

SOCIAL NETWORKS AND THE URBAN ENVIRONMENT

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INTRODUCTION

This paper will summarize some results of sociology and applied social psychology which I consider relevant for an interdisciplinary approach to the theme, technology and the urban environment. I believe that the transformations in the urban environment which will take place as a result of new technologies will be as radical as were the transformations which brought about the transition from the rural to the urban environment. This paper studies, relationally and chronologically, concepts of social support, social networks and physical health and environment. The point of view of applied social psychology will help us to understand the psychosociological predicament of human beings in their rural and urban environments. Finally, I will propose a brief prospective on the nature of a new environment. This paper is based on studies of Gonzalo Musitu's research team in the Psychology Faculty of the University of Valencia in Spain. Some of the studies have not yet been published, and I appreciate the team's kindness in allowing me access to and use of their material.

1. URBAN ENVIRONMENT VS. RURAL ENVIRONMENT AND CITY VS. SUBURBS

One characteristic of big cities is the presence of poor and marginal zones on the outskirts and in the center, which are often situated alongside middle and upper-middle class residential areas. These areas are often beset by problems derived from overcrowding, social disintegration, lack of development, and delinquency. This study will show that these problems lead to social and psychological instability, both in social groups and in the individual, ultimately involving the loss of social and personal health.

At the beginning of the 20th century, Simmel (1902) studied the predicament of urban life in contrast to rural life. Along the same lines, Thomas

and Znaniecki (1920) analyzed the effects of the immigration of Polish peasant farmers to industrialized urban areas of the USA. They collected data from period documents and concluded that moving from cohesive, rural surroundings to the impersonal environment characteristic of an industrialized city had caused behavioral problems and social disorganization among the immigrants.

At this same time, the so-called Chicago School—among whose members can be cited R. Park, E. Burgess, and R. McKenzie—started to study the geographical distribution of social problems. They were especially interested in analyzing the effects of the rupture of social networks. This concept will reappear in the third part of this paper.

According to their studies, the highest levels of social disorder were recorded in areas of Chicago where a progressive industrializing process was taking place (McKenzie, 1926; Park and Burgess, 1926). According to these writers, the behavioral and social problems of these areas were the result of a disintegration of previously socially cohesive communities, which was caused by the progressive industrialization of the area.

In recent times, it can be observed that the analysis of differences between urban and rural environment, and between residential zones and suburbia, is where the majority of research into the variations of social relations has been carried out. Some examples follow. Fisher (1982) has observed that the composition and structure of social networks are different in urban and rural communities, and that rural social networks are more dense and based on the family; while in urban zones, networks tend to be less dense and composed of fewer family members. In urban areas, Crenson (1983) observed that the atmosphere of the neighborhood in which a person resides can be as important for the development of a sense of belonging to a community as other factors such as social class or race. In addition, research comparing deprived urban areas with residential areas of higher socio-economic status suggests that, in problem areas, conflict, social isolation, and the loss of a feeling of belonging are more common (Harrison, 1983; Willmott, 1986).

In this sense, Gracia *et al.* (in press) have recently examined variations in different aspects of community social support (a concept to be discussed in more detail later) in relation to the level of risk of the residential area (Lin *et al.*,

1986; Gracia and Musitu, 1990). The results obtained in this research indicate that socio-economic status seems to have a different meaning in different residential areas. Thus, levels of integration, satisfaction in the community, participation, association, and level of contribution to community organizations are significantly higher among low socio-economic status groups residing in low risk areas than among groups of the same status who live in high risk neighborhoods. In addition, high and low socio-economic groups display different patterns in different residential areas.

Residential density is another aspect of the physical environment which has received researchers' attention (Sundstrom, 1978; Evans, 1978; McCarthy and Saegert, 1979; Aiello *et al.*, 1984; Cox *et al.*, 1984; Baum and Paulus, 1987; Evans *et al.*, 1989). As Evans (1989) says, high residential density can weaken social ties and in turn provoke disruption in social support systems. People living in high density situations maintain an excessive number of undesirable social contacts and suffer a lack of privacy (Baum and Valins, 1977; Saegert, 1982; Cox *et al.*, 1984). These conditions can interfere with the regulation of interpersonal exchange (Stokols, 1972; Altman, 1975) and cause social seclusion as a coping strategy (Evans, 1978; Sundstrom, 1978; Aiello *et al.*, 1984; Baum and Paulus, 1987). In addition, these coping strategies can manifest themselves in other ways that reduce the number of social ties, and further strain resources of social support (Evans *et al.*, 1989).

2. MENTAL HEALTH AND ENVIRONMENT

Since the 19th century, there has been interest among physicians, sociologists and psychologists in understanding what type of relationship exists between social factors and mental health. As early as 1855, a doctor from New England indicated that sixty-four times as many cases of dementia existed among the underprivileged classes as among the privileged classes. Durkheim (1897[1951]), found empirical evidence to confirm that suicide was more frequent among people with few intimate social ties. Durkheim was also concerned about social change in industrial societies; according to him industrial development had introduced modifications in traditional community links and family ties. He proposed that traditional relationships were dissolved with immigration to urban areas, causing anomie, a loss in social integration that is capable of producing serious psychological disorders.

These ideas became the seed of many studies oriented towards the study of the relationship between mental health and the human environment. Farish and Dunham (1939), in their work on the time-space distribution of certain psychoses in Chicago, observed that cases of schizophrenia were notably concentrated in the deprived central area of the city and in residential areas of minority ethnic groups. It seemed obvious to them that their first observation confirmed Durkheim's idea that psychic disorders follow social marginality and disintegration. As far as minorities were concerned, they attributed the appearance of the schizoid component to the rupture in communication within the community.

As time passes, interest is growing in studies which relate environmental factors with mental health. At Cornell University in the 1950s, a systematic study was launched to evaluate the extent to which cultural, geographical, and interpersonal changes had a negative effect on health. The study carried out by Hinkle and Wolf (1957), grew out of the findings of Selye (1956) on the influence of stress on health, and they tried to find out whether there are factors which can counteract the given effects. They examined such diverse factors as psychological defenses, experience, and access to social resources. They specifically observed that great differences existed in personal styles of coping with the situations, as well as in ways of dealing with social relationships today referred to as "social support."

Another important study in health and environment relations was carried out by Holmes and Rae (1967), and they proposed a classification of possible environmental stressors. This allowed a scaled evaluation of the environmental conditions to which subjects were exposed and led to the formulation of diverse scales of vital factors and their relation with psychological disorders. But all of these results, although significant, prompted much theoretical and methodological criticism.

The same stress factor manifests itself in very different forms in different people due to physiological and psychosocial circumstances (Dean 1986). It is here that the role of interpretation or evaluation might begin. Lazarus (1966) proposed an "appraisal hypothesis" in which the subject does the appraisals; it has been very well received by social scientists because it combines both contextual and cognitive factors in assessing how people cope with stress. This emphasis on the fact that contextual as well as cognitive factors constitute a powerful resource

in the prevention of illness has led to the community health programs that are common in our societies.

3. SOCIAL NETWORKS AND SOCIAL SUPPORT

As I indicated earlier, at the end of the 19th century Durkheim (1951) introduced the concept of "anomie" to explain the relevance of social relationships to the study of the psychosocial adjustment of the individual. Anomie is a loss of individual and community integration, causing a loss of the social restrictions that are based on social roles and well defined norms; it leads to social and psychological instability. In Durkheim's study of suicide, it can also be observed that this problem more frequently appears among individuals with fewer social ties and that single men and women are more likely to commit suicide than their married counterparts (Brownell and Shumaker, 1984; House and Khan, 1985). With these ideas, the beginnings of epidemiological research into social support were already outlined, relating bad interpersonal relations to the appearance of psychic disorders (Díaz-Veiga, 1987).

It is important to differentiate between the concepts of "social network" and "social support" because on occasion, they are used confusingly (Gracia and Musitu, in press). The social network concept refers to the structural characteristics of the social relationships maintained by an individual, group, or community. The social support concept is more precise; it refers to the roles which social relationships play in the maintenance and improvement of individual well-being (Díaz-Veiga, 1987). However, the two concepts possess a convergent element: social networks provide the structural framework within which support becomes accessible to the individual (Lin *et al.*, 1981). It is a question, then, of two approaches to the same process which correspond with structural and functional perspectives.

As indicated by Gracia and Musitu (in press), the role of interpersonal relations in the well-being of the individual has long been recognized by social scientists, but, with the publication of studies carried out by John Cassel and Sidney Cobb in the middle of the 1970's, the concept of social support as a key concept for research and intervention obtained the recognition of the scientific community. Cassel, as well as Cobb separately, observed that if subjects are exposed to stressful situations in the company of significant pairs or

in an interactive context of support, they do not show the negative changes in health which are evident in those who face such situations in conditions of social isolation. They arrived at the conclusion that people who experience significant stressful events can use social support as a buffer against psychic and physical consequences (Cassel, 1974; Cobb, 1976).

Cassel was an epidemiologist concerned about understanding the extent to which conditions of physical environment—overcrowding, inadequate living conditions, deteriorated neighborhoods, etc.—have a pernicious effect on people in terms of higher incidences of infant mortality, tuberculosis, or digestive disorders; or, in the area of mental health, of diagnosed psychoses. Environmental conditions could not explain all the effects, given that some people in the same, similar, or even worse surroundings did not show the same levels of deterioration of physical and mental health. It was therefore necessary to postulate some kind of variable which might explain these differences.

From the studies on the origin of microbial illness developed by Dubos (1965) and from other studies which clearly showed certain causal relationships between types of social disorganization and changes experienced by animals, including their vulnerability to illness, Cassel concluded that changes in one's immediate social environment could alter people's resistance to illness if certain metabolic changes occurred. According to this author, in very disorganized social environments, both humans and animals suffer confusion, a shortage of signals, or, on occasions, a complete lack of feedback. As Cassel says, deteriorated health is often the result of the instability caused by the appearance of disordered signs or signals coming from people important to the subject, or from an absence of information which might correct the resulting deviations and consequently the appearance of health problems connected to the existence of disorganized environments. In this way, external factors will be detrimental for the individual when he/she does not have the social relationships to help him/her cope with them. The strength of social relationships depends fundamentally on information processes: when the individual is incapable of adequately interpreting the signals and information coming from his most important social relationships, he/she is at a disadvantage and is vulnerable to environmental demands. The person is more vulnerable the nearer and more significant the lost relationship is, or when he/she is not able to adequately interpret the signals of the given loss.

Gracia and Musitu (in press) conclude that, "Two very important points stand out from Cassel's work: on the one hand, his analysis of the influence of social environment on vulnerability to illness; on the other hand, his hypothesis of the existence of social forces which can be mobilized in difficult situations in order to protect one's health." They quote Cassel, as saying that, "Out of the two groups of factors, it would be more practical in the short term to try to better and strengthen the kind of social support which reduces exposure to stressors" (Cassel, 1973, quoted by Gracia and Musitu, in press).

It could be maintained that the social support concept was confirmed when its value was shown as a theoretical construct intervening between a stress situation and a change in health; this, along with the process of coping and stress, forms one of the key elements in the study of mental health (Veiel and Baumann, 1990).

4. SOCIAL NETWORKS, SOCIAL SUPPORT AND NEW TECHNOLOGIES

At the beginning of human history, isolated human beings were defenseless before the problems of life. Few creatures were born as vulnerable as they were. Few were so unprotected by nature, where laws of natural selection, competition, and survival of the fittest ruled. But humans were born into strong and cohesive social networks. The dense social networks of the hunting and agricultural environments were fundamentally based on strong ties of kinship. Inside these social networks, the individual was strongly tied to traditions and norms. It was difficult to escape, but they also provided the individual with the strong security of social support. Firmly established and dense social ties made strong social cohesion possible and guaranteed the survival of the social group. The individual was subordinate to social need.

As discussed earlier, the transition from rural to urban life meant a high price had to be paid in terms of health. This transition produced a fundamental change in social relations. Human beings lost the social networks to which they were strongly tied. Social networks in an urban environment are generally less dense. They are not as strongly based on kinship ties. The cultural level has increased. Social services in big cities also increase. There is a higher degree of safety with respect to natural threats. Physical survival is taken for granted. The struggle for life within the human species does not exist for the individual.

Disagreements among individuals becomes a moral or legal problem. Conflicts between groups of people remained a problem, but in general it can be said that the problems of individuals and social groups have changed considerably. Individualism has increased. Anonymity has grown. The groups which a person can join, formally or informally, have increased astonishingly. So social relationships among urban people are based primarily on friendship, work, or an affinity with very diverse and specific interests. The individual feels stronger in that he or she belongs to much wider (although more unstable) networks. Social pressure to belong to these new networks is practically nil. Membership in almost all of them is completely voluntary. In almost all cases, a decision to join or leave can be made at any moment.

In social networks of a rural environment, kinship ties, density, intimacy, and necessity prevail. In an urban environment, friendship, superficial contacts, instability, and voluntary action prevail. Change causes social as well as psychological problems; but, once established, the average psychosocial stability of a city dweller is neither higher nor lower than that of someone living in a rural environment.

Medical, social, and psychological problems are not caused solely by the environment, not even by changing relations. The problems are caused by:

- environmental changes which cause unexpected or undesirable changes in social relations; and
- perceptions of these changes.

It is here that the problem of new technologies appears. I am referring to technologies such as those based on computers, digital technologies, lasers, genetic technologies, technologies of new materials, etc. They started to revolutionize life towards the middle of the 20th century and will transform life even more in the 21st century. I say even more because, as I understand things, we have not even glimpsed the tip of the iceberg of the revolution which will take place. As some examples of the profound ethical, cultural, and social transformations to be faced, one need go no further than the works of Sperber (1976), Old and Primrose (1981), Nossal (1985), Glover (1986), or Sanmartin (1987). Their studies of genetic engineering provide paradigmatic examples of what I want to say.

Making predictions is always risky, but certain continuations of past trends can be pointed out. The revolution which will take place in terms of new technologies will be far reaching. New technologies will transform the human environment as radically as or more radically than the change from the rural to the urban environment. I do not like the terminology which has come into common usage, but I am going to use it provisionally in order to be better understood. I think that the change which will take place in the human environment will be so great that the term "virtual environment" can be used without exaggeration.

Some rough characteristics which could help define this environment, for better or for worse (but without making evaluations), might be the following:

—The nature of the new environment will bear almost no resemblance to the nature of the human hunter's physical environment. If the rural and the urban environments are progressively transforming the human habitat, destroying the ecological niche into which the human species was born, the new environment will be of an almost completely artificial nature. To get a quick impression of what I have in mind, you can make a mental contrast between the jungle, the tundra, the savannah, or the desert, with an urban garden or a glimpse of a modern metropolis.

—In the new environment, there will be complete geographical mobility. Humans will move much more frequently, for the sake of work or for any other reason, voluntary or otherwise. But, at the same time, this fact in itself lacks importance with regard to maintaining social relations; these will be maintained primarily by computerized means. This will result in personal relations which are more fluid and less settled. There will be almost no physical connection to a social group. Person-to-person social relations in particular will be sporadic. The number of members of social groups who maintain face-to-face contact will tend to diminish. The social relations that do persist will be increasingly instigated by momentary or specialized interests, with no need of friendship or family ties.

—Social networks of individuals—with regard to the intimacy, time, and proximity of physical relationships—will become notably weaker. On the other hand, they will become more dense in number and will surpass all geographical limits. A comprehensive example, which I hope will be taken more as metaphorical approximation than as real, could be the social relationships established on the Internet. We potentially have "friends" or "acquaintances"

anywhere there is a computer terminal; we can participate in many "chats groups" and subscribe to many lists in order to receive a wide range of information; and we can have access to the latest advances made by each one of our "Internet colleagues." Today, most Internet links are situated in the workplace, but we have them at home simply by adding a modem, and their use is not strictly professional on the part of most users. On occasion, we must even protect ourselves from distracting messages which appear on our screen during work. But, proportionately, we have personally met few of these people. With even fewer do we maintain some kind of personal contact. And with a very few do we have friendships. In statistical terms, no family relationships exist.

—To what degree can it be said that these new social relations will be forms of social support? Without having carried out studies, but taking the current situation into consideration, I would guess that, in statistical terms, it must be very low. But I would hazard a guess that it is much higher than a decade ago. However, this social support will be different in the sense that it will be less and less based on face-to-face relationships. This will be the case because, although we meet more people and travel more, the growth of Internet contacts is increasing much more rapidly than the number of personal contacts. In turn, and necessarily so, these personal contacts will be more sporadic.

I would like to add more characteristics, but I believe that enough has already been said for the purposes of this paper. To say more would bring me dangerously close to those limits of time and space which, in our urban environment, we cannot transgress.

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