological distance while staring, expansive movements, noise from afar, territorial markers, etc. decrease psychological distance. In a smoothly functioning interaction

in which the participants have defined their personal spaces similarly, both will engage in whichever of these activities, if any, are appropriate. If, on the other hand, the participants have different interpersonal goals, then they will define their personal spaces differently and may be observed engaging in antagonistic symbolic distancing devices, e.g., one might stare while the other averts his eyes.

Symbolic distance is a significant accompaniment of physical spacing in the formulation and fulfillment of personal space. Studies of one means of creating symbolic distance, eye contact, indicate that there is a balanced relationship between eye contact and physical distance (Argyle and Dean, 1965). This suggests that physical and symbolic distance are mutually supporting and act in concert with one another. If this is the case, then one can compensate for the absence or overabundance of the other to achieve maximally satisfying psychological distance. Since personal space is the expectation of appropriate behavior, in order to predict whether physical and/or symbolic distancing devices will be used in any given situation, one will have to know the normative hierarchy of preferred responses and the degree to which there are restraints in the situation against any of these responses. As we discussed earlier, physical distance is the most immediate and most direct means of establishing distance. Thus, we should find that behaviors related to symbolic distance occur most frequently when acceptable physical distances are unavailable.

To illustrate, a patient and a doctor will be able to accept close physical proximity if they both symbolically create distance by behaving in a professional, impersonal, role-prescribed manner. However, the identical physical arrangement can be intrusive of personal space if one of them behaves in a manner which symbolizes closeness (e.g., eye contact, intimate conversation, personal comments, etc.). The reverse is possible also. In a situation in which an individual's interpersonal goals involve closeness and intimacy, his personal space will be "smaller" and he will not feel free to carry out his goals at a large psychological distance from the other person. If he cannot achieve this closeness through decreased physical distance, then he is likely to fulfill his personal space through symbolic distance and engage in behaviors which will bridge the gap he experiences, e.g., by staring, whispering, initiating intimate conversation, etc.

Thus, personal space is expressed in and can, therefore, be inferred from the physical and symbolic distance behaviors one employs in relation to others. As an intervening variable, it is useful in explaining the relationship between the antecedent conditions in a situation and the spatial consequences that follow. It allows us to predict that antecedent conditions which alter the momentary interpersonal goals, particularly those associated with psychological distance, are likely to affect consequent behavior by altering the momentary personal space definition. It also allows us to specify that relationships that have consistent interpersonal goals should result in consistent and reproducible

uses of space by the interacting individuals.

In personalizing the environment, individuals come to use space in consistent ways and come to expect that others will respect their right to move freely through space. When two individuals interact, it is highly likely that they will have common personal space conceptions and that satisfying these conceptions will require that each cooperate with the other. The spatial and spatially-related behavior that initially accompany the interaction are mutual adaptations directed towards the fulfillment of personal space requirements. The smooth and incident-free adjustments that usually result indicate that the interacting individuals have fulfilled their own and each other's personal space requirements successfully.

However, there is evidence that individuals develop different needs relative to personal space, and that what is spatially comfortable for one is not necessarily satisfactory to another. These interpersonal differences may be the result of individual proclivities or of cultural variations. Schizophrenics, for example, maintain larger distances from others than do normals (Horowitz, Duff, and Stratton, 1964). This difference implies that the schizophrenic's social withdrawal leads him to develop interpersonal goals which result in a "larger" personal space and, therefore, he requires greater physical and symbolic distances from others in order to feel comfortable and free. In the realm of cultural rather than individual differences, Hall's observational studies (1959, 1966) and the more controlled replications

of his findings (e.g., Watson and Graves, 1966; Little, 1968) indicate that there are consistent differences in the use of space across societies. Arabs, for example, stand very close to others, much to the despair of Americans who interact with them. The Arab learns to expect considerable involvement with others during interaction. This leads him to develop a smaller personal space and to require olfactory feedback, eye contact, and much less distance from those with whom he interacts. Americans, on the other hand, learn to desire more aloof, contact-free interactions, a goal which results in a larger personal space and in a need for greater physical and symbolic distances.

These personality and cultural differences indicate that personal space is learned and, therefore, expresses the influence of individual and social norms. These norms are the antecedent conditions which determine interpersonal goals and which affect spatial behavior through the mediation of personal space. Norms influence personal space on two levels. First, they dictate the appropriate goals and relationships for any given situation and, therefore, determine the characteristics of the momentary personal space definition. Secondly, they determine the socially accepted behaviors in the situation which can fulfill the given personal space definition. For example, many New Yorkers share the normative conviction that it is desirable to maintain anonymity and separation from strangers on a subway train. They are likely, therefore, to develop similar personal space definitions and mutually pursue means of satisfying these goals. On the second

level of influence, their shared norms will determine the particular balance and choice of physical and symbolic distancing devices that they will exhibit.

Most situations are complex enough to evoke many different norms which differ in strength and relevance and which may be redundant or may conflict with one another. The determination of which normative goals and behaviors predominate will depend on the momentary normative hierarchy in the situation. Thus, steady rush-hour commuters learn that they must maintain psychological distance in incredibly limited spaces. The normative solution is to forgo futile and disruptive attempts at physical distance and, instead, to engage in extensive symbolic distance behavior (e.g., shallow breathing, motionlessness, averted eyes, daydreaming, etc.). An uninitiated traveller might make abortive attempts at physical distance and overlook the subtle symbolic behavior because he has learned the normative goals but not the normative means of satisfying these goals in this particular situation. Another example of shared goals and behaviors can be observed on any commuter train with rows of two- and three-seaters. A newcomer quickly learns that the shared normative goal of anonymity is accomplished in a normative seating hierarchy. The order of preferred behavior is first to sit alone near the window, second to sit on the aisle of an occupied three-seater, third to sit on the aisle of an occupied two-seater, and fourth and only when no alternative exists, to sit in a three-seater already occupied by two people. In addition, the person on the aisle of that seat will not simply slide over to the

middle to make room for the third person; instead, he will stand up and allow the newcomer to take the middle and least desired seat.

Thus, the consequences of normatively determined personal space and spatial behavior are twofold: First, there is a consistent definition and use of space by individuals who share the same cultural norms, so that specification of the norm should result in an accurate prediction of the behavior. Secondly, when the norms change over situations, variations in the use of space will be observed.

The sharing of goals and behavioral expectations assures that everyday interactions are achieved routinely. When each interactant interprets the norms similarly and when the expectations of each party are met, the interaction proceeds smoothly and little if any attention is paid to the spatial arrangements nor to the characteristic but unconscious decision process that took place. The particular spatially-related behaviors that will occur in a situation are a function of the interpersonal goals, the situational context, and the normative hierarchy of behavior.

However, expectations are not always fulfilled and the individual can be confronted with a situation in which the assumedly appropriate norms are not met. This is experienced frequently in the form of actual or impending <u>personal space violations</u>. We will define a violation of personal space as any physical placement or distance-related behavior that does not meet with the individual's expectations at that moment and that, therefore, prevents him from fulfilling an interpersonal goal. This, as a

result, limits his sense of freedom, places restraints on the immediate achievement of a desired goal, and thus causes him to experience a measure of discomfort or displeasure.

The individual can be the victim or the perpetrator of the personal space violation. He would become a victim when the other individual in the situation knowingly or unknowingly engaged in spatially-related behavior which is contrary to the victim's expectations and goals. He becomes the perpetrator when he is responsible for the violation, even though he may accomplish it unknowingly or unintentionally. Unwillingly but knowingly engaging in behavior which results in a violation of personal space should lead to an intensification of feeling in the perpetrator as he is at once violating his own and another's personal space.

Personal space can be violated in two ways: by behavior which results in excessive physical and psychological distance and by behavior which results in insufficient physical and psychological distance. Behavior resulting in insufficient physical or psychological distance, which we will call <u>personal space intrusion</u> or invasion, is the more commonly experienced violation and the one which concerns us in the present research. Since personal space definitions and behavioral expectations and goals are most frequently normatively determined, either form of violation will be subjected to the personal and social sanctions accorded any nonnormative act. The individual thus experiences some degree of frustration at the difficulty of goal attainment and social embarrassment at the nonnormative behavior.

Although the terms intrusion and invasion have physical connotations, we will use them to describe symbolic violations as well. Furthermore, we are aware of the imprecision in using the term intrusion to apply to the personal spaces of both the victim and the perpetrator of the intrusion. It is clear that we can say that a seated individual is the victim of an intrusion when someone sits too close to him. It is less clear whether we can say that a perpetrator of an intrusion is similarly intruded upon, even though the absence of choice in the situation prevents him from taking a less intrusive seat. However, since at this stage of our knowledge it would be difficult to distinguish between the feelings aroused in individuals who differ in their responsibility for an intrusion, and since it is not always clear where to lay the blame for an intrusion, we will use the term to refer to the personal spaces of both parties. At some future date, this issue should be explored further and the conceptual and empirical definitions of intrusion should be refined.

The most direct form of personal space violation is physical distance which is inappropriate, that is, excessive or insufficient for the particular goal. They are violations of personal space because they interfere with the achievement of a task or because they result in either too much or too little psychological distance from others, or both. In all cases, the individual's sense of freedom to continue an ongoing activity or goal is reduced. For example, an inquiry at an information booth would be considerably hampered if the clerk stood three inches or fifteen feet away from

us. In addition to being nonfunctional to the activity, these nonnormative interpersonal distances may be socially embarrassing as they result in an appearance and feeling of inappropriate intimacy in the first case and in loud shouting in the second.

Another form of personal space violation is an inappropriate configuration or body position. Here, the violator sits or stands in a position or in a way that is either inappropriate or inefficient for the presumed goal, although the distance may be completely appropriate. The clerk at the information booth would make our inquiry difficult and perhaps embarrassing if he stood with his back to us or if he stood shoulder to shoulder with us. Similarly, someone whose head is blocking our vision in a movie theater is experienced as violating our personal space.

Finally, violations of personal space may result from behavior that signals inappropriate symbolic distance in the form of excessive nearness (e.g., loud voices from another room, staring from across a table, a territorial marker left by an absent person, intimate conversations, heavy breathing, etc.) or in the form of excessive distance (e.g., averted or closed eyes, polite formalities, formal or unfriendly facial expressions, etc.). Behaviors which imply intimacy or distance when they are undesirable prevent the individual from continuing some desired task and cause him personal or social discomfort. The inquiry at the information booth would be disconcerting if the clerk were to stare constantly into our eyes as we spoke or if he refused to return or acknowledge our gaze.

Therefore, while violations of personal space may take many forms, they all result, by definition, in the individual's feeling that he cannot freely behave as he had anticipated. This reduction in his free movement through space impedes his ability to obtain his chosen goal, and limits the range of behavioral options open to him. Intrusions of personal space, i.e., behaviors resulting in unexpected and insufficient physical and psychological distance, are especially disruptive because excessive closeness in this society has the additional quality of signalling intimacy, invasion of privacy, physical contact, etc. The non-normativeness of intrusions and the resulting discomforts that ensue should lead the individuals to avoid intrusions whenever possible. We are assuming, therefore, that when individuals are given a choice, they would consistently prefer nonintrusion of personal space to intrusion of personal space. We will test the following assumption in our experimental procedure: Given a choice, nonintrusion of personal space will be selected over intrusion of personal space.

However, as any rush-hour commuter can testify, intrusions of personal space are not always avoidable. It is therefore worthwhile to investigate the possible reactions to them. There seem to be four general classes of responses: (1) re-establishment; (2) redefinition; (3) endurance; and (4) termination.

The first case, that of attempting to regain the original sense of personal space and appropriate physical and/or symbolic distance would seem to be the most likely response. This can be

accomplished in two ways. The individual can insist on his precise definition and achieve it by moving towards or away from the intruder, demand that the intruder change his behavior, etc. Felipe and Sommer (1968) found that a very small number of their subjects asked an intruding person to move. On the other hand, the individual can re-establish his personal space by engaging in some other form of behavior to compensate for the violation. Thus, if physical distance is insufficient, he can engage in symbolic behaviors to alter the sensed distance; while if the behavior of the other symbolizes an undesired distance, he can alter the physical distance. For example, a private conversation can be continued in the presence of a stranger if the participants whisper and if the stranger behaves as if he is not listening; while symbolic behavior on his part which indicates interest in the conversation would force the pair to re-establish their personal spaces by widening their physical distance from the stranger. Felipe and Sommer (1968) noted that most of their subjects engaged in forms of nullifying behavior before they fled---bodies were tightened, heads were turned, movements were reduced, etc. While these behaviors may have reflected heightened affect, they may also have been attempts at compensatory behavior. The fact that eventually the subjects fled indicates that it is not always possible to satisfactorily compensate for physical intrusions.

The second response to personal space violation, redefinition, would appear to occur only after the individual decides that re-establishment is impossible or too difficult. It is a less

desirable alternative but there are occasions which prohibit regaining the original personal space---alternative behaviors may be absent, social embarrassment may result from changing positions or making demands on the other individual, etc. Therefore, it is now most normative to change the original personal space definition to accomodate for the violation, i.e., the individual will alter his interpersonal goals, tolerate the new level of psychological distance, restrict the behavioral freedom he desires, and thereby alter the amount of physical and symbolic distance he now expects and requires. If it is possible to do this, then the originally provocative situation is now acceptable. Thus, an individual can no longer spread his papers over the entire table when the library gets crowded, nor can he stare at the opposite seat when someone sits down in it.

The third response to violations of personal space is endurance. If the individual is unable or unwilling to regain or redefine his personal space, then he is confronted with an unalterable intrusion. Unlike regaining or redefining personal space, endurance means that the individual's original personal space definition remains intact, although his expectations are not being met. Should he chose to endure the violation because he feels unable to do otherwise, then he must accept the restrictions it will place on his behavior. The limits of an individual's endurance should be a function of the importance of the goal, the range of alternatives open to him, and the extent to which he is suffering from the violation. An evaluation of the

costs of enduring the violation versus the costs of regaining his desired personal space should determine the probability of tolerance and inaction.

The final response to personal space violations is termination. Should any of the preceding alternatives prove impossible or undesirable, then the individual will leave the field completely. Termination is similar to re-establishment in that the original personal space definition is maintained; however, by leaving the field the individual ends the encounter for which the momentary personal space was defined. Felipe and Sommer (1968) found that most of their subjects fled the field when an invasion was staged against them.

These responses to intrusion imply, then, that there are degrees of perceived or felt intrusion and that some are less tolerable than others. Rather than viewing violation and intrusion as all-or-none phenomena, we consider them to be continua ranging from slight to extreme. A slight intrusion, for example, might make you feel more aware of someone's presence than you would like while a strong intrusion might make you feel totally stiffled. One determinant of the intensity of intrusion is the quantity and quality of the relevant behaviors, i.e., the amount of physical and symbolic nearness and the nature of the particular behaviors engaged in. Thus, there is more potential intrusion in constant staring than in frequent glances and in nose-to-nose contact than in shoulder-to-shoulder contact; and in addition, proximity plus eye contact may be more powerful than eye contact alone

just as proximity versus eye contact may have differential impact on the experience of the intrusion. The relative weights of these various intrusive behaviors remain to be investigated.

Another determinant of the intensity of the intrusion is the nature of the original personal space definition. Given a constant intrusive act, it will be experienced as a greater violation when personal space is "large" (i.e., when behavior signalling greater physical and symbolic distance is expected) than when personal space is "small" (i.e., when behavior signalling less physical and symbolic distance is expected). Therefore, norms which determine the definition of personal space will determine the intensity of the sensed intrusion as well. While all intrusions are nonnormative, norms which initially suggest "larger" personal spaces should lead to more intense feelings of infringement under a given intrusion than norms which allow greater psychological intimacy. Thus, an intimate remark from a stranger is likely to be far more disconcerting than the identical remark from an acquaintance because the personal space for the former is larger than the personal space for the latter. While the two acts are identical behaviorally, the first is a more serious violation of the normative expectations and is experienced as quite different. Using "small" and "large" personal space as we defined it above, norms have two important effects on the experience of intrusion: one, a given act may be nonintrusive when personal space is "small" and intrusive when personal space is "large;" and two, a given intrusive act will be experienced as more intrusive when personal space is

"large" than when it is "small." Therefore, we can expect that the greater the norms against contact, the larger will be the expected physical and symbolic distances; the more intense will be the experience of intrusion; and the greater will be the avoidance of intrusion should it occur.

The third determinant of the intensity of an intrusion is the context within which it occurs. In evaluating and responding to an intrusive situation, the range of alternative behaviors will be considered. As a result, an intrusion is likely to be evaluated as less noxious when it is the alternative to a more intrusive act than when it is the alternative to an equally or less intrusive act. For example, sharing a very small subway seat with a disliked acquaintance may be less desirable than sharing the seat with a good friend, but may suddenly lose many of its negative characteristics when the alternative choice in the situation is to share the same seat with someone who is far more distasteful or frightening. What we are suggesting is that the actual experience of intrusion with the acquaintance in the two hypothetical choice situations will be different, and that this will be reflected in the extent to which discomfort is felt and attempts are made to alter the experience of intrusion.

It is clear then that we cannot judge the intrusiveness of an act without assessing the situation within which it occurs. In addition to evaluating the act itself, we must be aware of the personal space definitions of the participants and the nature and range of alternatives to the intrusion. In addition, it would

also be important to determine the extent to which redefinition and re-establishment of personal space have already occurred.

However, it is highly likely that all intrusions will lead to discomfort. This discomfort is due primarily to the restriction in the range of behaviors we can engage in and to the sense of breaching a social norm. When there are alternatives and the individual can nullify the intrusion through re-establishment or redefinition, then his discomfort will be reduced to some extent. If the new personal space definition is satisfying, then the initial discomfort should dissipate once the adjustment is accomplished. If the new definition is inadequate or if it requires undesirable alterations in the individual's expectations and behavior, then he will continue to experience discomfort and resentment. When there are no alternatives to the violated personal space and the individual chooses to endure it in an unaltered state, then we should find the most intense discomfort, unless some degree of adaptation occurs.

It would be difficult to predict the type of affect aroused under conditions of personal space intrusion. Depending upon the situation and the characteristics of the intruder, the discomfort could range from mild annoyance to extreme anxiety. A crowded subway might evoke uneasiness, a threatening person might evoke vigilence or anxiety, a low status person might evoke anger, and a naive person might evoke amusement. However, there is ample evidence that emotionality and tension in general increase when personal space is invaded. McBride, King, and James (1965) found increased

galvanic skin responses to physical closeness and eye contact. Seguin (1967) found increased respiration and pulse rate in response to a closely approaching examiner, and Garfinkel (1964) reported that both intruder and intruded experienced intense embarrassment and anxiety when they came into nose-to-nose contact. It is clear then that while the content of the feeling may vary, there will be an intensification of affect under intrusion. In the fairly innocuous encounters of everyday life, it is most probable that the characteristic responses to intrusions will be on the order of pique and annoyance rather than intense anger and hostility.

While we are not making any specific predictions in the present study about the expected responses to personal space intrusions, we anticipate that initially there will be attempts to redefine or re-establish personal space. These might involve postural shifts, body adjustments, redefined goals, etc., and to the extent that these adjustments will result in visible behavior, we expect to find nonverbal indications that the personal space definition is undergoing alteration. However, an attempt will be made to reduce the possibility of re-establishment, redefinition, and termination in the proposed study by restricting the options available to the individuals. In this case, we expect to find expressed affect that will increase as the nonnormativeness of the intrusion increases.

Following is a brief outline of several of the conditions for which individual and group norms exist and which, therefore, differ-

entially influence the individual's momentary definitions of his personal space. The outline is not intended to be exhaustive, and attention will primarily be focused on the particular variables under investigation in the proposed study. We will discuss the norms and personal space definitions in four categories: (1) Characteristics of the environment; (2) Characteristics of the individual; (3) Characteristics of the task and the relationship with others; and (4) Characteristics of the other individual.

Characteristics of the environment

Variations in the physical environment arouse differential normative ways of perceiving and dealing with space. The existence of facilitative or obstructive factors in the environment determines the individual's goal in the situation and his momentary definition of personal space. Research has shown that individuals respond differently and alter their use of space in different environmental settings. Room size (Elkin, 1964c); number of occupants (Ittelson, Proshansky, and Rivlin, in press); table and chair availability (Sommer, 1965, 1966, 1967); shape of table (Sommer, 1960); location in reference to speaker (Steinzor, 1950; Sommer, 1960); obstacles between individuals (Sommer, 1966), etc. lead to behavior that implies that personal space is being defined differently under the different conditions.

To illustrate in more detail, Sommer (1965) observed the seating arrangements of individuals in a cafeteria during non-eating hours. He found consistent seating preferences in the use of tables of different sizes and shapes. Thus, at square, four-seated

tables the corner rather than the opposite seats were taken by pairs, while at rectangular tables corner and across seating were preferred and side-by-side and distant seating were rare. We can conclude from the variety of studies that have been done in this area that the physical realities and the norms surrounding their use place restraints on the extent to which an individual can freely define his personal space and, therefore, alter the probability of different behaviors.

Characteristics of the individual

Enduring or momentary states in the individual lead to characteristic ways of using space that reflect these states. We have mentioned that schizophrenics keep larger distances from others than do normals. They also approach inanimate objects more closely than they do people (Horowitz, Duff, and Stratton, 1964). There are other enduring personality traits that seem to influence personal space. Kinsel (1969) found that violent prisoners maintained significantly larger distances from others than did nonviolent prisoners. Williams and Leopold (both described in Sommer, 1969) found that introverts maintained larger distances from others than did extroverts. Weinstein (1965) discovered that emotionally disturbed children overestimated distances between human pairs while normal children did not. Individuals who are high in dominance or who are the group leaders tend to sit at the head of the table with their followers gathered around them (Sommer, 1960, 1961; Lott and Sommer, 1967). In addition, factors such as age and sex influence personal space definitions. Younger children exhibit smaller

interpersonal distances than do older children and adults (Elkin, 1964a; Tolor, 1968), and females prefer closer distances than do men (Sommer, 1959; Norum, Russo, and Sommer, 1967; Lott and Sommer, 1967; Elkin, 1964b). Thus, enduring styles develop which result in characteristic interpersonal goals which, in turn, lead to predictable ways of behaving in the environment.

In addition to enduring states, momentary states appear to influence definitions of personal space. For example, Rosenfeld (1965) found that when subjects attempted to express liking and to seek approval, they sat closer to others than when they were not seeking approval and were expressing dislike. In general, it seems likely that feelings of loneliness, gregariousness, need for companionship, etc. would lead to a narrowed personal space and behavior directed at bringing others closer both physically and symbolically. On the other hand, the desire to be alone or the need to engage in some activity in isolation from all or particular others gives rise to a search for privacy. The desire for privacy results in a need for an expansion in the psychological distance from others. While the general behavioral requisite is that others "keep their distances," the specific ways that this personal space definition is satisfied is closely tied to the type of privacy being sought. Thus, anonymity or immersion in thought requires symbolic distance (absence of staring, talking, prying questions) but not necessarily physical distance, while reading a secret document or speaking privately to someone may require both sufficient physical distance from others to keep them out of

visible and auditory range, and symbolic distance to reinforce the belief that they cannot gain access to the secret (e.g., closed doors, Goffman's "civil inattention" (1963), etc.).

Characteristics of the task and of the relationship

The accomplishment of some task functionally requires that spatial behaviors be facilitative. Thus, individuals who are cooperating on a task sit next to one another (Norum, Russo, and Sommer, 1957) and, similarly, individuals who intend to carry on a conversation sit together (Sommer, 1960, 1961, 1965; Elkin, 1964b), at some optimal distance (Sommer, 1961, Hall, 1966), and facing one another (Sommer, 1960, 1961, 1965; Elkin, 1964b) so as to facilitate speaking easily and communicating nonverbally while watching the reactions of the other.

Thus, specific norms develop which define appropriate and functional spatial arrangements for communicative behavior. Sommer (1960) described one study which illustrates this nicely. He placed two couches facing each other and varied the distance between them. Interacting pairs of individuals chose to sit opposite each other except when the couches were placed three and one-half feet or more apart. At these distances, the pairs sat side-by-side on the same couch. When the couches are three and one-half feet apart, the individuals are about five and one-half feet apart. Sommer concluded that interacting pairs prefer to face one another, but that the maximum distance for comfortable conversation is about five and one-half feet beyond which the less desirable side-by-side seating is preferred.

When the task is not conversational but is, instead, defined competitively or requires solitude, individuals place themselves at a distance from others and in a position which reduces the possibility of eye contact (Sommer, 1965, 1966; Norum, Russo, and Sommer, 1967) indicating that they are defining their personal space in an extended fashion.

In the same way, there are characteristic ways of perceiving different relationships and of translating them into spatial terms. When individuals are asked to place a variety of objects freely in relation to one another or to view and recall physical arrangements, they demonstrate the tendency to group figures and distort memory in the direction of cultural stereotypes and social schemata (e.g., man-woman, woman-child, man-dog). Kuethe and Stricker (1963), Fischer (1968), etc. found that human pairs and especially mixed-sex ones were placed in greater physical proximity than were nonhuman pairs. It would seem that certain units are learned and are assumed to go together, and are then placed together physically to reflect their belongingness. However, this perceptual grouping process is not necessarily reflective of interpersonal behavior, i.e., the grouping of woman and child may mean that they are seen as intimately related, but not necessarily that they maintain smaller distances from one another than woman and man or man and child. It is possible that this distinction accounts for the apparent inconsistencies in the literature. Miniature representations of friends (Little, 1965; Seguin, 1967) and individuals sharing political affiliations (Little, Ulehla, and Henderson, 1968) are placed

closer together but Elkin (1964b, 1964c) reported findings that in his studies friendship and shared attitudes did not seem to affect seating in live interpersonal encounters.

Characteristics of the other individual: sex and race

The attributes of the other person in an interaction situation tend to evoke spatial behavior which is indicative of the relevant norms and interpersonal goals. We mentioned that leaders sit at the head of the table. In addition, their followers respond by clustering around them within eye contact (Sommer, 1961). Lott and Sommer (1967) found that high and low status individuals are kept at a greater physical distance than are peers. This desire to be apart from certain individuals is demonstrated by King (1966) who found that children kept their distances from other children who had exhibited hostility towards them. Similarly, Rosenfeld (1965) and Mehrabian (1968) showed that a desire to express like or dislike for another person was consistently translated into physical closeness or distance from them. Kleck (1969) and Kleck et al. (1968) found that in live encounters and in placement tasks, individuals assumed greater distances from those with physical stigma than from normals.

Thus, there is ample evidence that the characteristics of the other individual arouse norms and goals in the perceiver which define the desired relationship which in turn is communicated through physical behavior. In a general sense, the norms and goals which are relevant to the other individual define the amount and type of contact we wish to have with him, and lead eventually to the physical

and symbolic distance we exhibit in relation to him. If it is considered desirable to seek closeness to a highly favored or liked individual, then behavior leading to physical and symbolic proximity will result; if it is considered desirable to remain aloof and psychologically distant from a feared, scorned, or disliked individual, then physical and symbolic distance will result.

The two characteristics that concern us most here are the sex and race of the other individual. The established sex roles in our society are constantly being challenged and have shown some signs of change; but, for the most part, they have maintained the core elements of a double standard. While there is sufficient cross-cultural and cross-species consistency to suggest some biological basis, there is ample evidence that sex roles are largely learned and established at an early age. The typical male is expected to be independent, unemotional, strong, aggressive, manipulative, etc. and young males are heavily reinforced to adopt these characteristics (c.f., Kagan and Moss, 1962; Kagan, 1969). Except when it expresses masculine dominance or virility, males are discouraged from exhibiting affection and tenderness in public or private.

These demands for independence and distance are especially pronounced in encounters with other males. It is not uncommon for American males to address each other by their last names and maintain predominantly factual-intellectual or boasting-teasing relationships with one another. Affectionate displays are limited to handshakes and back-slapping with the exception of a few isolated relationships (e.g., father and son, long-lost friends, conditions

of extreme emotionality, etc. may lead to an expression of more intimate physical contact and affection). There is a normative assumption that normal, heterosexual males in this country do not desire, but more important, do not openly express warmth, intimacy, nor contact with other males.

As a result of these norms, we should find that men develop goals for greater, more stringently defined psychological distance from others, especially from other males, and that they expect to behave in ways symbolizing this distance. As a consequence of this larger personal space definition, we would expect interpersonal behavior aimed at creating a sense of increased psychological distance. We should find signs of both greater physical and symbolic distance. There is evidence to indicate that this is the case. On the symbolic level, for example, men have exhibited a tendency to engage in eye contact less frequently than women (Exline, 1963; Exline, Grey, and Shuette, 1965). On the physical distance level, the evidence is equivocal but tends to indicate that men avoid and are easily upset by physical closeness to other males (e.g., Horowitz, Duff, and Stratton, 1964; Garfinkel, 1964). Physical contact has taken on a strong sexual connotation, even when the contact is not meant to imply that. When a man is in close proximity with a strange woman, he may be aware of the potential sexual meaning of his closeness but his role of virile male will allow or at least excuse his behavior. However, if the same sexual meaning is attributed to proximity to another male, he is likely to feel threatened and highly uncomfortable.

The female sex norms have a much clearer effect on personal space and spatial behavior. Throughout the socialization process, women are reinforced for being dependent, conforming, emotional, and nonaggressive (c.f., Kagan and Moss, 1962; Kagan, 1969). They are encouraged to become socially sensitive and socially-oriented (Bennett and Cohen, 1959; Carlson, 1965) and to prove that they are capable of forming deep, intimate relationships with others (Jourard and Richman, 1963; Kagan, 1969). Unlike men, women are allowed and expected to express warmth, tenderness, affection, and weakness. Also unlike men, they are allowed fewer social improprieties and are expected to uphold the moral code. They grow up to be more conforming individuals (Crutchfield, 1955; Allen and Crutchfield, 1963) which further assures their compliance to the appropriate social norms.

The social consequences of these roles are different for different relationships. In her encounters with significant others in her life---husband, relatives, girlfriends, children, etc., she is likely to express warmth, open affection, concern, and involvement in their lives. It is not unusual to hear women express love for one another nor to see them embrace one another affectionately. Similarly, they are demonstrative with other relevant people in their lives. While they are less intimate and more formal with females they do not know well, there are no strong rules regulating their relationship with them. On the other hand, when women relate to men outside of their circle of intimates, they are expected to be proper, aloof, and distant. A woman must not express

to men the affection and openness that she shares with women, for to do so would be considered a sign of promiscuity. She also learns to suspect the motives of men who violate the strict rules of this code. Intimacy between women can be devoid of sexual meaning, while intimacy between men and women is usually interpretted as having sexual overtones. It is not likely that the type of close, nonsexual friendship open to women is reproducible in male-male or male-female relationships. The norms each has inculcated in reference to the other would result in personal discomfort and/or social reprimand in response to attempts to form intimate bonds.

The types of relationships a woman anticipates with others is very much a function of their sex. Primarily, we can expect that she is receptive to warmth and closeness with most females but not with most males. She is more accustomed to intimacy with females and is, therefore, likely to accept it more readily and more rapidly than she is with males. Consequently, she should develop larger personal spaces for males in general than for females in general. Given a constant relationship, such as strangers, she should experience a larger personal space for a male stranger than for a female stranger.

Although the social schemata research indicates that male-female pairs are grouped together and placed in greater proximity than male pairs or female pairs (e.g., Kuethe and Stricker, 1963), there is a great deal of evidence that in live encounters women prefer closer distances with each other than with males. Females

stay closer together than do males (Elkin, 1964b; Norum, Russo, and Sommer, 1967; Lott and Sommer, 1967), stay closer to one another than to males (Campbell, Kruskal, and Wallace, 1966; Sommer, 1960, 1966, 1967c; Dosey and Meisels, 1969), and they become more emotionally aroused when approached by males than when approached by females (McBride, King, and James, 1965). It is clear then that females respond in a different spatial manner to males and to females. Since these differential responses are normatively determined, it follows that they will occur in most normative social settings. Should the situation change and no longer qualify as a common normative setting, we would then have no grounds for predicting typical normative behavior. For example, we are likely to find a female keeping great distances between herself and women who are making aggressive or homosexual advances. This avoidance of the other females does not contradict the above findings as this situation is nonnormative in the culture with which we are concerned. We expect, therefore, that in normative social settings a female will experience a "larger" personal space for males than for females, and as a consequence, will choose a distance from a strange male that exceeds the distance she chooses from a strange female.

HYPOTHESIS 1: For a given normative social setting, females will choose greater interpersonal distances from male strangers than from female strangers.

Even though females have smaller personal spaces for other females than for men, there are distances, configurations, and behavior between women which will be considered excessively intimate,

restrictive of free behavior and choice, and therefore, intrusive of personal space. As we predicted earlier, intrusions are avoided if alternatives are available, and we can expect that intrusions with females will also be avoided. However, as we discussed earlier, intrusions can vary in intensity and the more extreme the perceiver's experience of invasion, the less likely it is that she would choose it over other alternatives.

If social norms lead a female to develop a larger personal space for males than for females, then we should find that an identical act of intrusion will be experienced as more intrusive with a male than with a female. Females will feel a heightened sense of intrusion with the male because the intrusion with him is a more intense violation of the personal spaces of both, a more serious infraction of the norms, and a greater restriction on her behavioral freedom and choice.

Thus, we expect that in two identical intrusion situations which differ only in the sex of the other person, the female will perceive a very close encounter with a male as more intrusive than an identical encounter with a female. This altered perception will lead the female to avoid intrusions with males more than she will intrusions with females, and to consistently show a preference for the latter over the former.

HYPOTHESIS 2: In a normative social setting, females are more likely to accept personal space intrusions with other females than personal space intrusions with males, when such choices are possible.

We suggested earlier that the perceiver's experience of an intrusion is altered by the context of the intrusion, i.e., by the

nature of the alternative choices that exist for her in the situation. We would expect, for example, that a person's feelings about intruding upon a given female when there were many empty seats in the room would be considerably different from her feelings about intruding upon the identical female when the alternative choice was a threatening-looking male. To test the validity of this assumption about the effects of context on intrusion, we will explore the behavioral and affective responses of subjects in our research who intrude upon the same people in different contexts.

The second set of norms which concern us in the present research are those which are relevant to the race of the other individual in the interaction. Aside from any individual prejudice, it is normative in this society to prefer and feel more comfortable with those who are familiar, that is, "one's own kind." While this is characteristic of intergroup relations in general, it is particularly relevant to the current relationship between blacks and whites in this country. The overwhelming white majority norm which varies in intensity across the country and across groups of individuals is the avoidance of intimacy, contact, and psychological closeness with Negroes.

Norms concerning minority groups influence spatial behavior through the mediation of personal space. The white individual learns the normative interpersonal goals and develops a larger personal space to satisfy them, i.e., he comes to expect behavior signalling considerably greater psychological distance from Negroes than from whites in order to function comfortably and freely.

This enlarged personal space is manifested behaviorally through physical and symbolic distancing devices during ongoing or potential interactions with Negroes.

There is very little direct evidence of the influence of race on personal space definitions. W[illiams] (1966) found moderately significant differences in the speaking distances whites maintained from Negroes and whites. There has been some evidence that anti-Negro prejudice is related to the use of space. Kuethe (1964) found that highly prejudiced subjects group figures on the basis of color, and Porier and Lott (1967) found that highly prejudiced subjects responded with increased GSR readings to the touch of a Negro experimenter. However, the likelihood that personal space is influenced by the existence of widespread cultural norms against proximity with Negroes must be inferred indirectly from the literature on small group ecology. Thus, if membership in the Negro race is considered to be a social stigma, then whites should maintain greater distances from them just as they do from physically and personally stigmatized people (Kleck, 1969; Kleck et al., 1968). If Negroes are avoided because they are threatening to one's well-being or status, then they should be kept at a distance to assure a sufficient body-buffer zone to protect the self from external threat (Horowitz, Duff, and Stratton, 1964).

On the other hand, the influence of normative prejudice on the use of large-scale environments is very apparent across the country. In the South and among groups with extreme forms of bigotry, the importance of spatial segregation is clear. Until

the enactment of legislation which forbade it, all facilities from transportation to toilets were separate. Although it is now illegal to practice most forms of racial discrimination, there is pervasive institutionalized prejudice which perpetuates inequality. Big business, big government, unions, etc. are all guilty of discriminatory practices. In housing alone, the Commission on Race and Housing (1968) pointed to the complicity of government, real estate brokers, banks, etc. in preventing meaningful neighborhood integration.

Although segregation is now advocated by very few whites, aggregation is still clearly the norm. The existence of voluntary ghettoes and the covetous protection of defined turfs and territorial boundaries when they are drawn is evidence enough. Also revealing is the erroneous belief that property values will go down when Negroes move into a neighborhood (Laurenti, 1968), the belief that the status of one's neighborhood is reduced by Negro occupants, the feeling that people get along better with their own kind, etc. These lead eventually to the same consequences even among those who are not highly prejudiced. Campbell, Kruskal, and Wallace (1966), for example, found that the classroom seating patterns of Negroes and whites in two well-integrated colleges, one liberal and the other not, tended towards racial aggregation in both schools. There seems to be a general discomfort and resistance to integration of schools, housing, work groups, recreational facilities, etc. because there is a widespread fear of the consequences. Even when integration in one of these interaction settings is achieved

successfully, it does not generalize to other situations (Pettigrew, 1969).

Thus, social distance becomes transformed into behavioral distance on many different levels of interaction. We are suggesting that these norms lead white individuals to develop larger personal spaces for Negroes. This need to feel separate and psychologically distant from Negroes causes large-scale distancing in the form of segregation or aggregation, and is more directly demonstrated by increased spatial distances during face-to-face interactions.

HYPOTHESIS 3: For a given normative social setting, white individuals will choose greater interpersonal distances from Negro strangers than from white strangers.

As we discussed earlier, larger personal spaces intensify the sense of intrusion when personal space is violated. We expect, therefore, that two intrusion situations which are objectively equal save for the race of the other individual, will result in the perception that the Negro intrusion choice is more intrusive. The consequences of this perception will be the avoidance of intrusions with Negroes and the preference for intrusions with whites.

HYPOTHESIS 4: In a normative social setting, whites are more likely to accept personal space intrusions with other whites than personal space intrusions with Negroes, when such choices are possible.

These hypotheses assume that the racial norms will be aroused in the experimental setting and that the subjects will not feel restraints against expressing racial preferences. We anticipate that the use of nonreactive measures will increase the probability that subjects will respond according to the norms we have described, but

it is possible that embarrassment or overcompensation will lead subjects to respond in the exact reverse of our hypotheses.

Finally, it is difficult to predict the responses of Negroes to choices between white and Negro intrusions and to interpersonal distance measures. There may be cultural differences in overall interpersonal distance between whites and Negroes. In addition, it would be equally possible to support the argument that Negroes have adopted white prejudice and have larger personal spaces for Negroes than for whites, or the opposite argument that Negroes have smaller personal spaces for Negroes than for whites because they are more familiar, more comfortable, and more attracted to other Negroes. Therefore, no specific hypotheses will be advanced, but Negro females will be exposed to as many experimental conditions as possible.

CHAPTER II

METHOD

Subjects

The subject sample was drawn from females employed in several different departments in a large metropolitan publishing firm. While most of the subjects had secretarial responsibilities, others were involved in editorial work.

Since there is a great deal of evidence of sexual and cultural differences in the use of space, only native-born females were used. In addition, a population that was likely to have a majority of non-college women was intentionally chosen. College women, particularly in a college setting, would be more likely to come under the influence of norms contrary to the ones we are dealing with here. These college-related norms would be aimed at the expression of greater liberality in racial matters and greater sexual freedom. In addition, college students tend to be test-wise and wary in an experimental situation. Thus, subjects who were less likely to have college backgrounds were tested in a nonacademic, nonexperimental setting. That the norms under question were in fact relevant to this subject population was tested and will be discussed in the following chapter.

The initial subject population consisted of 138 females. Twenty-two of the subjects were dropped from the sample: one white subject because she entered the room prematurely before the experimental conditions were set; fifteen white subjects because they were

foreign-born; and six Negro subjects because they were tested in conditions intended only for white subjects (e.g., the Free-Seating Choice conditions). Thus, the actual test sample of subjects consisted of 98 white native-born females between the ages of 17 and 59 and 18 Negro females between the ages of 17 and 43. Seventy-two of the white subjects were single, while 26 were married or divorced; 11 of the Negro subjects were single, while 7 were married or divorced.

Experimental Design

The research involved three sets of experimental conditions: Free-Seating-Choices, Intrusion-Choices, and Intrusion-Nonintrusion-Choices.

In the Free-Seating-Choice conditions, subjects chose a seat on a six-foot bench which was already occupied at one end by a confederate. The independent variable was the race or sex of this seated confederate, and the dependent variable was the distances the subjects placed between themselves and the confederate when they sat down. This resulted in a two-by-two design (race of confederate by sex of confederate) with ten white subjects in each of the four conditions.

The second set of conditions, Intrusion-Choices, required the subjects to choose between two three-foot benches, each occupied by a confederate. The conditions varied as to either the race or sex of the two confederates, resulting in a total of four different conditions. Over all four Intrusion-Choice conditions, there were 46 white and 18 Negro subjects.

In the final condition, Intrusion-Nonintrusion, subjects were given a choice between an empty three-foot bench and one occupied by a white female confederate. Twelve white subjects participated in this condition.

Thus, in all, there were nine conditions with at least ten subjects in each one. Since each condition required the participation of different confederates and since the trials were run consecutively, conditions were run in blocks of at least five in a row rather than ordered randomly. Also, since each subject had to be seen when she was available and when her department was being tested, subjects were assigned to whatever condition was in progress rather than a completely random assignment of subjects. However, whenever scheduling allowed, the particular blocks of trials and the order of subjects each day were randomly determined.

Materials for the experimental conditions

The experimental materials consisted of two unfinished wooden benches, each three feet long, and three black vinyl cushions, two of them three feet long and one of them six feet long.

Pilot tests were conducted to determine the effectiveness of these benches in the measurement of interpersonal distance and intrusion preference. Secretarial students and working girls were asked to volunteer for some research on "moods and feelings." These subjects were used because they were similar to the experimental groups.

When the pilot subjects arrived at the experimental room, they were asked to have a seat in a waiting area until the

experimenter was ready to see them. In this area, the benches and the confederates were arranged according to the particular experimental condition being tested. When the subject had selected her seat, she was given an affect measure to fill out while still seated. Upon completing the measure, she was invited to the experimenter's desk and was administered other pilot tests, was dehoaxed, and finally, was questioned about her seating choice. In the following description of the different experimental conditions, the relevant pilot test results will be discussed.

In the Free-Seating-Choice conditions, the two benches were placed side-by-side and covered with a single six-foot cushion. What resulted was a single six-foot bench with an unbroken seating area. The length of the bench was dictated by the need to provide a bench that was short enough to look natural in a waiting area and yet long enough to provide a wide range of seating choice positions to the subjects. The confederates consistently occupied eighteen inches of the bench and the subjects had to occupy at least ten inches. This meant that the maximum distance the subjects could place between themselves and the confederates was forty-four inches. In the pilot tests described above, the greatest distance subjects sat from the confederates in the Free-Seating-Choice conditions was 34 inches, the smallest distance was 15 inches, and the mean distance in relation to a white female confederate was 16.4 inches (N=5) and in relation to a white male confederate was 26.5 inches (N=4). Thus, as the underused space indicates, the bench was long enough to provide free, natural

seating choices and to allow a significant difference to emerge between the distances chosen in relation to the male and female confederates ($t = 3.08$; $p < .02$).

In the Intrusion-Choice and Intrusion-Nonintrusion conditions, the two three-foot benches were separated and covered with individual cushions. To meet the criterion of intrusions, each bench had to be small enough so that when it was occupied by a single confederate the remaining space appeared to the subject to be inadequate and too small for comfort. A three-foot bench was chosen because it was large enough for two people to sit on it but small enough to prevent the usual interpersonal distance strangers maintain. Regardless of how far subjects sat from the confederate, they would still be in the zone Hall (1966) described as "intimate distance" (which ranges from contact to eighteen inches), and they would be at a distance from the confederate that was sufficiently small to cause subjects to flee in the invasions staged by Felipe and Sommer (1968). In the pilot tests we conducted of the intrusion conditions, the confederates sat on half of the bench with their legs turned partially in front of the remaining space. The fifteen inches of bench remaining was, objectively, quite small for the frame of the average-sized girl. The subjects who sat in this small space tended to sit at an angle away from the confederate or on the edge of their seats; in both cases sitting motionless and without the benefit of support for their backs. The average distance the subjects left between themselves and the confederates was six inches, leaving a mere nine inches of bench for themselves

to occupy. In the Free-Seating-Choice condition, no subject sat closer than fifteen inches, further indicating that the available space in the intrusion situation was inadequate.

The subjects' avoidance behavior in these intrusion situations is in marked contrast to the more relaxed posture of subjects in nonintrusive seats (i.e., in nonintrusion chosen over intrusion and in the Free-Seating-Choice conditions). However, while their behavior under conditions of intrusion and nonintrusion differed, their verbal reports of their experience of the two conditions did not. In post-experimental interviews the subjects denied experiencing discomfort or a sense of excessive closeness to the confederates in the intrusion situations. While their body adjustments once they took a seat may have reduced the sense of intrusion to some extent, it is perplexing that they failed to acknowledge even initial discomfort at the available seating.

An explanation is suggested by a common finding in the literature and in our pilot tests as well. Subjects seem to suffer a great deal of difficulty and embarrassment in talking about space and its misuses. They seem able to talk about general rules for the use of space and to verbalize the social norms regarding them. This was quite evident in the test of spatial norms which we will discuss in the results section and in the subjects' casual conversations with the experimenter at the conclusion of the pilot tests. However, they appeared to feel uneasy about discussing their experiences of actual infractions of the spatial norms in the experimental situation. Their tendency seems to be towards either

nullifying the infraction entirely or towards denying any awareness of the infraction. Thus, in an earlier pilot test, a female confederate sat down next to a female subject on a five-foot couch in a waiting room, stared into her eyes, and pressed her shoulder against the subject's. After a few moments in which the subject averted her eyes, turned away, and busied herself in a book or some other belonging, the confederate revealed the purpose of her presence and behavior and asked the subject for a verbal report of feelings during the episode.

The subjects unanimously denied experiencing any discomfort and agreed that the confederate's behavior had not been unusual. It might be noted here that the confederate, even though fully aware of the purpose of the intrusion, was very uneasy during its enactment. However, only one subject moved further down the couch when the confederate sat next to her, and she later reported that she felt that she had been occupying too much of the seat and that the confederate's closeness had been a function of that. Thus, even in what seemed to be a blatantly intrusive situation, subjects denied and excused and generally refused to acknowledge being the victim of inappropriate proximity.

It is interesting that subjects are willing and able to verbalize norms for the use of space and to cite examples of their violation, but are unwilling or unable to acknowledge intrusions at the time of their occurrence. The very same subjects who denied that the confederate had behaved inappropriately in the above situation were eager to describe personal experiences of norms and their

infraction in their everyday lives.

Neither of the pilot intrusion situations, the confederate intruding in one and the subject intruding in the other, were described as intrusive by the subjects. To conclude, however, that the two conditions were not experienced as intrusive does not seem warranted. The limited space on the benches and the subjects' avoidance behaviors whether they were the victims or the perpetrators of the intrusion presented strong evidence that their verbal reports were not accurate reflections of their experiences. They seemed unwilling or embarrassed to admit to the perpetrator or to the witness that they had successfully been made participants in an intrusion.

Since accurate verbal reports appeared to be unavailable, more indirect defining characteristics of the intrusion situation were used. A partially occupied three-foot bench was considered intrusive because the seating it provided: (1) was objectively small for the average-sized girl; (2) required interpersonal spacing that was less than any subject had chosen when given greater seating flexibility on the long bench; (3) resulted in nonverbal avoidance behavior in the subjects who sat next to the confederates on the bench; (4) forced the subject to sit at a distance from the confederate that successfully resulted in flight in Felipe and Sommer's intrusion study (1968); and lastly, (5) required interpersonal distances that fell within Hall's (1966) "intimate zone" of interaction.

Confederates

Four different confederates were employed, one at a time in the Free-Seating-Choice and Intrusion-Nonintrusion conditions and two at a time in the Intrusion-Choice conditions. The confederates differed from one another in race and sex, i.e., there were two females, white and Negro and two males, white and Negro.

The confederates were selected on the basis of their resemblance to one another on as many characteristics as possible that were not linked directly to their race or sex. For example, hair length and texture were obviously going to differ between sexes and races, but facial hair, age, attractiveness, etc. were kept constant. To determine whether the confederates were, in fact, perceived to be similar, pilot tests were conducted. The results of these will be presented in the next chapter.

Finally, the confederates were instructed to dress in the same manner across all trials. The male confederates wore sport jackets and ties and the female confederates wore casual dresses. The confederates' attire was very similar to that of the subjects and their male coworkers.

Experimental procedure

All female employees in several different work units of a large publishing firm were notified by their supervisors and in a mimeographed letter from the Personnel department that interviews about the use of space in the office were to be conducted. The letter (see Appendix A) was circulated to reduce confusion, curiosity, and inter-subject communication and gossip. The study was

described as a short interview conducted by a research team from the City University. The stated purposes of the research were the potential improvement of conditions in their offices and the publication of the final results by the participating company. The letter used the expression "research team" to explain the presence of the confederates in the research room, and it classified the research as "first phase" in order to justify the use of female subjects exclusively.

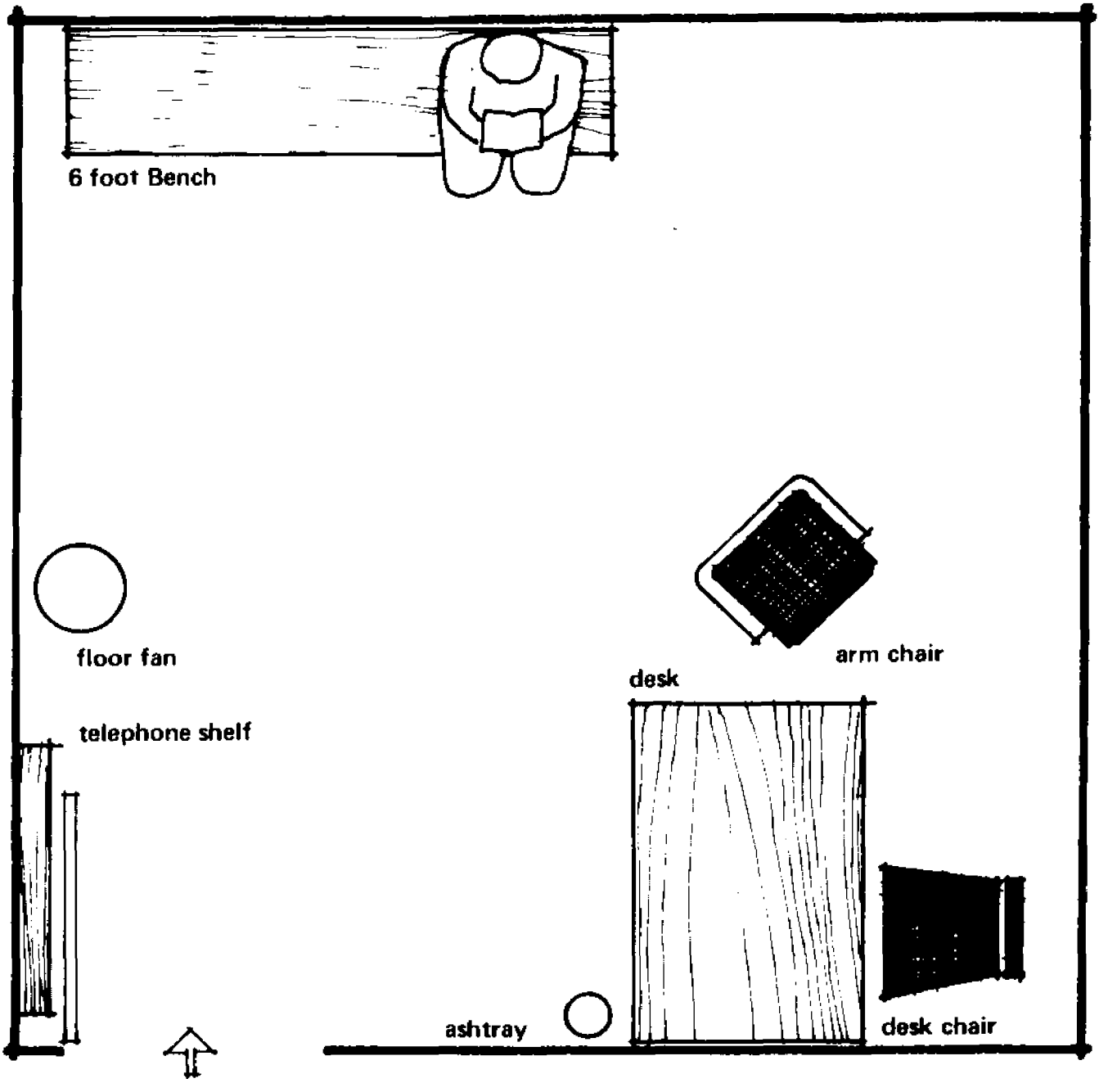
Only the personnel director, who was responsible for all of the arrangements, and the three floor managers of the departments initially interviewed were informed of the true nature of the study. They provided lists of female employees with information as to their race and approximate ages. The departmental supervisors were not interviewed, however, nor were they told of the actual intent of the interviews. In the closed environment of the offices, it was important to minimize all sources of communication in order to preserve the efficacy of the experimental manipulations. Also to this end, subjects were asked not to discuss the interview with anyone on the pretext that spontaneity in future subjects was important, and the experimenter moved quickly through each department before beginning interviews in a new department. Finally, to avoid exposure and to comply with the wishes of the company, at no point were the subjects nor the supervisors told the true purposes of the interview by the experimenter. The personnel director expressed the desire to deal himself with the dissemination of information about the study once it was completed.

The interviewing took place in a small conference room on the second floor of the building. Since the subjects were drawn from four different floors, many of them had to leave their floors to be interviewed. The conference room was twelve feet by twelve feet with two movable walls separating it from other conference areas. The remaining walls were permanent structures. The third wall was cloth-covered and the fourth, of frosted glass, contained the door which opened inward. Behind the metal door on the cloth-covered wall was a suspended shelf for the telephone and telephone directories. The remaining objects in the room were the interviewer's desk with its side against the glass wall, two desk chairs for the interviewer and interviewee, a floor fan beside the telephone shelf, a standing ashtray next to the desk, and the two benches on the wall opposite the door and desk. Figures one and two below illustrate the room dimensions and furniture arrangements for the two sets of experimental conditions.

Insert Figures 1 and 2 about here

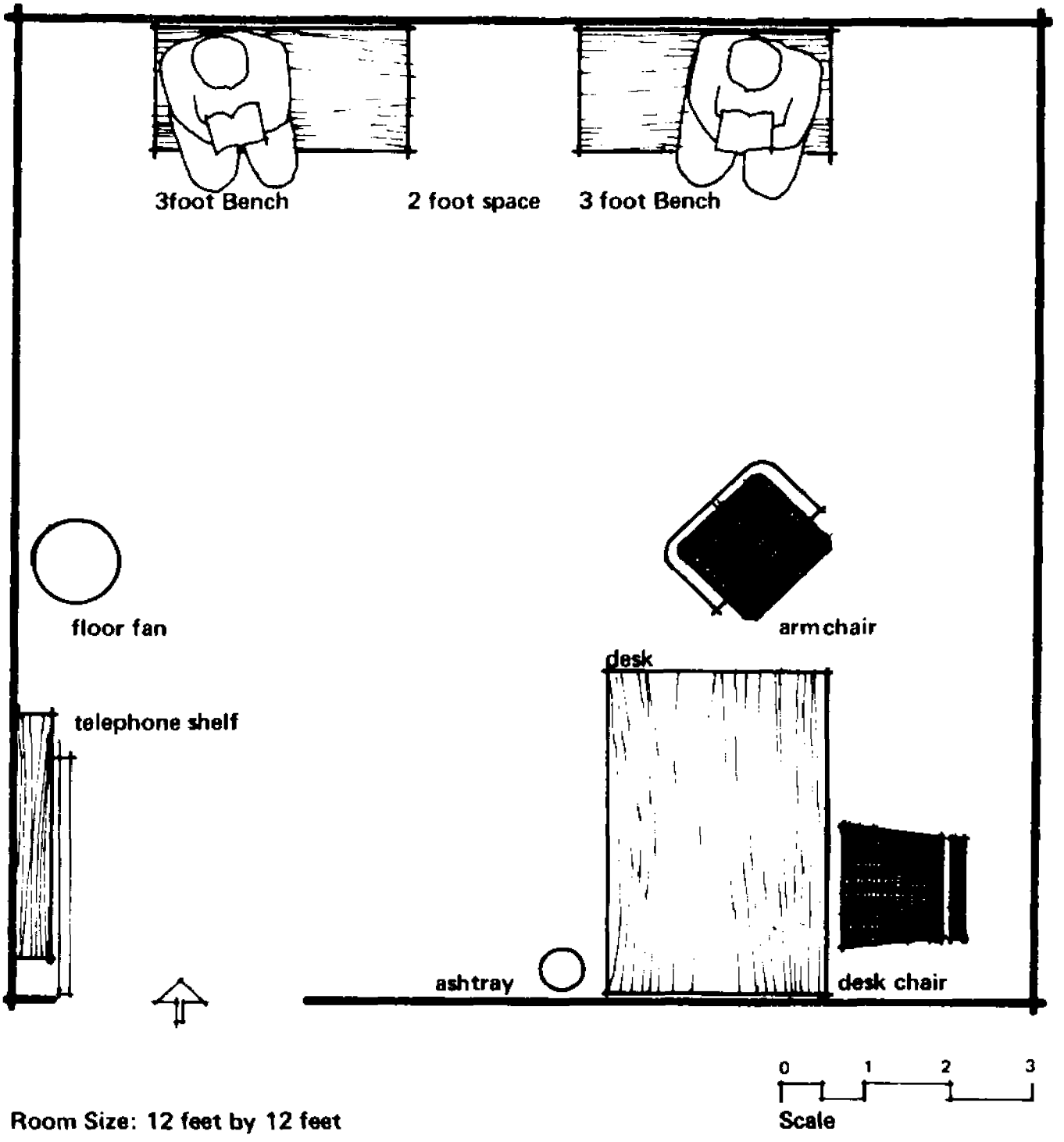
At the beginning of each testing day, the supervisors of the relevant departments were notified that their groups would be interviewed that day. Subjects and supervisors were told that the order of interviewing was randomly determined, and no interview schedule was provided for them in advance. In this way, E was able to arrange the scheduling to meet her needs, eliminate subjects who did not meet the qualifications, and schedule Negro employees to specific conditions

Figure 1; The conference room and furniture arrangements used in the Free-Seating Choice conditions



Room Size: 12 feet by 12 feet

Figure 2: The conference room and furniture arrangements used in the Intrusion-Choice conditions



Room Size: 12 feet by 12 feet

when possible. However, decisions were always made in the direction of reducing suspicion, so that many subjects who were to be eliminated were interviewed if their ommission would have seemed strange, requests for appointment changes were honored, etc.

Before interviewing began each day, E checked with the supervisor's work sheet to be certain that each girl was present that day and to determine their work and lunch hours. After arranging the schedule and when the confederates and furniture were in place, E called the supervisor and asked her to send a particular employee to the interview room. When the subject had her own phone, she was notified directly. The second subject was notified of her turn by the first subject when she returned to the department, the third subject was notified by the second subject, etc. While this procedure was time-consuming because it required waiting between subjects, it prevented subjects from arriving prematurely and it insured that two employees would not be absent from their departments simultaneously. As we will describe shortly, subjects were requested not to discuss the interview and to hurry the next subject along. Both of these reduced the likelihood of intersubject discussions. Whenever a break was desired (e.g., to change conditions or to have lunch), a new subject was not requested and, when testing was to resume, the cycle was started again with a call to either the supervisor or to the next subject.

On the door of the conference room, a sign "Interview Room" was placed to help the subjects locate the room quickly. When a subject was expected, the door was left slightly ajar to further

aid the subject in finding the room. When the subject arrived at the door of the conference room, E invited her in, asked her to sign the register and to have a seat. E said to the subject:

> "Hello. Please sign in here (pointing to sheet on desk). Thank you. Now please have a seat (pointing in the direction of the benches). I'll be with you shortly."

The purpose of signing the register was twofold. First, it identified the subject to E, and second, it placed all subjects in the identical position when they turned to approach the benches. The register was directly opposite E on the desk, so that as the subject signed in she was at right angles to the benches and, as she turned to approach the benches, she was directly between them in the intrusion-choice conditions and directly opposite the confederate in the free-seating choice conditions.

As the subject turned to approach the benches, the seated confederate(s) looked up at her briefly and then quickly looked back at the books they were reading. This glance was intended to show the subject that the confederate(s) was aware of her, and to prevent her from treating the confederates as nonpersons. However, no conversation nor communication between the subject and the confederates was permitted. For this reason, the confederates were reading, and in the event that the subject addressed them, they were instructed to give polite but brief and noncommital responses. Information as to the confederates identities was intentionally left vague. They were dressed similarly to the subjects and they covered the titles of the books they were reading. Under the interview conditions it was possible for the subjects to view the

confederates as other subjects or employees, or as members of the research team. Since there was no reason to invoke either of these images over the other, the confederates held clipboards but read books to allow the subjects to draw their own conclusions as to their identities.

As soon as the subject made a seating choice and settled into that seat, E recorded whatever data were possible at that point. She then brought a mood questionnaire to the subject along with a pencil and a clipboard to lean on. She handed the material to the subject and said:

> "This is the first part. The instructions are on the front and there are three pages. Work quickly and finish it all. As soon as you're finished, bring it over to me (pointing to desk) and I'll ask you the rest of the questions. O.K.?"

E then returned to her desk and busied herself while the subject filled out the questionnaire. She got the office interview ready, recorded all seating, distance, and postural information about the subject, and waited for the subject to return to the desk or signal that she was finished. At no time did she acknowledge the presence of the confederates nor did they seem to pay any attention to the conversation between E and the subject.

When the subject approached E's desk, E invited her to sit down and took the affect measure, clipboard and pencil from her. At this point the experiment was concluded but, for the subject, it was just beginning. E then smiled at the subject and said:

> "The rest of the questions have to do with the office that you work in. Everything you say here is completely confidential, so please feel free to be as honest and as frank as you wish. You see (pointing to answer sheet), I put a number here and not your name."

E then administered the office questionnaire (see Appendix B). At the conclusion of the questions she said:

> "That's it for my questions. I have just two more favors to ask of you. I'm going to be interviewing many other people in your department, and it's very important that their answers be natural and spontaneous. I don't want them to come here with prepared answers, nor do I want them to think about the questions before they get here. So, I've been asking everyone not to talk about the interview at all. Can you understand why? If anyone asks you about the interview, you can tell them that there's nothing to worry about and that I just asked some general questions about your office, but no specifics--- O.K.?
>
> "My second favor is that you ask Miss_____ to come down next. Do you know who she is? Good. Would you ask her to come as quickly as possible? I'm trying to keep a schedule. Thank you very much. Goodbye now."

The reason that an office questionnaire was chosen as the rationale for the interviews was that it was independent of the experimental manipulations and would, therefore, not provide any cues about them, it was attractive to the management of the company, it promised to provide some interesting information, and finally, it provided an excellent diversion from the true purposes of the interview.

The reason subjects were requested not to reveal anything about the interview was to further focus attention upon the interview and to reduce any conversation about what happened to the subject in the interview room (i.e., it was expected that subjects also failed to mention the benches, the confederates, etc.).

As soon as the subject left the conference room, the experimenter and the confederate(s) prepared for the next trial. The confederates took their places, the door was opened slightly, and the E waited at her desk for the next subject's arrival.

INDEPENDENT VARIABLES

Free-Seating Choice Conditions: As described earlier, the seating provided in the free-seating choice conditions was a single six-foot bench covered by a solid black vinyl cushion. The purpose of these conditions was to find the distances subjects naturally kept between themselves and persons of different races and sexes. Thus, the independent variables in these conditions were the race and sex of a single person (the confederate) seated at one end of the bench, occupying eighteen inches. The four conditions, therefore, consisted of a white female confederate, a Negro female confederate, a white male confederate, and a Negro male confederate, each seated on the bench individually. Naturally, only one confederate appeared in each condition and each subject was exposed to only one condition.

The bench was placed in the room so that all subjects approached it from the same distance and position; so that the confederate was visible and in the most accessible seat; and so that the subject had to pass the confederate and go out of the way in order to sit down. This assured that the subject did not choose the closest seat irrespective of the confederate's presence. That this seating situation was effective was demonstrated by our pilot tests. All pilot subjects took a seat on the bench and accepted the confederate's presence, and all pilot subjects spontaneously mentioned the presence of another individual when they were later questioned.

The six-foot bench was placed on the wall opposite the door and desk. It extended from the point opposite the subject as she igned in to her left as she faced it (see Figure 1). The confed-

erate was seated directly opposite her, so that she had to turn away from the desk, walk at an angle past the confederate, and take a seat somewhere along the bench. The bench extended from the center to the left rather than to the right because E's desk was on the right, and it was desirable to avoid preferences of sitting near or far from the experimenter.

Intrusion-Choice Conditions: The seating choices in the intrusion-choice conditions consisted of the two separate three-foot benches. Seated on the outside half of each bench was a confederate who was turned slightly towards the center of the bench and, thus, was slightly blocking access to the remaining seating space (see Figure 2).

The purpose of these conditions was to determine whether the race and sex of another person influenced the subject's choice of a small seat that would place her in close proximity to this other occupant of the chosen bench. Thus, the independent variables in these conditions were the race and sex of the two confederates in each condition. The four conditions were choices between intrusive seats with white versus Negro females, white versus Negro males, male versus female whites, and male versus female Negroes.

In the conference room, the two benches were placed on the wall opposite the door and desk. They were two feet apart and equally distant from the subject as she turned away from the register sheet. The seated confederates were on the outside edges of the benches so that the two available seats were near one another on the inside edges of the benches. Although the benches were equally distant from the subject, the confederates were

alternated between the two benches to correct for any left- or right-turning tendencies. Thus, for each condition the two confederates sat on the left bench for half of the trials and the right bench for the other half.

The importance of the placement of these benches was illustrated in the pilot tests discussed earlier. In order to qualify as true seating choices, the benches must be equally accessible, near to one another, and at a sufficient distance for the subject to survey her choices and to gradually and subtly choose one of the seats. When an equal choice or a sufficient opportunity to view the choices is not provided, then the subject is unable to casually and surreptitiously express her seating preference in a socially desirable manner. The need to be graceful and proper will direct her to the nearest seat and will overwhelm her desire to sit next to a particular confederate. In one of our pilots, the subject had to turn towards the right or left bench immediately upon being asked to take a seat. There was no opportunity to survey the choices nor to politely consider and choose between the alternatives, and thus, there was not a true choice provided. As a result, subjects (N=8) were just as likely to choose intrusion as nonintrusion and intrusion-male as intrusion-female. However, when the waiting area was changed so as to allow the subject to consider the alternatives as she approaches them from a distance which made them equally visible and accessible, there was a unanimous choice of nonintrusion over intrusion and of intrusion-female over intrusion-male (n=6).

Thus, the desk and the benches were placed in the conference room so as to put the benches at some distance and equally accessible from the desk. This allowed the subjects to approach the benches gradually and to judge and choose between the seated confederates. Although the available seats were objectively small and intrusive, our pilot tests indicated that all subjects would sit down when requested to rather than stand to avoid the intrusion.

Intrusion versus Nonintrusion Condition: The placement of the two three-foot benches in this condition was exactly the same as in the intrusion-choice conditions. However, in this condition the subjects had a choice between an empty bench and a bench occupied by a white female confederate. This confederate was used in the intrusion-nonintrusion condition because we wished to determine whether nonintrusion was consistently chosen over the mildest of intrusion situations.

MEASUREMENT PROCEDURES

Interpersonal distance: In the Free-Seating-Choice conditions, the distances the subjects placed between themselves and the seated confederates were the dependent measures. These distances were measured between the inside hips of the subject and the confederate.

Along the front edge of the benches thin vertical lines, one inch apart, were drawn and discreetly numbered. From her desk, E was able to follow the line of the subject's hip down to the front of the bench and was able to read the number that appeared there. Thus, E noted and recorded the number of inches between the subject and the confederate as soon as the subject settled into her seat

and before E presented her with the affect measure.

Intrusion choices: In the five Intrusion-Choice conditions (including intrusion-nonintrusion), E noted and recorded the subject's seating choice as soon as she took her seat. The particular seat chosen was the major dependent measure in the Intrusion-Choice conditions.

Intrusion distances: Both benches in the Intrusion-Choice conditions were marked and numbered along their front edges. The centers of the benches were numbered zero, and the remaining inch lines were numbered from one through seventeen from the center out to the edges. In this way, the distances the subjects placed between themselves and the confederates upon whom they intruded was read directly from the front edge of the benches by the experimenter.

The experimenter noted and recorded these distances from her desk as soon as the subject settled into her seat. When the edge was blocked by the subject's legs, E noted the distance as she approached the subject with the affect questionnaire.

Body Orientation: In all nine conditions, the position of the subjects' bodies were noted as soon as they settled into their seats. This descriptive information was recorded by the experimenter. The type of information sought was: body direction in relation to the confederate, position and direction of legs, relationship of arms and hands to body, degree of forward and backward lean, amount of seat area occupied, sideward lean, erectness of body, position of head, activity level, activity engaged in, and any other behavior that seemed worthy of note (e.g., placement of

pocketbook, ashtray, etc.).

The design of the conference room did not allow us to make use of a hidden still or motion picture camera. Since we were unable to get this kind of permanent and objective data on body orientation, E's notes served only as gross indicators of body position and general behavior in the waiting room setting.

Affect Measure: The conventional anxiety scales were not really appropriate to the intrusion situation. As discussed earlier, intrusion seems to arouse discomfort, embarrassment, awareness of others and of social norms, etc. but not intense emotional reactions such as fear, depression, hostility, etc..

For this reason, a new affect measure was devised. Initially, a group of subjects were asked to imagine an intrusion situation and to project their reactions to it by responding to a variety of adjectives. From their responses, twenty adjectives were chosen and incorporated into an affect scale (see Appendix C). Subjects in all pilot conditions were asked to fill out the measure while they were sitting on the benches next to some confederate. They were asked to respond as they felt "right now, at this moment" by circling numbers on nine-point scales.

The subjects' affect scores consisted of the total of sixteen directional items, with the scores on the positive words reversed so that higher scores meant more negative affect and lower scores more positive affect. The possible range of scores was from sixteen to 144. The remaining four items were nondirectional and scored separately (i.e., "aware of others," "conversational,"

"curious," and "active").

Initially, the individual and total affect scores were compared for differences between intrusion choices and nonintrusion choices. It was assumed that intrusions would result in greater affect than nonintrusions. However, neither the total affect scores nor the individual adjectives were different for intrusions and nonintrusions. In addition, the intragroup variance was substantial (see Appendix D).

When the subjects were regrouped in terms of the normativeness of their choices, striking differences began to emerge. Thus, total affect and several individual adjectives were significantly higher when the subject's choice was a nonnormative one than when her choice was a normative one. The normativeness and nonnormativeness was defined in terms of the situation. That is, choices which were the most normative ones possible in the situation were considered normative (i.e., nonintrusion over intrusion, intrusion female over intrusion male) and choices which were the less normative in the situation were considered nonnormative (i.e., intrusion over nonintrusion, intrusion male over intrusion female).

As Appendix D illustrates, this dichotomy yielded several significant differences in the affect measures. These findings lend support to our notions of intrusion. Intrusion cannot be considered a globally negative concept, but instead, must be defined in terms of the context within which it occurs. It is not the absolute response but its relative meaning that must concern us.

For our final affect measure (see Appendix E), only the adjectives which discriminated between normative and nonnormative choices were retained. The resulting scale is a shorter version, consisting of eleven directional adjectives with potential scores ranging from eleven to ninety-nine.

CHAPTER III

RESULTS

A. Efficacy of the Experimental Manipulations

1. Salience of the social norms to the subject population

It was important to determine whether the social norms under consideration were, in fact, relevant and salient to our subject sample. Since this information was important to have prior to experimentation and since we did not want to alert our subjects to our interests in space, a pilot study was conducted on a similar noncollege, working-girl population.

Twenty-five female airline employees and secretarial students were individually administered a questionnaire asking them to consider and rate ten behaviors that were related to the normative use of space, e.g., "A girl sits very close to a male stranger on a couch." (see Appendix F). For each behavior the subjects were asked to indicate how most people would feel about the behavior, on a four-point scale ranging from strong approval to strong disapproval; and also, how likely it was that the average person would engage in the behavior, on a four-point scale from very likely to very unlikely. The first rating was intended to tap the predominant expressed social norms while the second was aimed at uncovering behavioral tendencies and perceived extent of norm compliance. The chi squares comparing their responses to these questions appear in Table 1.

TABLE 1.--Chi square scores for the differences in ratings of the ten normative behaviors on both the "approval-disapproval dimension" and the "likelihood of occurrence dimension"

Normative behaviors	approval-disapproval		likelihood of occurrence	
	l	p[a]	l	p[a]
A girl sits on the lap of a strange boy.	75.7	<.001	14.8	<.01
A person spreads his newspaper wide open on a crowded train.	28.9	<.001	9.5	<.05
Two men walk along holding hands.	48.1	<.001	18.4	<.001
A white girl accepts a dance with a Negro boy.	74.1	<.001	12.5	<.001
Two strangers on a crowded train turn their eyes away so as not to stare.	20.2	<.001	32.3	<.001
An interracial couple takes an apartment in an all white suburb.	19.6	<.001	14.3	<.01
Two women hug each other.	6.8	.13	18.7	<.001
A girl shares an apartment with a coed and interracial group.	16.4	<.001	18.4	<.001
A white girl invites a Negro girl to a pajama party.	12.6	<.01	17.0	<.001
A girl sits very close to a male stranger on a couch.	26.7	<.001	18.7	<.001

[a]all probability values are for two-tailed tests with df=3.

The results of this pilot study confirmed our belief that there were expressed norms for the use of space that individuals are both aware of and capable of expressing. Thus, there was significantly more disapproval than approval for a girl sitting on the lap of a strange boy, sitting very close to a male stranger on a couch, accepting a dance with a Negro boy, and sharing an apartment with a coed and interracial group. In addition, there was significantly more disapproval than approval expected for an interracial couple taking an apartment in an all-white suburb, for two males walking along holding hands, and for a person spreading his newspaper wide open on a crowded train.

There seemed to be some ambivalence about the socially approved conduct between females. While more approval than disapproval was expressed for two women hugging each other (as we had anticipated), the difference was small and insignificant. For this item and for the significant item about a white girl inviting a Negro girl to a pajama party, the majority of responses fell into the moderate approval or disapproval categories rather than the two more extreme categories.

The final item dealt with symbolic distance, and as expected, there was more approval than disapproval expected for strangers on a crowded train turning their eyes away so as not to stare. The responses to these ten items indicate that the subject population under study is clearly aware of and assumedly under the influence of social norms against close contact with strange males and Negroes.

It is interesting that the expected approval and disapproval was not necessarily predictive of a judgment as to how likely it was that the average person would engage in the behavior. The informal comments of the subjects repeatedly revealed the attitude that in today's world almost anything could happen and that any behavior, however strange, could be observed from time to time. As a consequence, most subjects exhibited a hesitancy to choose the "never" category and a tendency to favor the "possible" category. The only items that were rated at one end of the "likelihood continuum" as opposed to the other end were that it is possible or very likely that women hug each other; that men are unlikely or will never walk along holding hands; and that strangers in a crowded train are likely to or will possibly turn their eyes away so as not to stare. The remaining items tended to be rated as moderately likely to happen even though they were simultaneously expected to evoke disapproval.

Thus, while there are clearly and commonly perceived social norms regarding the use of space, individuals see others as willing to break the rules on occasion. The implication of these findings for the prediction of behavior is that individuals will be aware of what behaviors are socially approved but will not necessarily see these rules as inviolate. This is hardly surprising when we consider that these norms apply to relationships and interactions that are, for the most part, transitory and superficial. Therefore, we can feel relatively certain that under the conditions of our experimental situation, these norms will be relevant to the subject

population; however, we have no grounds to conclude that these will be the exclusive norms in all situations.

2. Perceived equality of the confederates

It was clearly important that the four confederates resemble each other on all characteristics not tied directly to their race or sex. For example, if one male was clearly more attractive or perceived to be higher in class, then it would be impossible to determine whether he was chosen for his race, or appearance, or social class.

To determine the perceived equality of confederates, pilot tests were conducted individually on thirty working girls who were similar in background to the experimental group. Snapshots were taken of six potential confederates who were dressed similarly and seen from the waist up seated against a neutral background. The photographs were of the Negro female confederate, the Negro male confederate, the white female confederate, the white male confederate, and an additional white male and white female.

The subjects were told that "this is an experiment to see how much people reveal about themselves in their appearance, without even talking." They were then shown one photograph and were asked to look at it and then answer questions about the person in terms of age, religion, social class, education, occupation, attractiveness, friendliness, and similarity to self. The questionnaire appears in Appendix G. They were then shown a second photograph of another confederate and asked to answer the same questions. Thus, each subject independently rated two of the six photographs.

The chi squares comparing the ratings of the four confederates who ultimately were employed in the experimental conditions appear in Table [illegible].

TABLE [illegible].--Chi square scores comparing the picture ratings of the four confederates

Dimensions	df	chi square	p[a]
Age	6	24.04	<.001
Religion	[illegible]	18.01[b]	<.01
Social class	6	4.99	>.50
Education	[illegible]	12.81	<.05
Occupation	12	29.78	<.01
Attractiveness	6	9.36	>.10
Friendliness	9	10.83	>.20
Similarity to self	9	6.09	>.70

[a]based on two-tailed tests.

[b]When compared within race, the chi squares for ratings on religion were 1.72 ($p > .30$) for the white confederates, and .875 ($p > .50$) for the Negro confederates.

Since the confederates were initially selected on the basis of their apparent similarity to one another, it was not surprising that the subjects rated them similarly. Thus, the pictured confederates were scored equally on attractiveness, social class, friendliness and similarity to self. There were differences in religion that went along with race: Negroes were more frequently rated as Protestant and whites as Jewish or Catholic. When we compared within-race ratings, these differences disappeared.

There were discrepancies between the ratings of the four confederates in age, educational background, and occupation. The white male was seen as older and more likely to be a professional, while the Negro male was seen as younger and a student. Obviously, these two ratings are correlated. The age discrepancy may have diminished in the actual experiment because the white but not the Negro male was bearded in the photographs, while both had beards during the experimental conditions.

The Negro female was not rated as a student as often as she was rated as a clerical worker, and was twice rated as having only a high school education (accounting for the significant chi square in educational background). The differences in perceived occupation and education are consistent with the common stereotypes associated with race. There is nothing new in the revelation that Negroes are rated lower in education and occupation, and it would be difficult to erase this discrepancy without affecting other factors. Furthermore, it is assumed that the joint appearance of the confederates in the same legitimate and safe interview setting reduced these status differences to some extent. What seems to be more important for our manipulations is that the confederates were perceived as equal on the gross physical characteristics that would ordinarily influence the use of space if not held constant, i.e., features such as attractiveness, friendliness, similarity, etc. Since the confederates were rated similarly on these characteristics, we can feel more confident that differential spatial responses to them were due to their races or sexes and not to some

extraneous physical feature.

3. Distribution of age over experimental conditions and its relationship to the dependent variables

It is a well established finding that cultural factors are important in the use of space. We were able to control for ethnic background by limiting the sample to native-born females, but included in this sample were subjects ranging in age from seventeen to fifty-nine. Thus, it became important to ask two questions: was age related to the dependent variables and, even if the answer to this is no, was it distributed evenly across experimental conditions?

To answer the first question, the data were analyzed to determine whether age or marital status were related to the dependent variables. The product-moment correlation between age and interpersonal distance was -.18 ($p > .10$). The frequencies with which the two major age and marital status groups chose between the sexes and the races in the Intrusion-Choice conditions appear in Tables 3 and 4 below.

TABLE 3.--The relationship between age and intrusion-choices[a]

Age and the choice between sexes[b]			Age and the choice between races[c]		
	female	male		white	Negro
17-30	19	10	17-30	15	14
31-60	13	4	31-60	10	7

[a] The sex, race, and age categories are collapsed to meet the requirements of the chi square test.

[b] $\chi^2 = .2001$, $p > .50$, two-tailed

[c] $\chi^2 = .0255$, $p > .50$, two-tailed

TABLE 4.--The relationship between marital status and intrusion-choices[a]

Marital status and the choice between sexes[b]			Marital status and the choice between races[c]		
	female	male		white	Negro
married[d]	10	3	married[d]	6	7
single	12	11	single	19	14

[a]The sex and race categories are collapsed to meet the requirements of the chi square test

[b] χ^2=.1055, p > .50, two tailed

[c] χ^2=.1380, p > .50, two tailed

[d]including separated, divorced, and widowed

Thus, age and marital status were not related to the two major dependent variables. Nonetheless, the distribution of age over the experimental conditions was analyzed. The mean ages of subjects in the various conditions appear in Tables 5 and 6. Two one-way analyses of variance were conducted on the age data: one testing the mean age differences in the four Free-Choice conditions, and the other the mean age differences in the five Intrusion-Choice conditions (including the intrusion-nonintrusion condition). Separate analyses for the two sets of conditions rather than a single overall analysis were done because comparisons across the two sets of conditions were never made and, therefore, age differences between them would be of no consequence. The results of these analyses appear in Tables 7 and 8.

TABLE 5.--The mean age and marital status of subjects in each condition

Subjects	N	Mean age	Marital status	
			single	married[a]
White females	98	28.7	72	26
Intrusion-Choice conditions	46	30.7	33	13
Free-Choice conditions	40	25.0	32	8
Intrusion-Nonintrusion condition	12	33.4	7	5
Negro females	18	25.0	11	7

[a]including separated, divorced, and widowed

TABLE 6.--Mean ages of subjects in each condition

Condition	Mean age
Intrusion-Choice conditions:	
White female-white male	29.67
White female-Negro female	35.69
White male-Negro male	30.73
Negro female-Negro male	25.30
Intrusion-nonintrusion	33.42
Free-Choice conditions:[a]	
White female	28.30
White male	20.50
Negro female	27.00
Negro male	24.30

[a]The Tukey wholly significant difference for age in the Free-Choice condition is 5.3. Therefore, the white male condition has significantly younger subjects than the white female and Negro female conditions.

TABLE 7.--Analysis of variance of age as it was distributed over the Free-Choice conditions

Source	SS	df	MS	F
Between groups	356.275	3	118.758	5.710[a]
Within groups	748.700	36	20.797	
Total	1104.975	39		

[a] $p < .025$

TABLE 8.--Analysis of variance of age as it was distributed over the Intrusion-Choice conditions

Source	SS	df	MS	F
Between groups	708.941	4	177.235	1.11
Within groups	8462.180	53	159.664	
Total	9171.121	57		

The results indicate that the mean age of subjects in the Intrusion-Choice conditions were not significantly different from each other. However, the mean ages in the Free-Choice conditions did differ significantly. The follow-up Tukey test reveals that subjects in the white male condition were significantly younger than subjects in the white female and Negro female conditions. This disparity requires that we interpret the results of these conditions with some caution and that we attend to the possible effects of unequal age on the dependent variables.

4. <u>The reality of the waiting room situation</u>

Since we were unable to question subjects at the conclusion of the experiment, we were not able to assess directly their

impressions of the experimental manipulations. However, there is indirect evidence that they found the situation to be real and believable.

In the first place, only one out of the 138 subjects expressed suspicion. She deduced that her mood was being tested as it was affected by sitting in between two people (she had chosen to sit next to the Negro male rather than the white male). She did not voice her suspicion until after she had taken a seat, filled in the affect questionnaire, and was invited to sit at E's desk for the interview. When E acted surprised at her suspicions and emphasized that her interest was in the office space interview, the subject answered the remaining questions without mentioning the confederates again.

The remaining subjects made no mention of the confederates at all. All of the subjects looked at the confederates as they were choosing their seats, but none of them attempted to engage the confederates in conversation, nor did they question E about them. Even during the "confidential" interview, the subjects did not mention the confederates nor did they question their presence in the room. In addition, all of the subjects indicated by their behavior and comments that the interview and the waiting room were entirely credible to them.

In the pilot tests we discussed earlier, subjects were questioned after they had taken a seat in the waiting area. Every pilot subject expressed surprise that their behavior in the waiting room was under observation and that the person or persons on

the benches were cohorts of the experimenter. These pieces of evidence give us confidence that the subjects neither suspected nor were indirectly affected by the true goals of the experimental situation.

5. Equivalence of the Intrusion-Choice benches

As indicated in the methodology section, the two Intrusion-Choice benches were placed in such a way as to be equally distant and equally accessible to the subjects. In addition, the confederates alternated between the left and right benches to correct for any turning tendencies in the subjects.

To determine whether there was any preference for one bench over the other regardless of the confederates who sat upon them, a chi square test was performed on the frequencies with which the right and left benches were chosen in the five conditions. The resulting chi square was .0808 which could occur by chance more than fifty percent of the times. Thus, there is no evidence to contradict the null hypothesis of no difference between the two benches.

B. Tests of Hypotheses

Both parametric and nonparametric statistics were employed. Frequency data were analyzed by binomial tests, chi square and median tests, and point biserial correlations. Data which met the requirements of parametric statistics were analyzed by one- and two-way analyses of variance and covariance, t-tests, Tukey Wholly Significant Difference tests, and product moment correlations.

Results were tested with one-tailed tests when their directions were predicted by the hypotheses, and with two-tailed tests when they were not.

1. Intrusion and nonintrusion

It was assumed that when given a choice, subjects would prefer nonintrusion to intrusion of personal space. This assumption was tested by comparing the frequency with which an empty bench was chosen over a partially occupied, intrusive one with the frequency of intrusive choices. All twelve subjects in this condition chose the empty seat. The probability that a split this extreme would occur by chance is less than .003 as measured by a one-tailed binomial test. Thus, nonintrusion was significantly chosen over intrusion and our assumption is confirmed.

2. Interpersonal distance and the sex of the confederate

Hypothesis one predicted that female subjects would maintain greater interpersonal distance from male strangers than from female strangers. As discussed earlier, this hypothesis was tested in the Free-Seating-Choice conditions. The number of inches the subjects sat from the seated confederate on the long bench was taken as a measure of interpersonal distance. Since there were four confederates who differed on two characteristics (sex and race), a two-by-two analysis of variance was conducted on the data. The mean distances maintained from each con ederate appear in Table 11, and the analysis of variance appears in Table 9. As these tables indicate, the sex of the confederate was not a significant main effect. Subjects did not maintain greater interpersonal distances

from males than from females, and thus, hypothesis one is not confirmed.

As discussed in an earlier section, the subjects were not distributed evenly over the four Free-Seating-Choice conditions in terms of age. Although age was not significantly correlated with overall interpersonal distance, there was the possibility that the uneven age distribution affected interpersonal distance within particular conditions. To determine whether this was the case, an analysis of covariance was done between age and interpersonal distance over the four treatment groups. The summary of this analysis appears in Table 10.

TABLE 9.-- Analysis of variance of interpersonal distance

Source	SS[a]	df	MS	F
Sex	78.40	1	78.40	1.618
Race	2.50	1	2.50	.052
Sex x race	16.90	1	16.90	.349
Within	1744.20	36	48.45	

[a]The variances are homogeneous (χ^2=1.857; $p > .50$)

As is evident from this table and from the adjusted means in Table 11, the covariance adjustment did little to change the original data. The means simply shifted even closer together, the alterations ranging from .1 to .5, and the treatment F remained insignificant. Thus, the unequal age distribution did not affect the interpersonal distance scores.

TABLE 10.--Analysis of covariance of interpersonal distance adjusted for the effects of age

Source	SS[a]	df	MS	F
Distance				
Between	97.8	3	32.6	< 1
Within	1744.2	36	48.5	
Total	1842.0	39		
Age				
Between	356.3	3	118.8	5.7[b]
Within	748.7	36	20.8	
Total	1105.0	39		
Adjusted				
Between	46.6	3	15.5	< 1
Within	1734.4	35	49.6	
Total	1781.1	38		

[a]The within-group regressions are homogeneous (the F-ratio is less than one)

[b]$p < .005$

TABLE 11.--Interpersonal distance means before and after they have been adjusted for the effects of age

Condition	Original means	Adjusted means
White female	23.2	23.6
White male	27.3	26.8
Negro female	25.0	25.2
Negro male	26.5	26.4

While both the original and adjusted mean interpersonal distance differences between the male and female confederates were small, they were in the predicted direction. The mean distances from the female confederates were smaller than the mean distances from the male confederates. In general, the overall range of distances the subjects sat from the confederates was quite large, from 13 to 39 inches, and there was considerable within-condition variability.

To determine whether there was a tendency towards larger distances in relation to the males and smaller distances in relation to the females, despite insignificant mean differences, a median test was conducted on the frequency with which subjects sat at the median distance (24 inches) or further from the male and female confederates versus the frequency with which they sat at distances which fell below the median. These data are presented in Table 12.

These results present somewhat stronger for Hypothesis one, but are still only suggestive rather than confirming. Thus, while there is a tendency for the larger distances to occur in relation to male confederates and for the mean distances from males to be slightly greater, the evidence is not sufficiently strong to reject the null hypothesis of no difference between responses to the male and female confederates.

3. Intrusion and the sex of the confederate

Hypothesis two predicted that female subjects would choose to intrude upon the personal space of females rather than upon the

TABLE 12.--Median test of the interpersonal distances maintained from male and female confederates

	Female	Male
Median and above	10	15
Below median	10	5

χ^2 1.707; $p < .10$, one-tailed

personal space of males when given a choice between the two. The two Intrusion-Choice conditions relevant to this hypothesis were the choice between the Negro female and the Negro male and the choice between the white female and the white male. The frequency of each choice is presented in Table 13 below.

TABLE 13.--Frequency with which intrusions with males and females were chosen in the Intrusion-Choice conditions

Condition	Choice		p[a]
	Male	Female	
White female vs. white male	1	11	.003
Negro female vs. Negro male	2	8	.055
Combined, male vs. female	3	19	.001

[a]One-tailed probabilities determined with the binomial test

These data present strong evidence for Hypothesis two. Across race, subjects consistently selected seats which resulted in personal space intrusions with females rather than identical seating positions with males.

4. Intrusion distances and the sex of the confederate

In addition to recording their seating choices, the experimenter also recorded the subjects' body postures and the distances they maintained from the confederate once they intruded upon him or her. It will be recalled from the description of this condition that less than eighteen inches of the thirty-six inch benches were available to the subjects, as the confederates occupied eighteen inches and had their legs turned slightly in front of the remaining space.

Nonetheless, the subjects not only took seats in all instances, but also often left considerable room between themselves and the confederate upon whom they were intruding. Intrusion distances (i.e., the number of inches subjects placed between themselves and a confederate when they chose to intrude upon him) ranged from three inches to eleven inches.

It is apparent that in order to leave eleven out of eighteen inches vacant, the subjects had to balance their bodies carefully. The typical body orientations of the subjects in this condition fell into three broad categories: (1) sat on the far end of the bench, facing forward with body stiff; (2) sat on the far end of the bench with body stiff, predominantly facing forward but oriented slightly away from the confederate, especially in crossed legs, angled shoulders and head, etc.; and, (3) sat on the far end of the bench considerably oriented away from the confederate with one shoulder or entire back to him, and with legs over corner or side of bench rather than over front edge.

The information communicated by the subjects' body orientation is revealing. The predominance of body tightness (e.g., arms and hands close to body) and avoidance postures as described above, signal at least the awareness of and a desire to reduce the closeness of another person. The variety of body orientations were accompanied by another, more objective and more easily coded set of data; intrusion distances. By necessity the different seating positions resulted in different intrusion distances: smaller spaces tended to accompany seating positions in which the subject faced forward and larger spaces tended to accompany positions in which the subject sat with her back to the confederate. Since studies of nonverbal communication (e.g., proxemics, kinesics) indicate that minute and subtle movements and postures have meaning, and since our data consist only of gross descriptions by E rather than photographs of the subjects, we will not attempt to analyze the postural information at this time. Instead, we will discuss intrusion distance as it varied over the different Intrusion-Choice conditions. However, our analysis of the distance data will provide us with information about body position as well since body orientation and intrusion distance are positively correlated (i.e., larger distances tend to be associated with more extreme orientation away from the confederate).

Our interest, at this point, in intrusion distance is to determine whether the subjects responded to the sex of the confederates whose personal space they intruded by maintaining different intrusion distances from males and females. We will discuss the effects

of the confederates' races in another section.

We can determine the effects of sex on intrusion distances in several different ways. We can group together all male intrusions and all female intrusions regardless of condition; we can compare intrusion distance within condition; or we can group the intrusions in terms of the sex of the chosen confederate and the sex of the unchosen confederate. Since the female confederates were intruded upon more often than the males, there will always be unequal numbers when we divide the data these ways. The resulting small number of cases in some groups and the need to cross conditions to compose certain other groups make it difficult to reach firm conclusions from these data. However, even though tentative, the apparent trends in the results are most interesting.

One's first inclination might be to compare the intrusion distances from the male confederates with those from the female confederates, expecting females to sit further from males when they intrude upon them than from females when they intrude upon them. This would require grouping all male intrusions (i.e., white male chosen over white female, Negro male chosen over Negro female, white male chosen over Negro male and Negro male chosen over white male) and all female intrusions (i.e., white female chosen over white male, Negro female chosen over Negro male, white female chosen over Negro female, and Negro female chosen over white female). The results of this comparison indicate that the subjects sat significantly further from male confederates than from female confederates ($t = 1.6266$, $p < .10$). The means are

presented in Table 14.

However, a more thoughtful analysis reveals that it is misleading to group the male and female intrusions in this way. Certainly, the subject who chose the white male over the Negro male was making a very different selection from the subject who chose the white male over the white female. The first had no choice but to intrude upon the personal space of a male if she was to sit; the second had the option of choosing a female intrusion and preferred not to. For these reasons, we further divided intrusions upon each sex into two categories each: males chosen over males and males chosen over females; females chosen over females and females chosen over males. The mean intrusion distances for each group and the t-scores comparing them are presented in Table 14.

Looking first at the mean intrusion distances for male confederates, the two types of male intrusions seem to have resulted in similar intrusion distances. Subjects sat somewhat further from males when they were chosen over females than when they were chosen over another male, but there were only three subjects in the former group and the t-test comparing them is not significant.

Looking next at the distances maintained from female confederates, a greater difference emerges. The mean intrusion distances from a female confederate when she was chosen over another female was significantly greater than the mean intrusion distance from a female selected over a male intrusion. If we now compare across sex, it appears that the mean intrusion distances for a female

TABLE 14.--Mean intrusion distances from the different confederates and the t-tests comparing them

Chosen confederate	N	Mean	t-tests[a]
Male	14	7.64	..... versus female: t=1.827; p < .10
white male	6	7.17	..... versus Negro male: t=.600; p > .25
Negro male	8	8.00	
male over male	11	7.36	..... versus male over female: t=1.878; p > .20
male over female	3	8.67	..... versus female over male: t=3.578; p < .01 versus female over female: t=1.532; p > .10
Female	32	6.47	
white female	19	6.47	..... versus Negro female: t=.017; p > .45
Negro female	13	6.46	
female over female	13	7.54	..... versus male over male: t=.209; p > .50
female over male	19	5.74	..... versus male over male: t=1.784; p < .10 versus female over female: t=3.162; p < .01

[a]all significance levels are two-tailed

selected over another female resembled those of the male intrusions while the mean intrusion distances from a female when she was selected over a male was significantly less than both kinds of male intrusions.

Thus, there seemed to be something about the condition in which females were chosen over males that led the subjects to sit much closer to the confederates than they did in any other condition. If we combine these findings on intrusion distances with those on intrusion choices, an interesting pattern emerges. When subjects chose equally between two confederates and thereby exhibited no preference for intruding upon one over the other, then the distances they sat from these confederates were similar. Thus, they chose equally between two males and between two females and they sat at very similar distances from them. On the other hand, when one confederate was clearly preferred over the other (as the female was over the male), the subjects also sat closer to this preferred confederate than she did to any confederate in any condition, including the same confederate in other conditions.

It is clear then that we cannot speak of constant distances maintained from one sex over the other. We must carefully consider the context of the intrusion, for the nature of the alternatives in the situation influences both intrusion choices and intrusion distances once the choice is made.

In addition to analyzing the effects of the treatments on intrusion distance, we were also interested in the possible effects of cultural factors on the spaces left during intrusion. For this

reason, correlations were done between age and intrusion distance and martial status and intrusion distance. While age and marital status were not related to intrusion choices nor to interpersonal distance, they were correlated with intrusion distance. The product-moment correlation between age and intrusion distance was .42 which was significant at the .01 level, and the point-biserial correlation between marital status and intrusion distance was .30 which was significant at the .05 level of confidence. Since marital status and age are obviously related to each other, it was necessary to determine which of the two were related to intrusion distance. To this end, partial correlations were performed on the data. All of the correlations discussed appear in Table 15. The point biserial correlation between age and marital status confirmed our belief in their relationship as it was .39 and significant at the .01 level. The partial correlation between marital status and intrusion distance with age held constant was .16 and between age and intrusion distance with marital status held constant was .35. The first of these correlations was not significant and the second was significant at the .05 level of confidence. Thus, it was age and not marital status that was related to intrusion distance.

TABLE 15.--Correlation coefficients between age, marital status, and intrusion distance

	Age	Marital status
Age		$r=.39$; $p=.01$
Intrusion distance	$r=.42$; $p < .01$ $r_{12.3}=.35$; $p < .05$[a]	$r=.30$; $p < .05$ $r_{13.2}=.16$; $p > .10$[b]

[a] partial correlation with marital status held constant

[b] partial correlation with age held constant

The positive correlation between age and intrusion distance indicates that older subjects tended to sit at greater distances from the confederates than did the younger subjects. This unpredicted finding is interesting, especially since age did not relate to the other dependent variables. Thus, the older subjects did not tend to sit further from the confederates on the long bench, nor did they exhibit any intrusion preference unlike those of the younger women. It was only during the experience of intrusion that they exhibited significantly greater avoidance.

5. Interpersonal distance and the race of the confederates

We will now turn our attention to the influence of the confederate's race on the subjects' personal space. Hypothesis three predicted that the white female subjects would maintain greater interpersonal distances from Negro strangers than from white strangers. Operationally, we expected that the subjects would sit further from the two Negro confederates than from the two white confederates in the Free-Seating-Choice conditions.

In section two, we presented the mean interpersonal distances for each confederate, and the summaries of the results of the analyses of variance and covariance in Tables 9-11. In the two-way analysis of variance, the main effect for race produced an F that was less than one and, therefore, not significantly different from chance. The analysis of covariance also resulted in an insignificant F ratio. Thus, we must reject Hypothesis three and accept the null hypothesis that there was no difference in the interpersonal distances maintained from confederates of different races.

The confederates' races did not seem to affect the subjects' seating behavior in these conditions. They sat at similar mean distances from the white and Negro confederates.

As we discussed earlier, the range and variability of interpersonal distance in the Free-Choice conditions were quite large. For example, both the largest and smallest observed distances both occurred in relation to the Negro male confederate. Whether this variability indicated that the confederates' races were irrelevant to the subjects or that race affected this subject population differentially is impossible to determine at this time. An attempt to reduce the effects of this variability by using a median test resulted in another set of data which was not significantly different from chance (see Table 16).

TABLE 16.--Median test of the interpersonal distances maintained from Negro and white confederates

Distance	White	Negro
Median and above	14	11
Below median	6	9

χ^2 .4266; $p > .10$

6. Intrusion and the race of the confederate

Hypothesis four predicted that the white subjects would select personal space intrusions with white confederates over personal space intrusions with Negro confederates when given a choice between the two. Table 17 below gives the frequency with which each confederate was selected in the two Intrusion-Choice conditions

relevant to this hypothesis. The results clearly indicate that the hypothesis was not confirmed. We have no evidence to support our prediction that the race of the confederate would influence the subjects' choices of intrusive seats.

TABLE 17.--Frequency with which intrusions with whites and Negroes were chosen by white subjects in the Intrusion-Choice conditions

Condition	Choice		p[a]
	White	Negro	
White female vs. Negro female	8	5	.291
White male vs. Negro male	5	8	.50
Combined, white vs. Negro	13	11	.419

[a]one-tailed probabilities determined by the binomial test

An unpredicted finding adds an interesting dimension to this question. Eighteen Negro females were tested in the racial choice conditions: ten in a choice between intrusions on white vs. Negro males and eight in a choice between intrusions on white vs. Negro females. These results appear in Table 18. The Negro subjects chose equally between the white and Negro female confederates, as did the white subjects. However, this group of subjects showed a clear preference for the Negro male over the white male, unlike the white subjects. While this difference was not significant with a two-tailed test, the Negro male was chosen eight out of ten times. Since we would have considered this split significant had we predicted this result, we cannot simply ignore it now.

TABLE 18.--Frequency with which intrusions with whites and Negroes were chosen by Negro subjects in the Intrusion-Choice conditions

Condition	Choice		p[a]
	White	Negro	
White female vs. Negro female	4	4	> 1
White male vs. Negro male	2	8	.110
Combined, white vs. Negro	6	12	.238

[a]two-tailed probabilities determined by the binomial test

It is apparent that the Negro subjects were influenced by the race of the male confederates while the white subjects were not. It is interesting that their racial preference was for a male of their own race, and also interesting that this preference did not carry over to the Negro female confederate. While we can readily understand why the male's and not the female's race was important to this group of young, predominantly unmarried females, certain characteristics of the subject population may have confounded the results. Two of the four Negro subjects who chose intrusions on a white female rather than a Negro female were born in the West Indies, while the remaining six in that condition (four of whom chose the Negro female) were American born. In the male choice condition, one who chose the white male and one who chose the Negro male were West Indian. This means that half of the Negro subjects who chose a white confederate over a Negro one (three out of six) were West Indian. This information proves to be particularly critical in the female choice condition where no difference emerged. While we can conclude nothing from these

small numbers, it leads us to be cautious in interpretting the absence of a preference for the Negro female over the white female. American Negroes have frequently reported that West Indian Negroes tend to shun contact and identification with their American counterparts. If this is the case, then the small number of West Indians in our already small Negro sample may have distorted the results.

7. Intrusion distance and the race of the confederate

Let us turn our attention now to the intrusion distances the two groups of subjects maintained from the white and Negro confederates. Table 19 presents the means and the t-scores of the intrusion distances the white subjects maintained from the white and Negro confederates. These subjects neither chose to intrude upon whites more frequently than Negroes nor did they sit closer to whites than to Negroes. This finding holds true when we combine across conditions into intrusion distances from whites and Negroes, compare individual conditions, or combine into conditions which consider both the race of the chosen and unchosen confederates. In fact, the two extreme distances in the latter breakdown of the data both involved Negro confederates and these were significantly different from one another. Subjects sat closest to Negroes who were chosen over another Negro, and furthest from Negroes who were chosen over white confederates. Subjects also sat closer to whites who were chosen over other whites than to whites who were chosen over Negroes, but this difference was not significant.

TABLE 19.--Mean intrusion distances maintained by the white subjects from the Negro and white confederates in the Intrusion-Choice conditions and the t-tests comparing them

Chosen confederate	N	Mean	t-tests[a]
White confederate	25	8.04	..... versus Negro: t=.645; p > .10
white over white	12	8.17	..... versus white over Negro: t=1.027; p > .30
white over Negro	13	7.08	..... versus Negro over white: t=1.082; p > .20 versus Negro over Negro: t=1.189; p > .20
Negro confederate	21	7.05	
Negro over Negro	10	6.10	..... versus white over white: t=.0899; p > .20
Negro over white	11	7.91	..... versus white over white: t=1.952; p < .10 versus Negro over Negro: t=2.148; p < .05

[a] all significance levels are two-tailed

While these differences in intrusion distance may reflect something about the subjects' responses to conflict in racial choices, a cautionary word is in order. The white over white condition consisted of the white female chosen over the white male and the white male chosen over the white female. Similarly, the Negro over Negro consisted of a Negro male chosen over a Negro female and a Negro female chosen over a Negro male. Since females were chosen over males far more often than the reverse, and since intrusions on females chosen over males were characterized by significantly smaller intrusion distances, then the Negro over Negro and white over white conditions may contain deflated intrusion distance scores because of a sex rather than a race effect. This unequal weighting is probably responsible for the two significant differences in intrusion distance in these conditions.

It would appear that the white subjects expressed no racial preference or avoidance in either their seating choices nor their intrusion distances. The Negro subjects did express at least the tendency to prefer Negro males over white males. In addition, as the means in Table 20 indicate, they sat further from the white confederates than from the Negro confederates when they intruded ($p < .05$). In terms of individual intrusion distance means, the sample sizes are too small to apply statistics. The subjects seemed to sit closest to the Negro males, whom they chose most frequently, and further from the white male, whom they chose least frequently. The distances they sat from the females, whom they chose equally between, fell in the middle.

TABLE 20.--Mean intrusion distances maintained by Negro subjects from the Negro and white confederates in the Intrusion-Choice conditions and the t-test comparing them

Confederate	N	Mean	t-test
White confederates	6	7.67	t 2.278[a]
Negro confederates	12	5.42	

[a] $p < .05$; two-tailed

Thus, the Negro subjects responded to the confederates' races as the white subjects had responded to the confederates' sexes. Of the choices they were given, they sat closest to the confederate they showed the greatest preference for intruding upon. We can draw no conclusions about their responses to the confederates' sexes because they were not tested in the sex-choice conditions. Finally, while the Negro females did not choose the Negro female confederate more frequently than the white female, they did sit closer to the former when they intruded, contributing to the highly significant overall difference in the mean intrusion distances from Negroes over whites.

8. Affect scores

As described earlier, the affect questionnaire was a self-administered scale filled in by the subjects as they sat on the benches waiting to be interviewed. While no specific hypotheses regarding the scores on this measure were advanced, it was included in the procedure to determine if any affective differences between conditions emerged.

Table 21 presents the means and standard deviations of the affect scores for the different sets of conditions. The scores ranged from 13 to 59, with an overall mean of 29.95. The hypothetical range was from 11 (most positive) to 99 (most negative) with a hypothetical midpoint of 59. Thus, all of the obtained scores fell into the positive end of the distribution. This is hardly surprising, as we cannot expect extremely negative responses to self-enacted personal space intrusions in a fairly innocuous setting.

While no hypotheses were made regarding the nature of the affect scores in the different conditions, it is reasonable to expect that, given the positive cast of the data, the Intrusion-Choice conditions, the Free-Choice conditions, and the Intrusion-Nonintrusion condition might lead to different levels of affective arousal. Looking at the data for these conditions in Table 21, it is interesting that the means are quite similar to one another, and that the slightly higher and discrepant condition is the Intrusion-Nonintrusion. Since all of the subjects in this condition chose nonintrusion, it is puzzling why more negative affect was experienced there. However, rather than combining the data over conditions, it would be more meaningful to examine the affect scores within conditions separately. This will be dealt with in the following two sections.

TABLE 21.--Means and standard deviations of affect scores in the three sets of conditions

Condition	Mean	Standard deviation
Intrusion-Nonintrusion	34.00	13.51
Free-Seating-Choice	29.78	8.96
Intrusion-Choice	29.18	10.36
Total	29.95	10.15

a. Affect in the Free-Choice conditions

A two-by-two analysis of variance was conducted on the affect scores in the four Free-Choice conditions. The summary of the analysis of variance appears in Table 22 below. The only significant main effect was sex, i.e., affect scores in response to the confederates' sexes differed significantly. The individual affect means appear in Table 23. It is apparent that the affective response to the male confederates was less positive than the affective response to the female confederates. A follow-up comparison of the individual means using the Tukey Test revealed that the mean affect in response to the Negro male was greater than the white female ($p < .05$); that the mean affect in response to the white male was greater than the white female ($p < .10$); and that the mean affect in response to the Negro male was greater than the Negro female ($p < .10$). These differences appear in Table 24.

As we discussed in an earlier section, the subjects' ages were not distributed equally over the four Free-Choice conditions. Subjects in the white-male condition were significantly younger than subjects in the white-female and Negro-female conditions.

TABLE 22.--Analysis of variance of affect scores in the Free-Seating-Choice conditions

Source	SS[a]	df	MS	F
Sex	783.225	1	783.225	12.738[b]
Race	133.225	1	133.225	2.166
Sex x race	3.025	1	3.025	.049
Within	2213.500	36	61.486	

[a]there is homogeneity of variance (χ^2 2.254; $p > .50$)

[b]$p < .005$

TABLE 23.--Affect scores in the Free-Seating-Choice conditions, before and after they have been adjusted for the effects of age

Condition	Original mean	Adjusted mean
White female	33.8	34.2
White male	32.1	31.9
Negro female	28.9	27.1
Negro male	36.3	36.2

In addition, there was a slightly negative correlation between age and affect in the Free-Choice conditions ($r=-.27$; $p=.10$). The unequal age distribution coupled with the small correlation between age and affect required that we do an analysis of covariance on the affect data. The results of this analysis appear in Table 25.

The adjusted treatment effect, while smaller, is still significant at less than .05. Thus, we can feel confident that the treatments and not the disparity in the mean subject ages were responsible for the differences in affect scores. The mean affect scores for

TABLE 24.--Differences between both the original and the adjusted affect means in the Free-Choice conditions and the Tukey test comparing the significance of these differences

Confederate	Original mean differences						Adjusted mean differences				
	male	female	white female	white male	Negro female	Negro male	female	white female	white male	Negro female	Negro male
Male confederates		8.8[b]					8.27[b]				
white male			8.3[a]		5.2			7.44		4.48	
Negro male			12.5[b]	4.2				12.00[b]	4.56		
Female confederates											
white female					4.1					2.96	
Negro female						9.4[a]					9.10[a]

[a] $p < .10$, two-tailed

[b] $p < .05$, two-tailed

TABLE 25.--Analysis of covariance of affect in the Free-Choice conditions adjusted for the effects of age

Source	SS[d]	df	MS	F
Affect				
Between	919.48	3	306.49	4.985[b]
Within	2213.50	36	61.49	
Total	3132.98	39		
Age				
Between	356.28	3	118.76	5.710[c]
Within	748.70	36	20.80	
Total	1104.98	39		
Adjusted affect				
Between	710.01	3	236.67	3.760[a]
Within	2203.21	35	62.95	
Total	2913.23	38		

[a] $p < .05$

[b] $p < .01$

[c] $p < .005$

[d] There is homogeneity of within-class regression (F=.85)

each condition, adjusted for the influence of the subjects' ages, appear in Table 23 above. If we compare them to the original means in the same table we can see that the new means changed slightly, from .08 to .50. The covariance adjustment moved the means somewhat closer together, i.e., the means for males decreased and the means for females increased.

The Tukey comparisons of the adjusted means with one another appear in Table 24 above. As before, the affect for male confederates was greater than the affect for female confederates, but now, of the individual means, only Negro male versus Negro female and Negro male versus white female are significantly different from one another. Thus, the one effect that the covariance adjustment had was to make the barely significant white male versus white female difference now insignificant. Before the adjustment for the unequal age distribution, the younger women in the white male condition increased the affect scores sufficiently to make the mean affect for the white male condition significantly greater than the mean affect for the white female condition. The covariance adjustment equalized the age and, thus, erased this difference which resulted not from treatment effects but from an extraneous negative correlation between age and affect and an unequal distribution of age over the conditions.

We can now consider the meaning of the differences in affect scores. It will be recalled that the predicted differences in interpersonal distance were not found. While the subjects sat closer to females and further from males, these differences resulted in an insignificant analysis of variance and a barely significant median test. It appears that instead of sitting closest to the white female and farthest from the Negro male as we predicted, the subjects sat at equivalent distances but experienced the most positive affect when the confederate was a white female and the least positive affect when the confederate

was a Negro male. Thus, while the subjects' overt behavior did not indicate that the characteristics of the confederates mattered to them, their affective responses revealed otherwise. It is from the affective responses that we can conclude that while the confederates' races did not seem to concern the subjects, the confederates' sexes did. We will discuss possible reasons for the subjects' apparent indifference to the confederates' races and for their overt indifference to the confederates' sexes in the next chapter.

b. Affect in the Intrusion-Choice conditions

As described earlier, the overall mean affect score for the Intrusion-Choice conditions combined was very similar to the Free-Choice conditions mean and lower than the Intrusion-Nonintrusion mean. When we examine the individual Intrusion-Choice conditions, a similar lack of difference between them is apparent. Neither the race nor sex of the confederates nor the combined effects of the characteristics of the chosen and unchosen confederates seemed to make a difference (see Table 7B).

The absence of differences in these conditions is rather interesting. In the Free-Choice conditions there were affective but not behavioral differences; in the Intrusion-Choice conditions, there were behavioral but not affective differences. This makes a great deal of sense if we consider it in terms of a balance model or simply in terms of a value model in which some form of expression is sought and found. If the subjects felt the need to respond differentially to the confederates in the Free-Choice conditions but did not, then their affective responses might reveal the unexpressed and unsatisfied need. If the subjects desired to behave differentially to the

confederates in the Intrusion-Choice conditions and did by choosing not to intrude upon certain confederates or by sitting further away from certain confederates, then there were no unresolved desires to express in the affective measure. If this explanation is tenable, then differential affective responses should only be expected when subjects do not express their preference or proclivities behaviorally.

TABLE 26.--Mean affect scores in the Intrusion-Choice conditions and the t-tests comparing them

Chosen confederate	N	Mean	t-tests
Female confederates	30	28.33	..... vs. male: t=.922; p > .30
white female	17	27.41	..... vs. Negro female: t=.495; p > .60
Negro female	13	29.54	..... vs. Negro male: t=.613; p > .50
female over female	11	27.91	..... vs. male over male: t=.762; p > .40
female over male	19	28.58	..... vs. male over male: t=.751; p > .40 vs. female over female: t=.148; p > .80
Male confederates	14	31.00	
white male	6	29.67	..... vs. white female: t=.494; p > .60
Negro male	8	32.00	..... vs. white male: t=.542; p > .60
male over male	11	31.27	..... vs. male over female: t=.324; p > .70
male over female	3	30.00	..... vs. female over female: t=.437; p > .60 vs. female over male: t=.353; p > .70
White confederates	23	28.00	
white over white	12	27.67	..... vs. Negro over Negro: t=.510; p > .60
white over Negro	11	28.36	..... vs. white over white: t=.149; p > .70
Negro confederates	21	30.48	..... vs. white: t= 791; p > .40
Negro over Negro	10	30.10	..... vs. Negro over white: t=.157; p > .80
Negro over white	11	30.82	..... vs. white over white: t=.854; p > .40 vs. white over Negro: t=.552; p > .50

CHAPTER IV

DISCUSSION

The model proposed here states that various characteristics of the interaction environment, through the intervention of personal space, result in predictable behavior in space. Unlike its use in other sources, personal space was conceptualized here as a psychological intervening variable which translates the general interpersonal goals which arise from antecedent conditions into spatial and behavioral terms.

That is, personal space was defined as the individual's expectation that his own and other's behavior related to distance and posture in the immediate space would be consistent with and aid in the achievement of certain interpersonal goals. These goals (such as privacy, formality, etc.) are determined by the norms attached to the various antecedent conditions. Given a particular personal space, the individual should exhibit whatever behavior is both available and acceptable to him to fulfill his expectations of goal attainment. The particular way space is used in this pursuit depends very much on the situational context.

The interpersonal goals pursued by the individual in personal space are generally determined by the normative prescriptions attached to the situation. It is, therefore, highly probable that individuals of the same culture in the same situation would have similar personal spaces and, as a result, would exhibit similar

behavior. A major assumption made here is that individuals would not willingly violate their own or another's personal space because this would prevent normative goal attainment and would also be subject to the social sanctions accorded to nonnormative behavior.

The particular antecedent conditions we chose to investigate in our research were the sex and race of another person present in the immediate environment, with the normative interpersonal goals accompanying these characteristics. We proposed that if white females adopt differential normative goals in relation to the race and sex of others, then they should develop different personal spaces for males versus females and for Negroes versus whites; and as a result, they should exhibit consistently different distance-related behaviors towards each one. Our findings and their implications are discussed below.

Considering all of the results presented in the last chapter, what can we say we have learned about social norms and personal space? We found that we were correct in assuming that intrusions of personal space would be avoided when possible. We found also that the sex of the other person influenced spatial behavior in some but not all instances. Thus, subjects sat at similar distances from males and females on the long bench but experienced more negative affect in relation to the male confederate. On the other hand, the sex of the confederate did affect spatial behavior but not affective response in the Intrusion-Choice conditions, as subjects significantly preferred female intrusions to male intrusions and sat closer to the female when she was chosen over the

male. Finally, the findings on the effects of the race of the other person revealed that subjects neither sat further from Negroes than from whites nor chose white intrusions over Negro ones. Negro females on the other hand, demonstrated the tendency to prefer intrusions with Negro males over white males.

Perhaps we can best understand the failure to confirm certain of our hypotheses by examining the situations in which antecedent conditions did influence spatial behavior, i.e., the Intrusion-Choice conditions. These conditions were different from the Free-Seating-Choice conditions in essentially two ways: (1) they required the subject to choose one seat over the other, and (2) they involved intrusions of personal space. Both of these factors would force the subject to focus upon the characteristics of the seated confederates in order to evaluate degree of intrusiveness and seat preference. In the Free-Seating-Choice conditions the subjects were less compelled to attend to the characteristics of the confederates. Since social norms cannot influence behavior unless individuals attend to the characteristics of the situation to which the norms are attached, it would seem that the Intrusion-Choice but not the Free-Seating-Choice conditions made the social norms <u>salient</u>.

Thus, the context of the interaction appears to be of great importance. It would seem that something in the context must evoke the relevant norms in order for them to operate. Additional evidence on the importance of context comes from the data on intrusion distance. It will be recalled that subjects sat at the same dis-

tances from all confederates during intrusion---male and female, Negro and white---except in one condition. Those who chose females over males sat closer to them than they did to females in any other condition and then to males in any condition. This means that we cannot speak of a constant spatial response to one sex or even to one particular person without knowing the context of the interaction. The male-female intrusion choice made sex norms salient to the subjects and they responded by choosing the female over the male and by sitting closer to her. The choices between two females and between two males, on the other hand, seem analogous to the Free-Seating-Choice conditions. Like the Free-Seating-Choice conditions, only confederates of one sex were present at one time, and also like the Free-Seating-Choice conditions, the subjects responded with similar moderate distances from the male and female confederates. In addition, if our analysis is correct, we might add that the context of these Intrusion-Choice conditions, like the Free-Seating-Choice conditions, did not make the sex norms salient.

Data on the nature of the relationship between spatial behavior and social norms provide important information to both environmental and social psychology. Had the results confirmed all of our hypotheses, then we would have had substantial evidence that the social environment and interpersonal variables in the context of the physical environment are significant determinants of the ways in which space is perceived and used. In addition, we would have had good cause to consider spatial behavior an important behavioral

measure of the influence of social factors.

The data we actually collected at least implied all of the above. They also had additional significance to investigations which take either the environment or social behavior as their focus. In the first place, the general implications of the context and norm salience argument for the study of the environment are far-reaching. If this interpretation is accurate and generally applicable, then the concept of environmental constancies becomes questionable. We would focus instead on the context of environmental objects and the conditions under which they evoke certain responses and not others. In addition, we would describe the characteristics of objects and interactions in space in terms of their salience and position on a momentary hierarchy, rather than in terms of fixed qualities.

The implication of our results for social psychological studies is that we cannot assume that social objects automatically influence behavior by virtue of their presence alone. They must be an integral part of the major ongoing activity if they are to be relevant. If our specific results prove to be generally relevant, then they could mean that the characteristics of other people in the environment only become salient to seating behavior during actual or potential intrusions and not under normal circumstances of seating. This would imply that all strangers (and perhaps all people), regardless of their characteristics would evoke similar personal spaces and would, therefore, be kept at constant interpersonal distances. Only under conditions of inadequate distances would their characteristics begin to

affect seating behavior.

It would not be difficult to justify this argument, particularly when we deal with transient encounters with individuals who are unknown to the actor. The presence of others can be ignored or tolerated with only minimal attention paid to their characteristics when the situation and their behavior in it are normative and when the actor's freedom of movement and behavior are intact. Conditions of unwarranted intimacy with the associated infringement on the actor's freedom of goal attainment would rapidly make him vigilant to the objects in the environment.

However, we are not prepared to conclude that interpersonal distance under conditions of adequate spacing is simply unaffected by the characteristics of others in the setting. In the first place, there is ample evidence (cited in Chapter I) that differential spacing does occur in the absence of conditions of intrusion. In the second place, there may have been factors peculiar to our experimental situation that could have influenced the salience of race and sex norms in ways uncharacteristic of normal interpersonal encounters.

The influence of the independent variables could have been diminished by certain frames of reference which the subjects might have brought with them to the experimental situation. The influence of these frames of reference could have been to arouse norms extraneous to, and perhaps in conflict with, the norms associated with the confederates' race and sex. There were two such sets or frames of reference which seemed particularly relevant to the conditions

under which testing took place. In the first place, subjects were called away from their jobs to participate in an officially sanctioned interview, in a company conference room, in the middle of their work day. They may have experienced feelings, e.g., apprehension, annoyance, hurry, the need to create a good impression, that led them to focus their attention principally upon the task situation and to a lesser extent upon the individuals in the situation. Furthermore, the principal participants in the interaction were the subject and the experimenter, with the confederate occupying a vaguely defined "other" category. Given these task-orienting characteristics of the setting, we could expect attention towards the characteristics of the other person to decrease. Instead, we might find the predominance of norms associated with the formal task situation. Thus, norms associated with the characteristics of the other person may occupy a lower position on the hierarchy in this situation.

The second frame of reference which may have influenced the salience of race and sex norms in our experimental situation is related to the neutral and familiar atmosphere of the interview setting. Subjects can make certain assumptions about a setting such as this. For example, (1) the atmosphere is safe, neutral, and respectable; (2) persons associated with the task are safe, neutral, and respectable; (3) events occurring in a familiar and commonplace setting are likely to be familiar and predictable; and, (4) people who appear jointly with the subject in a familiar setting are likely to be more similar than dissimilar from her.

If these two sets, task orientation and trust in the safety of the interview setting, were prevalent in the subject sample, then they could have aroused normative goals other than those associated with the characteristics of the confederates. In addition, the transient and non-interactive encounter with the confederates allowed the subjects to focus their attention elsewhere. This is not to say that the subjects were unaware of the sex and race of the confederates. Their behavior and the results of interviews with pilot subjects indicate that they were aware of the confederates' sex and race, but that these characteristics and their associated norms were not always salient in the context of the interview setting.

The results of our pilot tests which dealt with ratings of the normativeness of behaviors in space are quite relevant here. It will be recalled that subjects expressed the belief that even nonnormative behavior could be expected to occur on occasion or even with some frequency. This suggested to us at that time that knowing the normativeness of a given behavior was not necessarily predictive of its likelihood of occurrence. We might now add that the context within which the behavior occurs seems to be an essential determinant of the arousal of norms and their subsequent influence on behavior.

Let us now look more specifically at our findings on the effects of sex and race of confederate as they may relate to the context of task orientation and feelings of safety. Subjects only responded minimally to sex norms in the Free-Seating-Choice conditions. We

had expected that the subject's awareness of the other individual and her need to take a seat at some distance from him would be sufficient to arouse norms associated with his sex. However, the subjects seemed to treat all confederates as safe and distant objects with only minimal concern for their characteristics. On the other hand, when the Intrusion-Choice conditions compelled them to attend to the confederate and to intrude upon him, then the sex norms must have become salient because they responded differently towards males and females.

Thus, the subjects' personal spaces seemed to have been quite similar for males and females in the Free-Seating-Choice conditions, but significantly larger for males than for females in the Intrusion-Choice conditions. In response to the confederates' race, however, not even the Intrusion-Choice conditions provoked differential seating behavior in the subjects. One tentative explanation of this is that differential norms and, thus, differential personal spaces regarding race are often based on fear of the unknown and assumptions of dissimilarity of members of different races. In the setting of the working environment, individuals may come to feel that people associated with the company are similar to them, safe, and not likely to engage in threatening behavior. This is the second set we discussed above. If this set operates in relationship to race as well as sex, then our white sample may have felt free to accept and treat Negroes as they do whites in the context of the office setting. This is not to say that this attitude necessarily carries outside of the office into other activities. There is research to

indicate that successful integration in one setting does not necessarily generalize to other settings (Pettigrew, 1969, e.g.).

In addition to this, it is becoming more and more unpopular to express anti-Negro sentiments openly in many public settings. Especially in the context of the tendency for many blacks and for many white liberals to label large numbers of commonplace behaviors as racist, many of the subjects may have felt embarrassed and restrained from expressing a preference for whites. Taken together, these two factors could explain why differential sex norms but not race norms were evoked by the Intrusion-Choice conditions. Subjects may have felt that in the context of the office, differential treatment of Negroes was neither appropriate nor necessary.

Negro females, on the other hand, did not seem to ignore the race of the confederates. They showed a clear preference for intrusions with the Negro male over the white male, and sat significantly closer to Negroes when they intruded upon them than to whites when they intruded upon them. However, the sample was small and the participation of foreign-born Negroes may have contaminated the results. Before we can have confidence in these findings we must replicate them on a larger native-born sample.

It is an interesting and positive sign that Negro females preferred their own race. The recent movement towards black identity and black separatism may be partially responsible. This would be especially relevant to intrusion choices between males, as these young, predominantly single black women might see implied intimacy

with white males as more of a violation of black norms than implied intimacy with white females. These results raise some interesting questions and suggest a great deal of additional research. If differential personal spaces with a preference for blacks is new to the Negro population, then older Negroes, or those living in areas as yet untouched by the new norms, or those who have adopted the white norms should not exhibit such a preference. If an intrusion choice indicates more positive valence, then a generation gap (and a cultural gap as our West Indian subjects seem to indicate) is more likely. On the other hand, an avoidance of contact with whites may be characteristic of new and old generations of Negroes, in which case all Negroes should exhibit a preference for intrusions with their own race. If an intrusion indicates familiarity and the avoidance of the unfamiliar, and menacing, then universal avoidance of white intrusions among blacks is most likely.

We might conclude that the Negro subjects had different personal spaces based on race while the white subjects did not seem to. There are many reasons why racial norms for the Negro but not for the white subjects might operate even in the context of the office setting. The preference for whites on the parts of whites is more subtle, more diversified, and less popular. Thus, they are not always operative and they can be unimportant and, indeed, inappropriate in certain settings. The preference for blacks on the parts of blacks is a more popular position (even among many whites). It is a stance that carries with it statements of newfound pride, and is new and held with less confidence, thus

requiring frequent restatement for reinforcement. It would follow from this that most choice situations involving race would evoke racial preferences in Negroes but not necessarily in whites at this time.

If we were to use personal space and spatial behavior as indicators of attitude, we would come to the ironic conclusion from our results that blacks, but not whites, exhibited racial preferences. However, our findings seem to mimic recent developments in the civil rights movement and in intergroup relations. Anti-Negro feelings have gone underground and, rather than disappearing, have become more subtle and more complexly tied into other issues. Black separatists, on the other hand, have become more vocal and have discredited the move towards integration. We would suggest that in order to produce preferences for whites over Negroes on the parts of whites we need only find the context to evoke these differential norms.

In addition to our context and norm salience explanation, there are other possible ways to interpret the results. While these do not appear to be as valid nor as parsimonious as the explanation we have advanced, we will present several of them as examples. One might argue, for example, as we suggested earlier that the characteristics of another person in the setting only become salient under conditions of intrusion, or that they do not influence personal space and spatial behavior under any circumstances. However, our results indicate that intrusion-choices and intrusion distances were influenced by the sex of

the other person. In addition, our own pilot tests, while small in number, demonstrated consistent differences in interpersonal distance (i.e., in the Free-Seating-Choice conditions) in relation to our male and female confederates. Furthermore, the works of Hall (1966), Kleck (1969), Mehrabian (1968), Sommer (1960, 1966, 1967c), etc. provide evidence that interpersonal spatial behavior does reflect varied differences in the other person. Thus, it would be hard to justify the assertion that the characteristics of the other person were irrelevant to the subjects' personal spaces and to their resulting spatial behavior.

Another argument might be that personal space was differentially affected by the social norms but that for some reason the subjects did not express these differences in their use of space. However, since the subjects did behave differently under certain conditions and not others, and since we can discover no restraints in the situation against differential spatial responses, this explanation is inadequate.

Given the explanation we proposed, we would need always to take the specific context into account in predicting the nature of an individual's momentary personal space. The mere presence of certain norms in the individual's repertoire does not seem to guarantee that he will behave according to their dictates. Only in a context which raises these norms will they operate. When the situation arouses certain goals over others, then personal space should involve expectations that spatial behavior will be aimed at the satisfaction of these goals. Should the situation

change slightly but enough to alter the priorities of interpersonal goals, then personal space should change accordingly. What we must add to our existing definition of personal space is the caution that it will not be determined by characteristics of the situation which are clearly present but for which relevant norms are not salient. In other words, even though certain norms remain constant from situation to situation, they should have differential effects on personal space as their positions in the normative hierarchy vary.

To illustrate, let us examine a situation familiar to most urban dwellers. On a train, a young woman is seated between two strange men with her upper arms in contact with theirs and with her lower arms forcibly crossed in her lap by centripetal pressure. In terms of Hall's interaction zones, she is at an intimate distance with two strange men, and therefore, should be very uncomfortable and should exhibit behavior to indicate this. In terms of Sommer's work, side-by-side seating is the most intimate, and coaction should occur at distant seating; hence, the woman should feel quite invaded upon and should flee. Clearly, as defined by these authors and by most others in the field as well, personal space is disrupted in this situation. Then how can we account for the constant repetition of scenes like this day after day with no apparent signs of agony or revolt?

We can explain it quite well with the model we have proposed here. In the context of the train, only a limited number of interpersonal goals are normative and, thus, the range of personal space is restricted. Should the woman desire to read the newspaper, then

the restriction of her arms---not the absence of physical distance and not the presence of body contact, but the restriction of freedom of movement will prevent this and her personal space will, in fact, be violated. With this particular interpersonal goal we would make the same predictions as Hall and Sommer, i.e., fleeing the field, demands on the other people, symbolic behavior, etc. These are examples of what we have called reestablishment of personal space. However, other outcomes are possible and are predicted by the model. The context also allows the woman to think or daydream, in which case personal space will be redefined and will require only that her seatmates remain as unobtrusive as possible and symbolically create a sense of privacy. Now we would predict that she would sit quietly and ignore the two men, with her personal space satisfied.

Finally, our model, with additional support from our findings, would predict differences in the woman's personal space and behavior based on the immediate context of her seat. The confinement of her seat and the sex of her seatmates will not be relevant for the limited goals we discussed above unless the context makes them salient. That is, availability of roomier seats or identical seating with females, or behavior on the parts of the men which make their sex or the closeness of the seating important can alter the interpersonal goals in terms of which personal space will be defined. In the absence of such cues, the sex of her seatmates should be fairly inconsequential to her personal space and behavior. Should her goals change, then sex and spatial cues may take on new meaning

and may then enter into the definition of personal space.

Our model also allows us to deal with many more aspects of space and its uses than we were able to investigate here. For example, our focus was primarily one-sided in that we studied the effects of individual characteristics on the use of space, and not the effects of particular spatial arrangements on the individual. Also, we studied only the responses of female subjects to the race and sex of another person. It would also be quite interesting to see how this context would affect the personal spaces of males; and similarly, how unique contexts and interpersonal goals other than those related to race and sex would affect the use of space.

In developing our experimental situations, we were aware that we were putting the model and its predictions to very stringent tests. If the relationship between the use of space and the sex and race of another individual occurred in the safe context of the experiment, then it was likely to occur with great frequency in a less protective environment where race and sex have more significance. Natural encounters are also more dynamic and involve action, reaction, and feedback rather than just the simple final response we dealt with.

As we have already discussed, the Free-Seating-Choice conditions hardly produced differences in spatial behavior in relation to the race and sex of the seated confederates. This kind of interpersonal distance, side-by-side in relation to a stranger provides only minimal cues to the subject and allows a great deal of diversion on his part. Face-to-face encounters are far more likely

to evoke norms about the other person and result in differential personal spaces and interpersonal distances because: (1) the other person is in sight and impossible to ignore, and each knows that the other knows of his presence; (2) one's behavior becomes more important, for the perceptual and behavioral possibilities described by Hall (1966) at each interaction distance are only possible when face-to-face; and (3) some mutual task is usually involved in face-to-face encounters, making the characteristics of the other person more relevant. Thus, side-by-side seating reduces many cues and involvements, but by virtue of this, allows one to isolate particular variables free from the interference of factors raised during interactions.

It is possible, of course, that side-by-side interpersonal distance is determined solely by situational factors and is free of the influence of the characteristics of the other person. This can only be determined by further research. However, if our reasoning is correct, then contextual changes in the situation could make race and sex more salient in side-by-side interpersonal distance. There are many contextual changes that seem capable of achieving this. For one, the subject's faith in the safety of the experimental situation can be reduced by conducting the trials in an unfamiliar, potentially threatening setting. Subjects would then be prevented from taking the environmental context for granted and they should become more vigilant to the characteristics of other people in the setting. Related to this, the other people in the situation can be made to appear or behave in ways that would prevent

the subjects from assuming that they are similar to them. The more menacing and unfamiliar the setting, the more likely it would seem that the norms associated with the characteristics of objects and people in the environment would become salient.

The subject's task orientation and the prevalence of situational norms can be reduced by consciously focusing the subject's attention upon the characteristics of the other person. As we discussed, the Intrusion-Choice conditions seemed to do this efficiently. The same attention to the characteristics of the confederates may be achieved in the Free-Choice conditions by altering the task orientation or by changing the seating arrangements. In the first, a task which requires the subject to interact with the confederates or which requires him to attend to them, should make the norms associated with their characteristics more salient. In the second, a seating choice which requires more of the subject than just sitting anywhere along a long bench (e.g., perhaps a choice between two long benches, each occupied by a different confederate) should call his attention to the seated individuals. Another possibility is that the addition of anchors on the long bench might focus attention more on the other individuals, e.g., confederates seated on either end of the long bench with seating available between them. Thus, it may be possible to achieve differential personal spaces and seating behavior in situations similar to the Free-Seating-Choice conditions by altering the context sufficiently to make norms associated with the characteristics of the other person more salient. This is an area in which further research is required.

The Intrusion-Choice conditions proved to be better measures of personal space because of their ability to arouse relevant norms and differential personal spaces. Unexpectedly, they aroused age norms as well, for age and intrusion distance were positively correlated. It would appear that older subjects felt less affinity, or younger subjects more affinity, or both towards the young confederates; but it was the intrusion distance and not interpersonal distance that revealed this. Again, the context of the Intrusion-Choice conditions seemed most efficient in the arousal of norms.

Considering their effectiveness in the experimental setting, the Intrusion-Choice conditions should be far more powerful in less antiseptic contexts. It could be a very useful technique for measuring preferential responses to factors other than race and sex, and considering the need for behavioral indicators of attitude, might prove to be a revealing nonverbal attitude measure. It also turned out to be a particularly fruitful set of conditions, in that it yielded not only differences in seating choice but differences in intrusion distance as well.

As we described them, differences in intrusion distance were linked to differences in body position in relation to the confederate. In other words, attempts on the parts of the subjects to create symbolic distance by turning away from the confederates achieved for them greater intrusion distances as well. These important data would have been lost to us had they not been collected as part of a more casual attempt to measure "other behavior." This points to the important role played by more subtle behaviors in the

use of space. It is most important to measure symbolic ways of dealing with encounters that occur in abundant or inadequate amounts of space. If the focus is only upon gross choices or distances, then these subtle adaptive and communicative techniques will go unnoticed. Work in this area points to the richness of untapped behavior during interactions in space. This is especially important when dealing with urban space, where physical interpersonal distance is growing more scarce, and where the need to retain privacy symbolically is becoming increasingly necessary.

The crowding and reduction in privacy which are increasing at an alarming rate in urban settings may eventually produce a context in which the usual norms simply cannot apply. Should this occur, new norms and personal spaces peculiar to overpopulation could develop initially to replace the old ones and to accomodate for the restrictions inherent in crowding. However, it is possible to predict that at more intense levels of crowding, norms could break down completely, personal space could become impossible to maintain, and behaviors could become nonnormative, unpredictive, and characteristic of anomie. This might be similar to the behavioral sink observed in animals during overcrowding (Calhoun, 1962).

Personal space is man's way of dealing with his surroundings by translating his momentary goals into spatial behavior. The obviously complex factors involved in the definition and use of space point to the need for complex solutions. As we described earlier, the relationship between social norms and spatial behavior has significance for several disciplines---environmental

psychology, social psychology, sociology, etc. In addition to the variety of social sciences to which the study of space is relevant, there is an entire field of knowledge accumulated by the applied fields which construct man's fixed environment---e.g., architecture, design, urban planning. The study of man's spatial behavior and the construction of environments to accomodate it require an interdisciplinary approach which takes all of these orientations into account. Social scientists who study the environment must become aware of their interrelatedness and must orient their work to the realities and limitations of the physical space; designers and planners, on the other hand, must become attuned to and make use of the tools, knowledge, and perspective of the social sciences.

Appendix A:

Letter to Subjects

TO: ALL CONCERNED

FROM: PERSONNEL

ABOUT: STAFF INTERVIEW

A research team from the City University of New York is conducting a study about the use of office space. To collect their information, they are giving ten-minute interviews to a large number of people who work for a variety of different offices. We have volunteered our staff for interviews because their results may be summarized in a book to be published by our company and, in addition, we hope that we can learn something about ways to improve our own office space problems.

The first phase of the study will involve only female staff members who will be interviewed within the next few weeks. The group will be randomly assigned to appointment slots, and each person will be notified of her appointment in advance. Of course, all interviews will remain private and no individual responses will be revealed.

Appendix B:

Office Questionnaire

OFFICE QUESTIONNAIRE

1. When you think of your present office, what is the first thing that comes to your mind?

2. What do you like best about your present office?

3. What do you like least about your present office?

4. On this card (Hand subject Card A), next to each number are pairs of words. When I say the number, look at the words and tell me which ones best describe your present office.

CARD A

1. small---large
2. crowded---empty
3. private---public
4. attractive---unattractive
5. distracting---easy to concentrate
6. exciting---dull
7. friendly---unfriendly
8. formal---casual
9. relaxed---tense
10. efficient---inefficient

5. Now lets go back to the beginning of Card A. This time when I say the number, look at the words and tell me which one best describes your ideal office---the office you would most like to work in now.
1-10

6. If you could add just one thing to your present office which one, if any, of the things on this card (Present Card B) would you add?

CARD B

1. windows
2. room dividers
3. music
4. different office furniture
5. sound-proofing
6. additional space
7. none of these, specify other, if any _____

7. In general, how much influence would you say the physical environment has on your overall mood and satisfaction with your job? (Hand subject Card C)

CARD C

1. no influence
2. some influence
3. considerable influence
4. a great deal of influence

8. In general, how much influence would you say the physical environment has on the quality of your work? (Card C)

CARD C

1. no influence
2. some influence
3. considerable influence
4. a great deal of influence

9. Is there any place in the office that you consider your own, i.e., that you consider aspersonal and as belonging to you? Where?

10. Have you added any personal touches to your office or desk? What?

11. During the business day, what do you do when you want to concentrate on something very important?

12. How important to you is a sense of privacy in the office? (Hand subject Card D)

CARD D

1. not important
2. somewhat important
3. considerably important
4. very important

13. Can you achieve a sense of privacy in your office? How?

14. Of the following things, which one would you say contributes most to how much a person likes her job? (Hand subject Card E)

CARD E

1. salary
2. co-workers
3. physical surroundings
4. supervisors
5. hours

15. Would you recommend your office or one like it to a good friend as a place to work? Why?

Appendix C:

Pilot Affect Questionnaire

MOOD CHECKLIST

On the following pages you will find a list of words which relate to different moods and feelings. Next to each word is a scale from one through nine which describes the extent to which you are experiencing that feeling, from "not at all"(1) to "extremely"(9).

Look at each word, one at a time, and circle the number which best describes how you are feeling right now--at this moment. Work rapidly and answer each one.

RELAXED:

1 2 3 4 5 6 7 8 9
not at all extremely

ANNOYED:

1 2 3 4 5 6 7 8 9
not at all extremely

UNCERTAIN:

1 2 3 4 5 6 7 8 9
not at all extremely

UNCOMFORTABLE:

1 2 3 4 5 6 7 8 9
not at all extremely

PLEASANT:

1 2 3 4 5 6 7 8 9
not at all extremely

RESTLESS:

1 2 3 4 5 6 7 8 9
not at all extremely

CURIOUS:

1 2 3 4 5 6 7 8 9
not at all extremely

ANGRY:

1 2 3 4 5 6 7 8 9
not at all extremely

CONVERSATIONAL:

1 2 3 4 5 6 7 8 9
not at all extremely

ACTIVE:

1 2 3 4 5 6 7 8 9
not at all extremely

SELF-CONSCIOUS:

1 2 3 4 5 6 7 8 9
not at all extremely

CONTENTED:

1 2 3 4 5 6 7 8 9
not at all extremely

AWARE OF OTHERS:

1 2 3 4 5 6 7 8 9
not at all extremely

HAPPY:

1 2 3 4 5 6 7 8 9
not at all extremely

EMBARRASSED:

1 2 3 4 5 6 7 8 9
not at all extremely

RESTRAINED:

1 2 3 4 5 6 7 8 9
not at all extremely

CHEERFUL:

1 2 3 4 5 6 7 8 9
not at all extremely

TENSE:

1 2 3 4 5 6 7 8 9
not at all extremely

IRRITATED:

1	2	3	4	5	6	7	8	9
not at all								extremely

CALM:

1	2	3	4	5	6	7	8	9
not at all								extremely

II. If there are any feelings you are experiencing now or which reflect your present mood which are not listed above, please mention them below.

Appendix D:

Affect Scores

Table D1: Total and individual affect scores for intrusion[1] and nonintrusion[2].

	Intrusion		Nonintrusion		
	Mean	S.D.	Mean	S.D.	t
Total affect score[3]	49.6	19.3	47.8	11.9	.199
Active[4]	5.8	2.1	6.2	2.4	.306
Aware of others[4]	6.6	2.4	6.2	2.6	.269
Conversational[4]	6.1	2.4	4.7	1.3	1.437
Curious[4]	8.0	1.6	8.0	1.2	.000
Angry	1.9	1.7	1.0	.0	1.455
Annoyed	2.4	2.1	1.1	.4	1.711
Calm	5.6	2.2	4.3	2.2	.969
Cheerful	5.4	2.5	6.9	1.2	1.405
Contented	4.8	2.4	5.4	1.9	.565
Embarrassed	1.4	.7	2.7	2.5	.071
Happy	5.3	2.5	6.6	2.1	1.000
Irritated	1.8	1.3	1.1	.4	1.566
Pleasant	6.3	1.8	6.6	1.5	.268
Relaxed	6.2	1.5	5.3	2.1	.841
Restless	2.6	2.6	3.2	1.7	.398
Restrained	2.9	1.5	2.0	1.4	1.092
Self-Conscious	2.7	1.3	3.0	1.9	.374
Tense	2.3	1.6	2.9	2.2	.502
Uncertain	3.4	1.8	3.0	2.6	.361
Uncomfortable	1.8	1.1	1.5	.5	.606

1. Intrusion over nonintrusion; intrusion female over intrusion male; intrusion male over intrusion female.
2. Nonintrusion over intrusion; nonintrusion over nonintrusion.
3. Total of 16 directional adjectives with positive wordscores reserved so that higher scores reflect more negative affect.
4. Not included in total affect score.

Table D?: Total and individual affect scores for normative[1] and nonnormative[2] choices.

	Normative		Nonnormative			
	Mean	S.D.	Mean	S.D.	t	p
Total affect score[3,5]	39.1	14.1	63.4	12.2	3.001	.01
Active[4]	5.0	2.5	5.4	2.7	.251	>.10
Aware of others[4]	7.3	1.6	5.4	2.2	1.336	>.10
Conversational[4]	5.2	2.0	5.6	2.7	.250	>.10
Curious[4]	7.7	1.9	7.2	1.8	.406	>.10
Angry	1.0	.0	2.6	2.1	1.554	.08
Annoyed	1.4	1.0	3.6	2.3	1.839	.05
Calm	5.6	2.1	5.2	2.4	.297	>.10
Cheerful	6.8	1.7	4.2	1.9	2.187	.03
Contented	5.4	2.5	3.2	1.5	1.974	.04
Embarrassed	2.1	2.1	1.8	.8	.370	>.10
Happy	5.9	2.6	3.8	1.6	1.730	.06
Irritated	1.1	.3	2.4	1.5	1.682	.06
Pleasant	6.2	1.8	5.8	1.9	.367	>.10
Relaxed	5.9	2.1	6.0	1.2	.115	>.10
Restless	1.4	.7	3.8	3.0	1.555	.08
Restrained	2.3	1.2	3.4	1.6	1.154	>.10
Self-conscious	2.2	1.8	3.6	1.0	1.719	.06
Tense	1.1	.3	3.4	1.4	3.299	.005
Uncertain	3.0	2.5	4.6	.8	1.629	.07
Uncomfortable	1.3	.7	2.4	1.2	1.655	.07

1. Consists of nonintrusion over intrusion and intrusion female over intrusion male.
2. Consists of intrusion chosen over nonintrusion and intrusion male over intrusion female.
3. Consists of total of sixteen directional adjectives with positive wordscores reversed so that higher scores reflect more negative affect.
4. Not included in total affect scores.
5. When the eleven significant adjectives are combined into total affect scores, the resulting means are: Normative, 23.0 and nonnormative, 45.2 ($t = 3.367$, $p = .005$).

Appendix E:

Revised Affect Questionnaire

MOOD CHECKLIST

On the following pages you will find a list of words which relate to different moods and feelings. Next to each word is a scale from 1 to 9 which describes the extent to which you are experiencing that feeling.

Look at each word, one at a time, and circle the number which best describes how you are feeling right now--at this very moment. Work rapidly and answer each one.

UNCERTAIN:

1 2 3 4 5 6 7 8 9
not at all extremely

RESTLESS:

1 2 3 4 5 6 7 8 9
not at all extremely

HAPPY:

1 2 3 4 5 6 7 8 9
not at all extremely

SELF-CONSCIOUS:

1 2 3 4 5 6 7 8 9
not at all extremely

ANNOYED:

1 2 3 4 5 6 7 8 9
not at all extremely

UNCOMFORTABLE:

1 2 3 4 5 6 7 8 9
not at all extremely

CONTENTED:

1 2 3 4 5 6 7 8 9
not at all extremely

ANGRY:

1	2	3	4	5	6	7	8	9
not at all								extremely

CHEERFUL:

1	2	3	4	5	6	7	8	9
not at all								extremely

IRRITATED:

1	2	3	4	5	6	7	8	9
not at all								extremely

TENSE:

1	2	3	4	5	6	7	8	9
not at all								extremely

Appendix F:

Norm Questionnaire

ATTITUDES OF THE GENERAL PUBLIC

We are all aware of certain standards in our society. As a result, we have a good idea how the average person feels about things and we also have an idea of how likely different things are to happen.

For example, we know that most people strongly approve of a man holding a door open for his date, and we know that a man will usually do this.

Therefore, if we were asked to rate the behavior, we would probably do it as follows:

Example: A man holds a door open for his date.

A. How would the average person view this?

(1) strong disapproval

(2) mild disapproval

(3) mild approval

(4) strong approval

B. How likely is it that the average person would do this?

(1) very likely

(2) possible

(3) unlikely

(4) never

Following is a list of other behaviors. We would like you to think about each one and rate it as to (1) how most people would feel about it, and (2) how likely you think it is to happen. We're not interested in how you feel about it; we want to know what you think most people feel. Circle the numbers you select.

A girl sits very close to a male stranger on a couch.

A. How would the average person view this?

(1) strong disapproval

(2) mild disapproval

(3) mild approval

(4) strong approval

B. How likely is it that the average girl would do this?

(1) very likely

(2) possible

(3) unlikely

(4) never

A white girl invites a Negro girl to a pajama party.

A. How would the average person view this?

(1) strong disapproval

(2) mild disapproval

(3) mild approval

(4) strong approval

B. How likely is it that the average girl would do this?

(1) very likely

(2) possible

(3) unlikely

(4) never

Two men walk along holding hands.

A. How would the average person view this?

(1) strong disapproval

(2) mild disapproval

(3) mild approval

(4) strong approval

B. How likely is it that the average man would do this?

(1) very likely

(2) possible

(3) unlikely

(4) never

A white girl accepts a dance with a Negro boy.

A. How would the average person view this?

(1) strong disapproval

(2) mild disapproval

(3) mild approval

(4) strong approval

B. How likely is it that the average girl would do this?

(1) very likely

(2) possible

(3) unlikely

(4) never

A girl sits down on the lap of a strange boy.

A. How would the average person view this?

(1) strong disapproval

(2) mild disapproval

(3) mild approval

(4) strong approval

B. How likely is it that the average girl would do this?

(1) very likely

(2) possible

(3) unlikely

(4) never

A person spreads his newspaper wide open on a crowded train.

A. How would the average person view this?

(1) strong disapproval

(2) mild disapproval

(3) mild approval

(4) strong approval

B. How likely is it that the average pe son would do this?

(1) very likely

(2) possible

(3) unlikely

(4) never

Two women hug each other.

A. How would the average person view this?

(1) strong disapproval

(2) mild disapproval

(3) mild approval

(4) strong approval

B. How likely is it that the average woman would do this?

(1) very likely

(2) possible

(3) unlikely

(4) never

A girl shares an apartment with a co-ed and interracial group.

A. How would the average person view this?

(1) strong disapproval

(2) mild disapproval

(3) mild approval

(4) strong approval

B. How likely is it that the average girl would do this?

(1) very likely

(2) possible

(3) unlikely

(4) never

Two strangers on a crowded train turn their eyes away so as not to stare at each other.

A. How would the average person view this?

(1) strong disapproval

(2) mild disapproval

(3) mild approval

(4) strong approval

B. How likely is it that the average person would do this?

(1) very likely

(2) possible

(3) unlikely

(4) never

An interracial couple takes an apartment in an all-white suburb.

A. How would the average person view this?

(1) strong disapproval

(2) mild disapproval

(3) mild approval

(4) strong approval

B. How likely is it that the average couple would do this?

(1) very likely

(2) possible

(3) unlikely

(4) never

Appendix G:

Confederate Equality Scale

Answer the following questions about the person in the picture. Use your imagination, and circle one answer for each question.

1. What is the sex of the person in the picture?

   Male

   Female

2. What is the age of the person in the picture?

   1 - 0

   1-30

   31-40

   41-50

   51- 0

3. What is the religion of the person in the picture?

   Jewish

   Catholic

   Protestant

   Other, please specify: _____

4. What is the social class of the person in the picture?

   Lower class

   Middle class

   Upper class

5. What is the education of the person in the picture?

   Through High School

   Some college

   College degree

   Graduate work or graduate degree

6. What is the occupation of the person in the picture?

Laborer

Clerical work

Sales

Managerial

Professional

Housewife

Student

Other, please specify:_____

7. How attractive is the person in the picture?

very attractive

average

below average

very unattractive

8. How friendly is the person in the picture?

very friendly

slightly friendly

average

slightly unfriendly

very unfriendly

9. How similar to you is the person in the picture?

very similar

somewhat similar

somewhat dissimilar

very dissimilar

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