

**SUBJECTIVE INTERPERSONAL DISTANCE IN A PUBLIC SETTING: EFFECT OF SITUATION AND ECOLOGY**

T. Matthew Ciolek  
Adrian F. Furnham

Department of Experimental Psychology  
University of Oxford  
Oxford OX1 3UD  
England

**ABSTRACT**

*Thirty-six subjects were asked to estimate the degree of proximity between 15 pairs of seated people in three different types of social situations which differed in seating arrangements. The data suggest that (a) perceived interpersonal proximity is higher in such contexts as a church and a lecture room than in a place like a cinema; (b) perceived proximity is higher in the case of an arrangement of chairs in which the majority of target people are placed within the same of the two groups of chairs and lower in the context of a fragmented, three-block arrangement; (c) perceived proximity is inversely and non-linearly related to the objective (physical) interpersonal distance; (d) average proximity rating tends to be higher for people sitting to the side of the observer; intermediate for those positioned in front of him and the lowest for those placed diagonally to the observer. These findings are discussed in terms of the definition of the situation and ecological conditions affecting people's perception of interpersonal spacing. Implications for the studies of personal space and human territorial behaviour are also considered.*

**INTRODUCTION**

Recently there has been a considerable interest in the notion of subjective distance and proximity. This distance is usually defined as the perceived extent of space between a subject and some set of stimuli or reference points. Most of the research on the relationship between subjective and objective distance has been conducted within the framework of psychophysically oriented experimental psychology and human geography.

Gilinsky (1951) carried out a series of field experiments on perception of distance between a person and an object positioned at a number of zones between 2.4 to 62 meters. These studies were conducted in an outdoor setting and it was found that: subjective distance tended to change at a rate slower than that of objective distance; subjective distance is an exponential function of the objective distance, and the exponent of function tended to be inversely proportional to the objective distance between

subject and stimulus. Kunnapas (1960) in a similar experiment conducted in a laboratory setting obtained basically the same results with one exception: in his study the perceived distance tended to change at a faster rate than it was the case with the objective distance. Results similar to Kunnapas' were also obtained in a study by Lloyd and Van Steenkiste (cited in Gould and White, 1974) where subjects were asked to estimate the number of miles separating pairs of various American cities. Lundberg and his colleagues (Lundberg et al., 1972) have summarized results of eight different experiments conducted in the years 1965-1971. Subjects were asked to perform two tasks in these studies, firstly, to estimate the magnitude of their emotional involvement in an imaginary event taking place in one of the foreign towns, and secondly, they were asked to estimate the distance to such a town or city. The studied geographical distances ranged from 204 to 12800 km. It was shown that emotional involvement tended to be inversely proportional to the square root of the estimated distance between subjects and the imaginary stimuli and that the estimated distance tended to grow at a slower rate than did the objective distance. Also it was found that the estimated distance is an exponential function of the objective distance and tended to be inversely proportional to the stimulus range.

These findings have important implications for contemporary research in human communication and social behaviour. Since the pioneering work of Sommer (1959, 1969) and Hall (1959, 1963), investigations of human interaction have paid attention to the spatial forms and spatial contexts of phenomena under study. Separate fields of study have grown up during the past 20 years, such as studies concerned with the social and psychological correlates of use of space and territory (Edney, 1974; Baum and Epstein, 1978), spatial factors in social interaction (Kendon, 1973, 1977; Deutsch, 1977; Argyle, 1975; Patterson, 1978), the use of architectural space (Proshansky et al., 1976; Lee, 1976; Rapoport, 1976, 1977; Stokols, 1978) and so forth. Further, concepts such as "personal space," "spacing," "territory," "zones of co-presence," "interaction distance," "immediacy," grew out of the research.

However, studies on the relationship between subjective and objective distance have indicated that there is a difference between these two measures. While the physical or objective distance between two sets of reference points remains, by definition, constant, despite possible changes in the social, physical or psychological context, this is very seldom the case with the perceived or estimated distances. Further, research suggests that the space surrounding people is perceived, experienced and treated by them as if it were finite in its extent (Ciolek, 1979), discontinuous in its structure (Goffman, 1971; Schefflen and Ashcraft,

SUBJECTIVE INTERPERSONAL DISTANCE IN A PUBLIC SETTING:  
EFFECT OF SITUATION AND ECOLOGY  
T. M. Ciolek     A. F. Furnham