Psychological perspectives on crowding: A materialist critique

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INTRODUCTION

Social and environmental psychologists engaged in crowding research have traditionally employed idealist rather than materialist perspectives. This paper argues that idealist perspectives have a number of fundamental shortcomings which inhibit their ability to come to grips with their subject matter.

Traditionally, crowding is taken as the starting point for research, with associated psychological consequences and processes being central issues of concern. Traditional scientific methodology, and its assumed neutrality, is never questioned except in order to seek methodological refinements. In this way, researchers have been able to ignore the web of relations which provides the context within which crowding occurs.

The paper is divided into two main sections. The first initially outlines significant research, together with a methodological

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evaluation of this work, and later presents some of the major theoretical dimensions posited, with a critique of these. The second section attempts to extend the theoretical critique by suggesting a number of issues which are avoided in traditional work in the field, and which are held to fundamentally influence the phenomenon of crowding.

1. TRADITIONAL CROWDING STUDIES

Problems of definition

Problems are of two types. Some (particularly older) studies view terms such as "crowding", "density", and even "slum conditions" as interchangeable, while others claim that each term relates to a different "thing" : see, for example, Jacob (1965: 218). A fairly widely-accepted measure of clarity has been achieved by Freedman (1975), who views "crowding" as a psychological state and "density" as a physical one. The second type of definitional problem relates to the meaning of specific terms. "Crowding" has been defined as the amount of space per person; the excess of demand for space over supply; excessive social stimulation; loss of personal control; and the "overmanning" of a situation see Fischer, Baldassare, and Ofshe (1975). To escape the definitional trap Zlutnick and Altman

(1972) resort to a three-part description including "situational/environmental characteristics", "inter-personal events", and "personal/subjective events".

As can be seen, although environmental and interpersonal factors may be included in attempts to definition, wider-scale social processes are excluded. In particular, the process of poverty is taken as a given, to which the "lower and working class" respond through coping strategies in relation to a dangerous living environment (see for example, Yancey, 1971: 4).

Leaving these difficulties aside for the moment, it is apparent that crowding and density are related concepts, and that they operate across different environmental scales.

Experimental studies

The fundamental aim of this approach is, to quote two prominent researchers, "one of generalizing the laws and relationships uncovered under highly controlled, artificial laboratory settings with regard to the role of individual stimulus variables to the effects of corresponding environmental variables on behaviour" (Wohlwill and Kohn, 1976: 20-21).

Interests in the topic of crowding was greatly stimulated by John Calhoun"s experiments with rats, living at high density for prolonged periods. Over time behaviour such as homosexuality, rape, autism, delinquency and cannibalism occurred. Calhoun referred to this condition as a "behavioural sink," and concluded that crowding led the rats to "go beserk" (Calhoun, 1962: 147).

Probably the best-known experimental studies using human subjects are those conducted by Freedman et al (see Freedman et al, 1972), who placed subjects in rooms of various sizes, and studied subsequent behaviour patterns such as social interaction and severity of "mock jury" judgements. The general procedure adopted by Freedman has been extensively used in other studies. Zeedyk-Ryan and Smith (1083) found that crowded subjects exhibited higher levels of anxiety and hostility than non-crowded controls, and that this intensified over time. Worchel and Hunter (1984) studied perceived crowding in subjects watching "arousing" or "nonarousing" movies under conditions of "appropriate" or "inappropriate" social spacing. They argue that arousing movies reduced the experience of crowding because arousal was attributed by the subjects as due to the movie rather than to spatial restrictions.

Various other kinds of experiments have been conducted. Desor (1972) requested subjects to place human figures in a model room

until the room was felt to be crowded. Results indicated that appropriate density was heavily influenced by the type of activity suggested as taking place in the room, and also by architectural features such as barriers and partitions. Six, Martin, and Pecher (1983) used diagrams of simulated crowding situations to study effects of various variables on perceived crowding and discomfort in the USA and West Germany. Results are complex, with a general finding being that interpersonal distance is a more important variable than numbers of people present. A problem here is that perceptions and stereotypes may have been reflected in these studies, rather than behaviour (see Epstein and Baum, 1978).

Generalizations are difficult to draw from these studies. Variations regarding the definition of "crowding" have led to wide variation in experimental conditions to test these conceptions. Animal experiments are sometimes lauded, sometimes debased. Durations of crowding, seating arrangements, numbers of subjects, types of activity, measures of behaviour, and units of statistical analysis (individual or group), have all ranged widely. These factors all suggest that a fundamental aim of the experimental approach, that of generalisability to the real world, is certainly not being met.

Naturalistic observations

Several researchers, dissatisfied with laboratory surrogates of the "real world", have undertaken observational studies under natural conditions.

Schmidt (1984) conducted two field studies (one in a bookstore in the USA, the other in a residential environment in Singapore) in testing the relationship between stress and annoyance. He considered this data to support a current theory of crowding stress which explains reactions to the physical environment on the basis of perceived personal control over events. He found some evidence for cross-cultural generalisability for this explanation.

In recent years a number of studies have investigated the effects of crowding in prisons. Cox, Paulus, and McCain (1983) found that, in general, crowding appeared to be related to increased pathology.

The large difference between these studies is symptomatic of the body of research of which they form a minute sample. The enormous variations between individual studies make generalization to the population at large a hazardous

undertaking. As is the case with the experimental studies discussed previously, this is a severe handicap in view of the idealist wish to do so. This problem is usually considered transient, eventually to be overcome through more rigorous research in which the phenomenon of crowding will become precisely defined. When this is achieved, its manipulation as an independent variable would become unproblematic. This view does not consider the methodology used to apprehend the phenomenon of crowding as part of the problem: instead, the methodology is considered neutral in relation to it. In this way, crowding becomes reified, with a status independent of the methodology used to research it. The methodology is held to protect the subject of research from whatever ideological biases the researcher might unwittingly have.

Housing studies

A considerable body of work exists in this field, the majority of which has been based on interviews with, and reports of, residents.

The best-known study is probably that of the Pruitt-Igoe Housing Project in St Louis (Missouri), which consisted of 43 large residential buidings. It had a widespread reputation as

being an "extreme example of the pathologies associated with lower-class life" (Yancey, 1971: 7). Yancey goes on to argue that such conditions are at least partially attributable to the physical design, and recommends that a sense of "turf" be encouraged through the design of semi-public spaces in such buildings, to which adjacent residents are presumed to respond with a sense of identification and organization. Even in terms of Yancey's own research, this simple rearrangement of space may be incapable of resolving the severe interpersonal conflicts (including gang warfare, assaults, rapes and murders) found at Pruitt-Inge: "informal social networks did not form in the corridors and stairwells"; and friendships bore little or no relationship to the physical proximity of families to each other" (Yancey, 1971). Yancey's concern with reflecting the social status quo (rather than with reflecting upon it) is encapsulated in his conclusion: "If housing must be designed for the ghetto - ... - the architect can make some small contribution by facilitating the constructive adaptations that have emerged as a means of defense against the world of the lower class" (Yancey, 1971: 16). The dismal failure of Pruitt-Igoe as a living environment is reflected in the fact that the entire project has since been demolished.

The failure to focus upon social issues is common amongst such studies: unfavourable social conditions, which are observed as

operating on an interpersonal level, are seen as at least partially the result of the incorrect architectural arrangement of the living environnment. It is the improvement of the spatial configuration of space which is the primary emphasis of these studies. The balance of the cause of these unfavourable social conditions is not addressed, and is located in an amorphous mass of social forces which are seen to be beyond the individual's ability to change.

Research examining cross-cultural instances of crowding has been reviewed by Mitchell (1975), who concludes that many societies have been able to maintain housing levels at a high density without unusally high levels of pathology being apparent. Duckitt (1983) studied effects of household crowding in a sample of "Coloured" South Africans, living in a "dormitory suburb for an industrial center" (1983: 233). He found crowding to be associated with adverse psychological effects, manifested by increased negative affect rather than decreased positive affect. He notes the influence of Group Areas legislation, and suggests that residential crowding may be perceived as a political issue by residents. He considers it possible that this perception might have affected their psychological response to crowding, but does not pursue this line of reasoning.

The case-study nature of much of the research on residential crowding obviates the drawing of generalizations. However, literature emphasises the importance of physical design of the environment: this orientation is to be expected owing to the situation of environmental psychology's subject matter on the interface between psychology and the spatial and design-orientated fields. Nonetheless, to ignore the antecedents of crowding may be viewed as accepting crowded conditions as a starting-point from which to engage in drawing correlations with other social interpersonal conditions, and never to embark on an exploration of why these conditions arose in the first place.

We now turn to the implications that these various studies have for theory.

Theoretical perspectives

The above research has been, without exception, conducted within the positivist, idealist conception of science. As may be expected, therefore, the equivocal nature of the research findings has led to a wide variety of explanatory models.

This section cannot possibly be exhaustive, and rather seeks to highlight some of the problems and contradictions. Two of the more interesting theories will be outlined.

A problem already dealt with is that of definitional incoherence: see section 1.2 A second problem is that of factors which are seen to affect, or be affected by, the crowding variable. Typically, these are induced from research findings rather than being derived from theoretical models. The consequence is a constantly-expanding "check-list" of factors, which makes statements such as "... no research on crowding offers conclusive evidence" (Loo, 1977: 156) an inevitability. Accordingly, many alternative explanations have been posited. Some theorists (for example, Mitchelson, 1977), in attempting to mold the multiplicity of theories into a single, overarching one, do no more than add to the proliferation.

The nature of theory in this field can best be illustrated by an example. A widely-quoted and respected theory is the "Density-Intensity" theory postulated by Freedman (1097), which arose from experimental research findings such as those mentioned in section 1.2 above. High density is held not to affect arousal at all, "but rather serves to intensify the individual's typical reaction to the situation" (1975: 90). This "typical reaction" is based upon the individual's evaluation of the situation as being inherently pleasant or unpleasant, and Freedman has found this to be sex-specific. He theorises that "it is likely that for most

men in our society, entering a room full of men in a formal, scientific setting is a somewhat threatening experience. Men typically think of other men as rivals, are suspicious of other men, and in particular are prepared to have to prove themselves or to compete with other men (Freedman, 1975: 96) Therefore, a room full of men is seen by men as hostile, thus unpleasant; the fuller the room, the more intense the unpleasant feeling of being crowded. On the other hand, "women compete less with each other.... In fact, most women probably respond to a group of other women as a potentially interesting, intimate, friendly group" (Freedman, 1975: 96-97). (One might be tempted to assume, therefore, that the more women there are in a room the happier they become!).

The experiences of this paper dictate that Freedman's theory cannot be evaluated in depth, fruitful though such an exercise might be. However, three main points may be made with regard to the theoretical perspectives outlined above, when seen as a whole: firstly, the "facts" are seen as residing in the world, and it is merely a matter of time before the "correct" understanding or objective "truth" is achieved; secondly, these theories have an inherently conservative bias in that their "facts" and the conditions within which they reside are taken as given and are not analysed in relation to the wider scientific

and social contexts in which they are embedded; and thirdly, related to the first point, they are "modelled on the Newtonian paradigm of the physical sciences, which views man as equivalent to a physical object whose actions are determined purely by external forces" (Ellis, 1982: 123).

This latter point has introduced a relatively new perspective into the theoretical superstructure of environmental psychology: Rom Harre's ethogenic approach (see Stringer, in Adams-Webber, 1979; Ellis, 1982).

Social transactions are the starting point for this approach, and are the unit of study. The structure of such transactions is only ascertainable by reference to the accounts of participants, engaged in them, of their behaviour and its antecedants. The physical environment is not seen as deterministic, but is rather relevant for study insofar as it affects the social goals of the participants involved in a particular episode. The application of this approach to studies of crowding is still in early stages of development, but appears to offer considerable promise. As Ellis comments, "the study of spatial language has hardly started" (Ellis, 1982: 124). However, the ethogenic approach nonetheless steers away from the reintegration of the phenomenal episode in the wider social and structural context from which it

was originally abstracted, and is thus incapable of examining the social processes which allow it to exist. For to suggest that the fundamental social reality is to be found at the interpersonal level is to ignore the existence of other levels of social organization; and if they are acknowledged to exist must either be understood as having their own reality (which is clearly untenable from the ethogenic viewpoint), or as multiples of interpersonal espisodes (which could be understood as denying the fundamental structure roles played by (for example) ideology and education in society).

General evaluation

Two related problem themes may be isolated from the literature which has been examined in section 1.

Firstly, most research studies and their attendant theories have tended to understand the phenomenon of crowding as something "out there", existing independently of the methodologies, apparatus, and theories used to apprehend it. This would appear to be a direct consequence of the philosophical tradition of positivism in which they are embedded, according to which variables of study are viewed as properties of an independent object. As such, they become potentially measurable. It is then the work of positivist science to separate the variable under study from its entangle-

ments with other variables, and thereafter to record its extent and "interactions", if applicable. In this way the object of study becomes removed from its context of relations.

The second problem theme is that crowded conditions are addressed as givens and by implication as unchangeable. The work of the researcher is required to remain untainted by political considerations, although such forces may be acknowledged as enjoying a separate (rather unscientific) existence. It is therefore not considered desirable, from within the framework of traditional crowding studies, to undertake a critical analysis of the processes by which crowded conditions are created.

It is upon a consideration of the implications of these problems that the next section is based.

IDEOLOGICAL DIMENSIONS OF CROWDING

The primary concern of this section is not with crowding as such, but rather with the processes which produce crowded conditions. This concern will be examined initially from liberal perspectives on the nature of the problem, and subsequently from materialist perspectives. The point from which this exploration begins is the almost axiomatic finding that crowded conditions and poverty are related, and often co-exist in a given geographic area.

Jacobs (1965) writes that: "Overcrowding within dwellings or rooms...is almost always a symptom of poverty or of being discriminated against" (Jacobs, 1965: 220).

Liberal perspectives

Generally, from within this viewpoint, the "poor" are understood in a factual sense: for example, having a mean income less than a given proportion of that of society as a whole. The liberal solution to the problem of poverty is to provide better opportunities for the disadvantaged, such as better education or the undertaking of income equalization programmes. The question of whether such policies can in fact eradicate poverty is debatable: parallels with the "better design means less crowding" argument are evident.

The intertwined nature of the political and economic system is a major factor in the evaluation of whether or not poverty-eradicating policies can succeed in their aims. Goodman (1972) states that "it is clear that, in common with other capitalist states, there has been a converging identity of interest between business and government" (Goodman, 1972: 45). The maintenance of poverty, and conditions of crowding found in relation to it, must be considered an implicit "given" of the capitalist mode of

production. It is precisely upon this given that traditional crowding studies are based.

It is within this framework that Michelson (1977), speaking of the conditions under which high-rise apartment blocks come to be erected, says that "we have to rule out consumer demand for this type of housing from the start. ... Rather most people credit this phenomenon to... (high land values). When land becomes highly expensive, it is quite rational to divide such a cost among many potential residents rather than to create other forms of housing that are priced outside the borderlines of marketability" (Mitchelson, 1977: 216). It is of course, within such high-rise apartment blocks that research into housing found high levels of crowding.

Materialist perspectives

As a natural extension of Mitchelson's (1977) point noted above, David Harvey (1973) says that "it is a general characteristic of ghetto housing that if we accept the mores of normal, ethical, entrepreneurial behaviour, there is no way in which we can blame anyone for the objective social conditions which all are willing to characterize as appalling and wasteful of potential housing resources. It is a situation in which we can find all kinds of

contradictory statements 'true'. Consequently, it seems impossible to find a policy within the existing economic and institutional framework which is capable of rectifying these conditions" (Harvey, 1973: 140-141).

Castells (1977) writes: "The sociological problematic of housing must set out from a reversal of the usual psycho-social themes and centre itself on the analysis of the process of production of a certain durable commodity (i.e., housing), in the diversity of its qualities, forms, status and in relation to the economic market and, consequently, its social context" (Castells, 1977: 149). In doing so, he recognizes housing as an essential element in the reproduction of labour power. As such, it follows the movements of concentration, dispersal, and distribution of the working class. When industry becomes grafted onto an already-existing urban fabric, it "causes a strong migratory movement whose dimensions go well beyond the building and amenity capacities of a city inherited from an earlier mode of production. Thus the shortage of housing, the lack of amenities and the unhealthy conditions of the residential space are a result of the sudden increase in urban concentration, in a process dominated by the logic industrialization" (Castellis, 1977: 149).

Marx, in his paper "the housing question", wrote that "In such a (capitalist) society the housing shortage is no accident; it is a necessary institution and can be abolished together with all its effects on health, etc., only if the whole social order from which it springs is fundamentally refashioned" (quoted in Castells, 1977: 146). From this perspective, to believe that crowding can be overcome by merely manipulating the arrangement of the physical environment, as proposed by traditional research, is very wide of the mark indeed.

CONCLUSION

This paper provides no more than a very brief overview of an extensive body of literature, and only tentative explorations into theoretical perspectives and implications. Inevitably, more questions are raised than erased, particularly with regard to the application of a theoretical perspective which strays far from those traditionally used.

Does the materialist critique invalidate traditional crowding research? In the context of the socio-economic system in which it is immersed, which produces crowding as a byproduct of its central process of generating wealth for those who own the means of production, the answer must be "yes". However, such a

categorical rejection needs to be tempered by research findings, however interpreted: that is, that some relation does appear to exist between crowded conditions and sociopathy and psychopathology. It is essential to apply such data to the process of assessing the social and psychological impact of the environment, and of proposed development, on those likely to function within it. Particularly in the USA, the psychologist is beginning to play a substantial role in environmental inpact assessments, and it is to be hoped that in the future in South Africa the importance of this role will be recognized.

However, from the perspective of theoretical understanding, it would appear that current mainstream theories can only obscure underlying issues, and are incapable of engaging them in the task of ameliorating the social and psychological problems which exist in tandem with crowded conditions. A fundamental restructuring is required if these issues are to be addressed.

For most South Africans, crowded living conditions are part of life. Duckitt (1983) suggests that these conditions may be perceived as a political issue by those who endure them. For those who seek to undertake research from a community-based perspective, it is clearly necessary to break with tradiitonal scientific neurtrality, and to take up such issues. The wider context of crowding can no longer be ignored.

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