BASS: ENVIRONMENTAL PSYCHOLOGY

(PSY. 2107):

Introduction:

Environmental psychology is a branch of psychology concerned with the relationships between human behavior and man's physical environment. It therefore examines the interrelationship between environments and human behavior. The field defines the term environment very broadly including all that is natural on the planet as well as social settings, built environments, learning environments and informational environments.

When solving problems involving human-environment interactions, whether global or local, one must have a model of human nature that predicts the environmental conditions under which humans will behave in a decent and creative manner. With such a model one can design, manage, protect and/or restore environments that enhance reasonable behavior, predict what the likely outcome will be when these conditions are not met, and diagnose problem situations.

The field develops such a model of human nature while retaining a broad and inherently multidisciplinary focus. It explores such dissimilar issues as common property resource management, the effect of environmental stress on human performance, the characteristics of restorative environments, human information processing, and the promotion of durable conservation behavior.

The field of environmental psychology recognizes the need to be problem-oriented, using as needed, the theories and methods of related disciplines (e.g., psychology, sociology, anthropology, biology, ecology).

There are several recurrent elements in the research literature that help to define the field of environmental psychology (Garling and Golledge, 1993, Kaplan and Kaplan 1982, 2009) and these include;

Attention - Understanding human behavior starts with understanding how people notice the environment. This includes at least two kinds of stimuli: those that involuntarily, even distractingly, command human notice, as well as those places, things or ideas to which humans must voluntarily, and with some effort (and resulting fatigue), direct their awareness. Restoring and enhancing people's capacity to voluntarily direct their attention is a major factor in maintaining human effectiveness.

Perception and cognitive maps - How people image the natural and built environment has been an interest of this field from its beginning. Information is stored in the brain as spatial networks called cognitive maps. These structures link one's recall of experiences with perception of

present events, ideas and emotions. It is through these neural networks that humans know and think about the environment, plan and carry out their plans. Interestingly, what humans know about an environment is both more than external reality in that they perceive with prior knowledge and expectations, and less than external reality in that they record only a portion of the entire visual frame yet recall it as complete and continuous.

Preferred environments - People tend to seek out places where they feel competent and confident, places where they can make sense of the environment while also being engaged with it. Research has expanded the notion of preference to include coherence (a sense that things in the environment hang together) and legibility (the inference that one can explore an environment without becoming lost) as contributors to environmental comprehension. Being involved and wanting to explore an environment requires having complexity (containing enough variety to make it worth learning about) and mystery (the prospect of gaining more information about an environment). Preserving, restoring and creating a preferred environment is thought to increase sense of well-being and behavioral effectiveness in humans.

Environmental stress and coping - Along with the common environmental stressors (e.g., noise, climatic extremes) some define stress as the failure of preference, including in the definition such cognitive stressors as prolonged uncertainty, lack of predictability and stimulus overload. Research has identified numerous behavioral and cognitive outcomes including physical illness, diminished altruism, helplessness and attentional fatigue. Coping with stress involves a number of options. Humans can change their physical or social settings to create more supportive environments (e.g., smaller scaled settings, territories) where they can manage the flow of information or stress inducing stimuli. People can also endure the stressful period, incurring mental costs that they deal with later, in restorative settings (e.g., natural areas, privacy, and solitude). They can also seek to interpret or make sense of a situation as a way to defuse its stressful effects, often sharing these interpretations as a part of their culture.

Participation - The field is committed to enhancing citizen involvement in environmental design, management and restoration efforts. It is concerned not only with promoting citizen comprehension of environmental issues but with insuring their early and genuine participation in the design, modification and management of environments.

Conservation psychology - The field has also played a major role in bringing psychological knowledge to bear upon environmental challenges including responding to global climate disruption and the impending energy descent, as well as crafting a wholesome and environmentally durable society. It explores conservation-related attitudes, perceptions, motivations and values as well as devises intervention techniques for promoting environmentally appropriate behavior at a variety of scales

Assumptions of Environmental Psychology

Like all other environmental sciences, Environmental Psychology has the following assumptions about the natural environment;

  i.   The earth is the only habitable planet that we have
 ii.   Although there may be other planets in the space, they are too far away
iii.   Throughout the history of the earth, various forms of life have begun, evolved, prospered and died. Humans too will succumb to extinction either through geological, climatic or interstellar catastrophes.
 iv.   The resources of the earth are limited
  v.   The earth as a planet has been and continues to be affected by life
 vi.   Sustained life on the earth is a function of ecosystems and not individual species

Forces driving Environmental psychology

There are five (5) major forces that are driving the emergence and development of Environmental psychology and these include;

  1. *Population trends*

World population projections concur that given current trends, our numbers will reach 10 billion by 2030 and 30 billion by the end of the 21st century. These numbers are close to the carrying capacity of the entire earth. In some places on the globe (e.g. Himalayan region of Asia) the carrying capacity is believed to have already been exceeded. This dramatic increase in world population has been a force in the development of Environmental Psychology.

  2. *Resource depletion*

The depletion of natural resources essential for survival is another factor influencing the development of environmental psychology. Nonrenewable resources are being consumed at increasing rates.

  3. *Environmental deterioration*

Serious deterioration in the earth's basic resources can be found throughout the world. Examples include erosion of agricultural soil, desertification and lake acidification.

  4. *Public policy*

The formulation of public policy to preserve and sustain a decent environment is being implemented. The need for reliable scientific data upon which to base policies has contributed to the growth of environmental psychology.

  5. *Human Behavior*

The problems of the mother earth are human problems caused directly or indirectly by human presence. Advanced technology whose source is human behavior acts as part of the solution but is also a part of the problem. Psychologists whose domain of interest is human behavior have a great deal to contribute to resolve the problems of the earth.

Theories of Environmental Psychology

Theories of Environmental Psychology can be divided into the historical and the contemporary theories. To date, there is no single theory of environmental psychology that explains the entire complexity of the environment-behavior interrelationship. Each theory can only explain a limited aspect of this relationship.

Historical theories

1. Geographical determinism

Some Historians and Geographers have attempted to account for the rise and fall of entire civilizations on the basis of environmental characteristics. For example, Tony Bee (1962) theorized that the environment e.g. topography, climate, vegetation, availability of water, presents challenges to its inhabitants. Extreme environmental challenge leads to the destruction of a civilization where as little challenge leads to stagnation of a culture. He therefore proposed that an intermediate level of environmental challenge enhances the development of a civilization.

2. Ecological biology

This stresses the interdependency between organisms and their environment. The various components are seen as constituting a single total system. Changes in any single component are assumed to change the nature of the entire system.

3. Behaviorism

This emerged as a reaction of behaviorists to the failure of personality theorists to account fully for human behavior. Behaviorists emphasize the environment in the molding of human behavior. However, it is generally accepted that considering both the environment in which the behavior occurs and the person variables leads to a more accurate understanding of behavior.

4. Gestalt Psychology

Gestalt psychologists were more concerned with the perception and cognition than with overt behavior and the environment. From the Gestalt point of view, behavior is rooted in the cognitive processes. It is determined not by the physical reality (stimuli) but from the subjective perception of that reality.

Contemporary Theories

1. Arousal theory

This is concerned with the influence of stimulus arousal on performance. Generally, performance is maximized at intermediate levels of arousal but falls off as arousal is either increased or decreased. Too little arousal is as bad as too much arousal.

2. Stimulus load theory

The assumption is that humans have a limited capacity to process information. When inputs exceed that capacity, people tend to ignore inputs and pay attention to others. Ignoring less important stimuli enhances performance on the task at hand. Paying attention to less important stimuli will lead to poor performance. Generally, it is stimuli that are most important to the task at hand that are allocated as much attention as needed and less important stimuli are ignored.

3. Behavioral constraint theory

This theory focuses on real or perceived limitations imposed on the organism by the environment. According to this theory, the environment can prevent or limit the behaviors of its inhabitants. For example rush hour traffic interferes with rapid commuting and extremely cold temperature limits finger dexterity. When we feel that we have lost control over the environment, we first experience the discomfort and then we attempt to re-assert our control. This phenomenon is labeled **psychological reactance.**

If repeated attempts to regain control fail, learned helplessness may develop. People begin to believe they no longer control their destiny and that what happens to them is out of their personal control since behavior has no effect onto the environment. These feelings eventually lead to clinical symptoms and in the most extreme forms can lead people to give up on life and die.

4. Adaptation level theory

Adaptation level theories believe that the interrelationship between the organism and the environment is specifically made up of two processes, namely; **adaptation and adjustment.** To an environmental stimulus, organisms either adapt or adjust. Adaptation refers to change of response to the environment while adjustment means changing the environment in which the stimulus is coming from.

5. Under-stimulation approach

A number of theorists have suggested that environmental-behavior problems result from too little stimulation. Depriving an individual of all sensory stimulation leads to severe anxiety and other psychological anomalies and other research has documented the deleterious effects of under-stimulation on the maturational development of the young. Therefore, the environment should sometimes be made more complex and stimulating in order to restore the excitement and sense of belonging to individuals' perceptions of their environment.

6. Environmental stress approach

This theory looks at elements of the environment such as noise and heat as stressors. Stress is seen as mediating variable as a reaction to stimuli where the reaction is assumed to be emotional, behavioral and physiological. Part of the response to stressful stimuli is automatic and leads to increased heart rate, adrenaline secretion and so on. It further explains that in order for stress process to begin, there must be a cognitive appraisal to the stimulus as threatening. However, the same stimulus that has not been threatening in one situation, may threatening in another. If the coping responses are not adequate for dealing with the stressor, the organism will enter the stage of exhaustion when all the coping energies are expended.

Environmental attitudes

Understanding Environmental attitudes

Environmental attitudes can include any attitude related to nature or architecture, but the usual focus is on environmental concern for nature, or the degree to which a person cares about the state of the natural environment. It is an individual's concern for the physical environment as something that is worthy of protection, understanding and enhancement.

Question: How concerned are you about the welfare of your own room, residence, neighborhood, campus, city, or planet Earth?

Relevance of understanding Environmental attitudes

Although attitudes do not always translate into actions, they can be very useful for environmental managers such as parker wardens, game officers, forestry officials, construction managers, etc., in the following ways;

1. Environmental attitudes can inform environmental managers of the degree of environmental concern
2. Environmental attitudes can help in setting environmental program goals
3. Such attitudes can help indicate what people are doing with the environment or at least what they are intending to do.

Components of Environmental attitudes

Attitudes in general have three components;

1. Cognitive
2. Affective
3. Conative

In terms of the environment;

The cognitive component refers to what an individual knows or thinks about the environment including facts and opinions.

The affective component refers to the emotional aspects of attitudes toward the environment.

The conative component relates to an individual's practices or behavioral intentions toward the environment.

Measuring environment attitudes

Many instruments have been developed to measure environmental attitudes. One such instrument is the Maloney-Ward Ecology Inventory. It has 45 items arrangedin four sub scales namely;

a. Affect
b. Knowledge
c. Verbal commitment
d. Actual commitment

Affect refers to the affective/ emotional components of environmental attitudes. Knowledge refers to the cognitive component whereas the latter two scales represent the conative component. Verbal commitment measures what the respondents say they will do for environmental conservation; and actual commitment is what the respondents report to have actually done for the environment.

Patterns in Environmental attitudes

a. Sex and Environmental attitudes

Women often report more concern about the environment than men. However, there is a disturbing sex difference. Women say they are upset by anti-environmental activities (affect). They say they will do more about the problems (verbal commitment) but report actually doing less (actual commitment) and know (cognitive) less about environmental problems than men.

b. Age and childhood experiences

Research shows that young people are more environmentally concerned than older people. There can be two possible explanations for this finding;

1. As we age, we become less concerned about the environment (Age effect).
2. Something significant happened to a particular generation that did not happen to older or young generation (Cohort effect).

c. Politics, Religion and Social status

Less environmental concern has been reported for individuals with conservative political views and with fundamentalist religious beliefs. The basis for this may be that these political and religious views are closely tied to a mastery-over-nature philosophy.

A number of studies also suggest that environmentalists tend to be middle class. Even if the environmental conservation saves money in the long run, wealthier people can more easily afford the initial costs.

d. Values and beliefs

Most people favor environmentalism but researchers have begun to make finer distinctions. Some people valve nature for its own sake (Ecocentrics). Others support environmentalism because they see nature as the foundation of human comfort, health, and quality of life (Anthropocentrics). Research shows that individuals who are more ecocentic express greater concern about the environmental issues.

World Population Growth and Urbanization

A) Trends in world population

The human population of 6000BC is estimated to have been 5 million people. In the year 2000 and 2011 AD it is said that the person who made the human population six (6) billion and nine (9) billion was born respectively.

At the current growth rates, the population of the world will be doubling every 35 years. It is also assumed that the world population is currently growing by an average of over 100,000 people per day (Total births minus deaths).

The implication of such a growth rate is that the resulting numbers are close to the estimate the carrying capacity of the planet earth. In some places on the Himalayan region in Asia have exceeded the capacity of the immediate area to sustain life. Failure to preserve the carrying capacity makes it impossible to sustain a decent life.

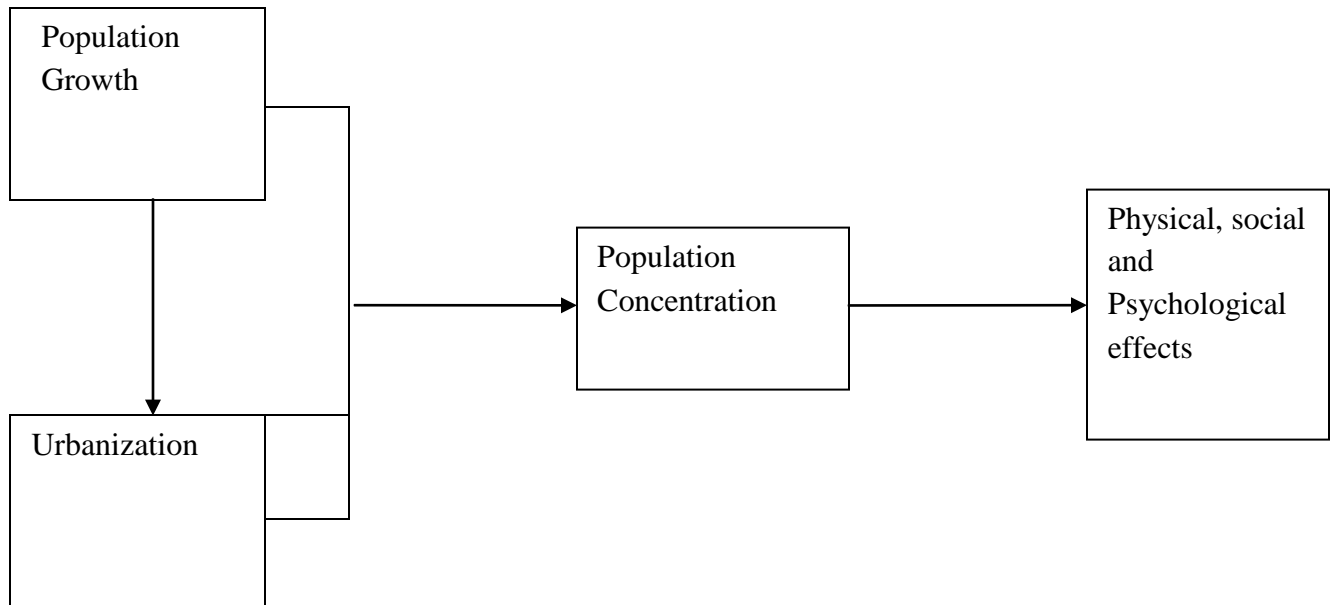### B) The urbanization trends and its consequences

As the absolute number is growing, there has been a trend towards urbanization. Instead of spreading ourselves evenly over the surface of the earth we have tended to concentrate our numbers into limited geographical areas. In the United States of America alone, 70% of its people live on the only 2% of the habitable land.

Increasing numbers and increasing urbanization combine to bring about dramatic rises in population concentration which results in negative physical, social and psychological effects. This has led to a number of scholars to claim that in today's world, the major problems of society are urban ones. Pollution and slums are some of the physical effects while increase in crime and civil disturbances are among the social problems. Psychological effects include;

- Increase in drug and alcohol abuse

- Greater family disorganization
- Decreased quality of life

A conceptual framework showing the relationship between population growth, urbanization and its effects on humans

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┌──────────────┐
│ Population   │
│ Growth       │                    ┌──────────────┐          ┌──────────────┐
│              │                    │ Population   │          │ Physical,    │
└──────┬───────┘───────────────────▶│ Concentration│─────────▶│ social and   │
       │                            │              │          │ Psychological│
       ▼                            └──────────────┘          │ effects      │
┌──────────────┐                                              └──────────────┘
│ Urbanization │
│              │
│              │
└──────────────┘
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Social and behavioral differences between urban and rural people

Differences in human behavior across urban and rural settings have been reported in occurrence of affiliation, pro-social and anti-social behaviors.

a)   Affiliation

Studies have indicated that urbanities are less affiliative towards strangers than people from rural areas. Urbanities tend to avoid eye contact with strangers and are less likely to reciprocate friendly gestures.

b)   Pro-social behavior

Studies on pro-social behavior have reported that urbanities are less likely to help a stranger. But this does not mean that urbanities are inherently less friendly and helpful than people in rural areas. The differences could be explained in terms of urbanities paying less attention to other

people perhaps as means of coping with excessive stimulation, that is, if you pay attention to every one's business, you end up not finishing your own.

    c)   Anti-social behavior

Regarding anti-social behavior, clear differences have been reported in the incidence of crime. Rural areas are definitely safer than cities. Zimbardo (1969) proposed the concept of de-individuation to explain the crime rates in cities owing to the large number of people in the city. He states that individuals feel more anonymous and therefore less concerned about what other people in the community think or even feel about them. The inhibitions against antisocial behavior such as the fear of getting caught and being humiliated before the community are less effective in urban areas.

Benefits of Urban life

The potential advantages of urban life were suggested by a survey in which the majority of the respondents indicated they prefer to live in a city than a rural area. Among the obvious disadvantages of urban life are;

- Greater entertainment
- Greater employment opportunities
- Urban life gives a broader perspective on life than is afforded by a rural existence.
- Life in the city makes an individual more versatile and adaptive

<h1 style="text-align:center">Understanding Crowding and Human Privacy</h1>

A) Understanding crowding

Theorists have come to agree that the physical state of high social density is not the same as the psychological experience of crowding. These two are differently defined. Social density refers to the objective number of people in a given space. It might be measured in terms of the number of people per square meters. Crowding refers to the subjective experience of feeling cramped and not having enough space. Density is necessary but not a sufficient condition for crowding. Density may or may not be unpleasant, but crowding is always unpleasant and negative.

A feeling of being crowded can occur regardless of the amount of space we actually have. It is more likely to be aroused when we are cramped but we sometimes feel crowded even when we have plenty of space around us. There are times when three (3) is a crowd no matter how much space is available. If you like to swim at deserted beaches, the presence of a few other people may make you feel crowded, whereas you might not feel crowded at a party even if there were fifty other people in a fairly small room. Therefore, crowding refers to the psychological state of discomfort and stress associated with wanting more space than is available.

B) Understanding Human Privacy

Irwin Altman (1975) was among the first theorists to emphasize the importance of privacy. He defined privacy as the selective control of access to oneself or to one's group. Privacy has two major features;

a) The optimizing process
b) The process of selective control

Privacy as an optimizing process

Altman takes a broader view of privacy than is suggested by common use. Privacy does not simply involve keeping to oneself by avoiding others. The optimizing nature of privacy means that achieving too much privacy, that is, being socially isolated can be just as undesirable as not having enough privacy, that is, being crowded.

Privacy as selective control

Privacy means more than whether others are permitted or refused contact. It means that the nature or the content of interaction is also relevant in addition with whom the interaction take place.

Types and orientations of privacy

Westin (1970) distinguished among four types of privacy namely;

- **Solitude**: This means being alone and free from observation
- **Intimacy:** This refers to two or more people separating themselves from others
- **Anonymity:** Refers to one being in a public setting in which one is not reorganized or known
- **Reserve:** It refers to setting up psychological barriers when forced to be with other people by screening them out of conscious awareness

Marshal (1997) identified two (2) major orientations of privacy namely; **general withdrawal and information control**

1) General withdrawal: This includes solitude and intimacy. This orientation entails the desire to get away from other people, to be either alone or with a special person or group.
2) Information control: This includes anonymity and reserve. This orientation entails the desire to avoid intimate self-disclosure to and involvement with others.

Mechanisms for achieving privacy

The mechanisms for achieving privacy include the following; **Verbal and Non-verbal mechanisms**

1. Verbal mechanism: This is the use of the spoken word. We all have used or heard verbal mechanism such as; "I want to be alone right now", "Please leave", "get out" or "I will through you out". The message is clear and usually successful in preventing contact.

In achieving contact, phrases such as the following are used; "come in", "would you like to come and see my place?

2. Nonverbal mechanism: In addition to the obvious messages communicated by verbal content, we communicate privacy intentions by means of a variety of more silent Para-verbal ones, gestures and postures. Typically verbal content and style correspond but occasionally two different messages are sent by what we say and how we say it. In case of a discrepancy, the non-verbal messages are sent by what we say and precedence. The phrase "please stay all day" can take on a very different meaning depending on the way it is spoken.

On non-cues that can indicate seeking as opposed to avoiding contacts include;

- Fist shaking versus out stretched arms
- Smiling versus sneering
- Rigid body versus relaxed body posture
- Leaning forward versus leaning backward.

Personal space

The study of personal space is sometimes referred to as proxemics, and was founded by E T Hall (1959). Katz (1937) and Sommer (1969) are the seminal workers in personal space.

Personal space refers to that invisible bubble we all carry around with us which defines how close we will approach to other people and how close we will allow other people to approach us. To a very large extent it is a function of our relationship with the people involved and the society or culture to which we are accustomed. To some extent the terminology is misleading since in fact what we are considering is interpersonal space. It only becomes important when we interact with others. In addition we need to be aware that the bubble can expand or shrink. In essence we all have a construction of the amount of personal space that is appropriate between ourselves and other people in a range of situations. We only become aware of our personal space when it is invaded. It is something which maintains an invisible control over our behavior with others most of the time.

Theories of personal space

An interesting view on the function of personal space is provided by Argyle & Dean (1965) in their **affiliative—conflict theory**. This suggests that we have both a desire to be close to others, and a desire to move away, much like the approach-avoidance conflict in regard to novel stimuli observed in behavioral studies with animals. The goal of interaction is to reach a compromise in the conflict which means an equilibrium point.

An alternative view with a similar outcome would be to apply the **social constructionist perspective**. This would suggest that a particular personal space involves reaching some shared representation of what is appropriate through negotiated interaction. Invasions of personal space tend to produce physiological arousal, and within the arousal level or adaptation-level perspectives we can see personal space as some form of achieved balance. In addition we can draw on the labiality model of emotion here, in that an invasion of personal space produces generalized physiological arousal which leads to an appropriate emotion as a result of the cognitive appraisal of the situational cues. Hence if the invader is a loved one the physiological arousal may turn to passion, whereas if it is a stranger we may become angry. Essentially, invasions of personal space are potentially stressful depending on their context and personal appraisal, and as such are important aspects of maintaining health.

Methods of measurement

- Simulation. Here a silhouette is placed by the participant at what they consider appropriate distances to allow them to "Speak to a close friend…"etc. Mehrabian asked people to talk to a hat stand as though it were their friend, boss, enemy etc. Hayduk (1985) had real people approach the participant until that person felt uncomfortable and said "stop". Both methods are widely used but how valid are they?
- Naturalistic observation would seem to be better in terms of reality and demand characteristics, but measures by eye, and by counting e.g. the width of paving slabs between two people approaching each other in the street are rather imprecise.

Classification of personal space

Hall (1966) identified 4 categories of personal space, each of which can be subdivided into two sub-categories "near" and "far".

- **Intimate distance**. This tends to be somewhere between 0–10–18 inches. The closest distance is generally the domain of those who have an intimate relationship with each other, but also includes situations where the social rules allow contact, for example in a wrestling match. Hall distinguishes between near situations requiring body contact (lovemaking) and far distances which require being very close but not in contact (whispering). This distinction is rather artificial since whether contact occurs will depend on a variety of things such as the social and physical setting.
- **Personal space**. This ranges from 18 inches – 4 feet, and is the zone generally reserved for good friends or intimate partners in a social setting. The near aspect is reserved for couples or very close friends whereas the far phase is used by acquaintances or friends.
- **Social distance**. This varies between 4 feet to 12 feet and is the zone where those who are not acquainted interact or where business transactions occur. The near distance would be used by those being introduced or for informal business transactions whereas the far phase would be reserved for more formal business processes.
- **Public distance**. This is described as 12 feet or greater; It is subdivided into near phase such as the distance between a speaker and an audience, and the far phase being the distance for example between the public and an important public figure.

These categories may be rather artificial. It is likely that personal space spans a vast continuum which is determined by a number of factors including relationship with the person, cultural or societal norms, and the immediate environment. The important contribution of these categories lies in identifying the way in which they influence behaviour and experience. We do tend to maintain distances between ourselves and others and to reserve various distances for different people. If a stranger invades our intimate distance we feel angry or frightened.

Different cultures tend to have different sizes of personal space bubbles. For example Middle Eastern people tend to tolerate closer distances than people from Britain.

Research also suggests that the personal space bubble is not circular, but elliptical, so we will tolerate people coming closer to us at the side than in front or behind.

Personal space (or interpersonal distance) is a mechanism of communication and as such it cannot be understood independently of other aspects of nonverbal communication such as orientation, touch and eye-contact. For example, on a crowded train we may be forced to allow others to invade our personal space for periods of time. However, consider the difference between having to stand very close to someone in front of you who turns slightly to one side, tries to avoid touching you, and avoids eye contact, as opposed to someone who faces you head on, makes no attempt to avoid squashing against you, and looks you straight in the eye.

In addition, being inappropriately far apart is also uncomfortable. We know a loved one is angry with us when they sit apart, and we feel uncomfortable if someone tries to hold a conversation

with us across a room. Considering these differential effects leads one to become aware of how good we generally are at reading and using nonverbal cues, including personal space, and how unaware we are of our skill.

Personal space and the concept of it is also used symbolically. We talk about being close to someone when we are good friends with them. We talk about keeping in touch or being distant. We use personal space to communicate our relationship with others, to protect our territory, and to regulate our social interaction.

Factors that influence personal space

Gender

Males interacting with other males require the largest interpersonal distance, followed by females interacting with other females, and finally males interacting with females (Gifford, 1987). However it probably depends on the situation, or the relationship, or the age group and so on as well.

Age

Some evidence suggests that personal space gets bigger as we grow older (Hayduk, 1983). Children tend to be quite happy to be physically close to each other, something which changes as awareness of adult sexuality develops. In addition the gender difference does tend to also appear at this time.

Culture

Hall (1959) identified the importance of cultural variation. He suggested that while all cultures use personal space to communicate, and tend to conform to the different categories, the size of the space within the categories varies across cultures. Hall also identified the essential issue in inter-cultural difference as the tendency to interpret invasions of personal space as an indication of aggression.

Personality

There is some evidence of personality difference but the effects here need to be treated with caution given the situational dependence of traits. Extraverted and gregarious persons tend to require smaller personal space, while cold and quarrelsome people require a larger interpersonal distance (Gifford, 1982).

"Abnormal" behavior

The relationship between interpersonal space and problem behaviors is perhaps a more interesting area. It is generally found that violent criminals require larger interpersonal distances.

The evidence for psychiatric patients is that interpersonal distance depends on the specific symptoms and severity of the disorder. For example Sommer (1959) found that schizophrenic patients tend to vary from one extreme to the other, i.e. from very small to very large interpersonal distance. Since many psychiatric disorders involve withdrawal from social interaction, one would expect such disorders to include greater interpersonal distance. In addition many disorders involve attention seeking, which would appear to predict interpersonal closeness. These differences in specific symptoms do not appear to have been thoroughly investigated. And there are implications for the design of built environments designed to house these "problem people".

Situational effects on personal space

It is generally found that where attraction between individuals is strong, where friendships exist and where the general tone of the interaction is friendly, we are more willing to decrease our personal space requirement (Little, 1965; King, 1966). Alternatively where people dislike each other, and where the tone of the interaction is unfriendly, people move further apart (O'Neal et al, 1980; Guardo & Meisels, 1971). People with disability, the mentally ill and those who appear and behave in different ways tend to be shunned in the social arena. Interpersonal distance between us and these groups tends to be much larger than for individuals who appear similar to our selves. Bull (1981) found that people moved away from a confederate who was made up to appear as if their face had been disfigured. Also the effect can be reduced by whether the disfigured person appears to be married to a facially attractive partner (Bull & Brooking, 1985)

Competition and cooperation

The cooperation versus competition effects on personal space interact with orientation. Generally people in cooperation will select a smaller interpersonal distance unless the competition requires interpersonal contact (Cook, 1970).

Tedesco & Fromme (1974) had participants interact either in competition or cooperation with each other. They then observed the same participants interpersonal space in another room after the study. Those who had been in the cooperative encounter chose a smaller interpersonal distance than those in the competitive condition. This generalized effect on interpersonal distance as a result of competition or cooperation is important given the information conveyed about attitudes and potential aggression in our choice of interpersonal distance.

Status

The general finding for status focuses on differences in status and it appears that the greater the difference in status between individuals, the larger the interpersonal distance used. There doesn't seem to be any evidence regarding personal space between same status individuals at different levels. In other words it is not clear if high status individuals require a greater distance when interacting with other high status individuals than with low status individuals in interaction. We also use interpersonal distance to assess the differential status of individuals in interaction. Burns (1964) showed that in a filmed interaction in an office setting, someone standing further away

when conveying a message was judged to be a subordinate, whereas when the same individual stood closer they were judged to be of equal status.

Expectations & Social Perception

Our anticipation of the type of person we are going to meet in a situation also influences our choice of interpersonal distance. When we anticipate meeting a warm and friendly person we tend to choose smaller distances (Kleck, 1969). We are also less likely to offer help to someone if our personal space has been invaded (Konecni et al, 1975), however if we perceive the persons need to be great the negative effect of the invasion may be offset (Baron, 1978). It seems very clear that use of interpersonal distance is an important part of the regulation of interaction and has important effects on the relationships and hence effectiveness of the interaction.

In a world where interaction is an important part of everyday life, at work, rest or play, we need to be aware of the potential positive and negative aspects of the use of interpersonal distance. The use of interpersonal distance will be a function of the design of the physical environment. For example library seating which is cramped, the number of people sharing a small office, and the size of the aisles in a shop layout will all determine the level of interpersonal space invasion that occurs.