THE SPATIAL RELATIVISM OF ABSOLUTE JUDGMENTS

by

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ABSTRACT

The current emphasis on spatial patterns and structure in geography is somewhat sterile without a concurrent focus on empirical content, and the relationships which explain those patterns. The traditional geographic theme of man's relationship to his environment offers a needed complement to the inspiration of spatial theory. Excessive environmentalist claims in the past, together with an unsophisticated methodology, have led to an unnecessary abandonment in geography of the theme of environmental influence on behaviour. The environment can in fact be considered as normative, so that a given situation can be understood as demanding behaviour. This does not necessarily deny the central role of the individual, for it is the continuous interaction of man with his environment which methodologically permits one to overcome the mechanistic assumptions of the past.

The research work was designed to test whether in fact *place* is a statistically significant variable in the making of moral judgments. Six acts of behaviour were evaluated by 86 students located in Vancouver's Skid Row area and by 89 students located in Shaughnessy a high status area also in Vancouver. The results showed that a statistically significant difference in judgments occurred in the two locations, suggesting a situational ethic.

TABLE OF CONTENTS

ILLUSTRATIONS

ACKNOWLEDGEMENTS

We learn all from the environments we pass through, and it gives me pleasure to acknowledge some of my environmental constituents. I am grateful to Professor E.W. Gibson for introducing me to the notion of a perceptual and symbolic environment, and to the 'naively given reality of geography'. Professor P. Wagner's restrained, but poignant, comments have been of great help. I should also like to thank my wife, Rita, for her unfailing kindness and encouragement.

INTRODUCTION

The principle of cultural relativism has been stated by Herskovits [1955, p.351] as follows: "Judgments are based on experience, and experience is interpreted by each individual in terms of his own enculturation." The central concern of this work is with the role of direct and immediate, external experience in the formation of judgments. Geographic environmentalism is resurrected and with substantial modifications found to be more useful than many geographers have been willing to admit.

The methodological theme in Chapter I develops from a consideration of the significance of the man/environment relationship in geographic thought, to the usefulness of looking at the relevant external situation as a referent system affecting behaviour.

It is argued that the study of spatial patterns *per se* in geography is not enough and that the *explanation* of such patterns requires an analysis of relationships. One particularly important relationship throughout the long history of geography is that of man and his environment. This is a problem requiring a recognition of man's internal referents both cultural and individual, which, in one sense, create his environment by forming his perceptions of

it. At the same time the situation he finds himself in exists independently of his will. Therefore it seems clear that it is the interaction of internal and external referents which is the determinant of observed behaviour.

A survey of the relevant literature indicates that it is widely assumed that the external referents are principally social rather than non-social. However, non-verbal "communication" with the total impinging milieu can effect a change in attitude as well as interpersonal verbal communication. There is reason to think that not only has this been overlooked but that non-social factors could at times be more important than social factors.

A large part of this work is concerned with methodological argument and the objective is to explore as well as to contribute hard data. The relativistic position taken is somewhat paradoxical when set side by side with an empirical and positivist field study which supports that position--as Shakespeare said, " 'Tis the sport to have the engineer hoist with his own petard." In justification it can be argued that the adoption of a relativist position for the total situation does not preclude the use of positivist methodology as a limited aid to the better understanding of a part of that total situation. In other words it is asserted that partial relationships can be examined positivistically whereas the total existing re-

lationship is essentially relative. There is surely a parallel here with Heisenberg's uncertainty principle in quantum mechanics. If this argument has some merit it would seem to be fitting that the limited empirical study, although important, is not the central focus in this work and there is no needed balance between the theoretical and the empirical.

The technique utilised to test the hypothesis that judgments vary with place is a modification of one used by Parducci [1968] and is outlined in Chapter II. Six statements are evaluated by two groups of students, one located at The Crescent, Shaughnessy and the other at the intersection of Cordova and Carrall, both in Vancouver.

The results given in Chapter III indicate that there is a spatial variation of attitudes in response to differing environmental contexts. An evaluation of the results suggests that the kinds and degrees of variation are related to the relevance of the statements to the situation, and also to the degree of ego-involvement. This is in line with the methodological emphasis on the constant interplay between the individual and his environment. The focal stimuli, that is the six statements, have in other words a functional relationship with their surroundings.

CHAPTER I

METHODOLOGY

In der Geographie . . . ist der Mensch das Mass.
(Schmitthenner, 1951)

La conception géographique s'avère en définitive comme une sorte de philosophie de l'homme considéré comme l'habitant principal de la planète.
(Cholley, 1942)

THE SIGNIFICANCE OF A FOCUS ON THE RELATIONSHIP OF MAN TO HIS ENVIRONMENT IN GEOGRAPHIC THOUGHT

The theme of an authoritative work by Glacken [1967] is that in Western thought until the end of the eighteenth century, concepts of the relationship of human culture to the natural environment were dominated by three general ideas: the idea of a designed earth; the idea of environmental influence and the idea of man as a geographic agent. To a considerable extent these general ideas have permeated geography from the eighteenth century to the present time.

The idea of a "designed earth" implies rationality and patterned arrangements on the landscape, and many geographers, often implicitly accepting the notion of some

discoverable rather than man-imposed order, maintain that the spatial element is the prime concept within geography [Whittlesey, 1945; Schaeffer, 1953; Ackerman, 1958; Bunge, 1962; Berry, 1964]. Until recently the spatial element was usually conceived of in the form of cartographic patterns often based on a simple physical distance scale rather than ideas of distance understood in terms of accessibility and using such scales as time and cost, or the more complicated multi-dimensional aspects of individual perception of distance [Hall, 1966; Sommer, 1969]. Paradoxically, relative location has often been considered as though it were absolute. Certainly as Harvey [1969, p.209] says much of the philosophy of geography still relies upon the Kantian concept of absolute space.

Much post-war work, particularly following on such events as the setting up of the Ad Hoc Committee on Geography in 1963 to deal with what was thought to be the low esteem held for geography as a research area, together with the removal of geography as an autonomous department in such American universities as Stanford, Yale, and Southern California, was primarily directed towards what was considered to be a more scientific and rigorous approach, which in essence focused on spatial pattern.

While it is true that a spatial and locational approach is likely to bring out hypotheses which a concen-

tration on *local* man/land relationships might not otherwise inspire, geographers are not so interested in spatial patterns *per se* as they are in the explanation of such patterns. As Robson [1969, p.33] points out, while "the geographer starts out with the identification of patterns, . . . his analysis, if it is to be more than descriptive, must proceed from there to the study of the interrelationships which are responsible for those patterns." Such interrelationships are clearly a function of place, and although one can agree with Hartshorne [1939, p.124] that "If the major concern of geography is with relationships, presumably the logical organization would be in terms of the character of the relationships," his further argument that "the particular places in which they were found, or the particular times in history in which they were found, would be irrelevant" is not correct. It makes a great deal of sense to be concerned with both process and pattern.

Nor should Hartshorne's [1939, p.125] point that "the geographers whose work has most clearly been governed by the concept of relationships have almost all carried on a large part of their studies in areas (sic) that must at least be regarded as transition zones, if not definitely parts of other fields" act as a deterrent to this approach, especially in an age of convergence in the social sciences and increasing wariness of academic nationalism [Mikesell, 1969].

Indeed, following Ackerman [1963] and the Ad Hoc Committee report [1965], geography can be thought of as the study of a world-wide, man/environment system. This statement is not particularly helpful in itself for such a system can be taken to cover everything, but it does, whether intentionally or not, point up the important fact that distance, which is a central concept for geographers concerned with the spatial element [Watson, 1955; Bunge, 1962] and which itself varies over space and time, is significant only as *part* of the total relationship between two or more objects. In this specific regard Berry's [1964] classificatory paradigm in which the vertical columns of a vector matrix appear to represent environmental relationships whereas the horizontal rows represent spatial relationships appears misconceived, for although the objective is the aggregation of data the underlying assumption is that local things are in environmental relationship, whereas distant things are in spatial relationship and this seems to be an arbitrary state of affairs. All things that interact can be considered to be in both environmental and spatial relationship--the latter being only one dimension of a multi-dimensional relationship. The relationships between two or more objects are themselves in turn only significant in terms of their environmental relationship with man.

Spatial relationship implies a focus on pattern and structure [Schaeffer, 1950, p.8]. Bunge [1962, p.202] argues that movement can be considered as a spatial process, but movement *per se* is merely a description of a changing pattern or structure. Neither time nor space are themselves processes.

It is a weakness of some of the spatial approaches that the fundamental explanation of pattern was not pursued with as much vigour as its discernment. Attempts, such as those of Bunge [1962] and Haggett [1965], to suggest a similarity between geography and geometry appear to be misconceived insofar as they mistake form for content. This is not to deny the validity and usefulness of the geometric "school" but rather to assert the *incompleteness* of such an approach. The result has been that while a great deal was claimed for this reorientation the practical contribution has not been nearly so significant as one was led to expect. The inaptly named quantitative revolution [Burton, 1963; Brookfield, 1969], which is closely tied to the spatial approach, is in fact largely based on the measurement of a relatively few, well-defined properties in contrast to the immeasurable multi-dimensional aspects of qualitative properties, and indeed much of the argument concerning the qualitative/quantitative dichotomy can be resolved with this in mind. Rigour and objectivity then have been sought

at the expense of "humanistic reality" or, to paraphrase Sauer [1925, p. 20] in *The Morphology of Landscape*, the naively given reality of geography.

This does not mean that the study of the man/environment relation is the only legitimate way of approaching the study of geography, but it is a necessary part and parcel of any explanatory spatial approach and it has been a recurring and central theme in geographic thought, although one which has not always been either consistent or satisfactory. In particular there has been considerable confusion between the environmentalist concept in geography, which is the definition of geography as the study of relationships between the environment and man, and environmental determinism which is the view that the physical environment rigidly controls human action, a distinction which is made clear by Lewthwaite [1966].

It is not particularly useful to rank the various geographic themes [Pattison, 1964; Haggett, 1965], and an approach using the theme of man/environment relations does not mean that it necessarily functions for the writer as an overriding theme, or as the "unifying lynch pin" of geography. It is one way of studying geographic problems justified by the existing geographic "culture."

The term "environment" in geography is frequently understood to denote the natural and physical environment and to "exclude the forces derived from man's activity" [Lewthwaite, 1966, p.2]. Wagner [1960, p.viii] demurs and suggests that the artificial environment should be acknowledged as geography's central interest. Neither position is appealing. The environment of man is a totality and it refers to the total complex of relevant but external factors which the Sprouts [1950, pp.11-12] labelled "milieu." The distinctions between natural and artificial, physical and non-physical, are ingrained dichotomies in geography which may well cloud our thought as much, if not more, than they clarify it. Unfortunately categories have a habit of becoming reified and discrete entities, rather than merely analytical tools which enlarge our understanding of the whole. It is because they are ingrained as such in our thought that it becomes necessary to re-emphasise the unity underlying the differentiation. It is not trivial to observe that in one sense everything consists of natural substances and obeys natural laws, and that in another sense all externality is perceived and processed through man and hence has not only the impress of culture but is also received non-physically, and as such constitutes the cognitive environment. There are undoubtably times when a distinction between the natural and the cultural is useful but the division seems to be a somewhat simplistic one, so

that it is pertinent to ask what part of the earth's surface has not been moulded by man both physically to some degree, and mentally through perception of it? Such a question leads one to suggest that any geographic presumption that the natural and physical environment is the most important factor in human life is untenable.

THE VALIDITY OF A BELIEF IN ENVIRONMENTAL INFLUENCE

Rostlund [1956] wrote: "To keep the record clear: environmentalism was not disproved, only disapproved." And Carl Sauer writing in 1927 said: "There is, of course, no intention to belittle environmental influences . . . . The notion of environmental significance is really a commonplace to which everyone subscribes." No one would suggest today that geography should only be concerned with such influences, indeed the pendulum has swung so far in the opposite direction as a result of the methodological controversies of the past that many geographers avoid it altogether. This, while understandable in terms of the excessive claims of the geographic determinists, is nevertheless somewhat surprising. As Rostlund argued people generally have always believed in the influence of the environment. In academia too the influence of the environment has been recognised for a considerable time. Psycho-

logists and educationalists have long maintained that the home environment has a significant role to play in the educational progress of children. Indeed the whole thrust of educational research has been towards the learning situation and there has been a growing awareness of the unsought environmental inputs in classroom learning. Zaniewski [1952] gives a wide-ranging review of theories of the relationship between man and the milieu and discusses their relevance to education. Criminologists have also been interested in the role of the environment. Recently geographers too have shown an interest in these topics. Timms [1963] considered the influence of such factors as population density and type of housing, and the mobility of people, on social defectiveness; and Robson [1969] found that location and environment were related to attitudes involving local educational programmes when the more commonly recognised measures of class structure were held constant. This parallels the findings of several contemporary American geographers studying such things as voting patterns [Cox, 1969]. We may indeed be sensitive to far more influences from the environment than we suppose.

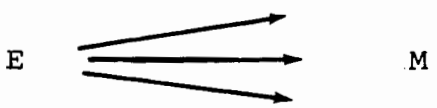
Most of the work on environmental influence outside geography has focussed on the social rather than the physical environment, but it is clearly the total environment which is affective and not only that part of

it which is human. There seems no reason to doubt on common sense grounds that man is the product of his total environment, human and non-human, as it has existed for him through time. The failure of the environmentalism of the past resulted from the mechanistic assumptions that were made. If we are to make the fresh start that Rostlund [1956] called for we must do so by explicitly taking account of the continuous interaction between man, the organism, and his total relevant environment on a mental as well as physical level. The distinctions between environmental determinism, possibilism, cultural determinism and the continuous interaction postulated here can be characterised as follows:

(i) Environmental Determinism (Monocausal)

Environment (E) ⟶ Man (M)

(ii) Possibilism (Multiple Choice)



(iii) Cultural Determinism (Man as actor, environment as the stage)

(iv) Continuous interaction and interdependence

The idea of interaction, an awareness that all parts of nature, including man, are interwoven, is an ecological principle and it is appropriate at this point to examine the significance of ecology in human geography.

HUMAN ECOLOGY

A number of geographers have specifically viewed their subject within an ecological framework. Indeed House [1929, 1936], in his review of the historical antecedents of human ecology in plant ecology and human geography, draws attention to the fact that Ratzel once suggested that anthropogeography is, in effect, human ecology. Many writers [Barrows, 1923; James, 1954; Timms, 1963; Robson, 1969, et al.] have drawn the conclusion that human ecology and human geography are very similar in their approaches to the study of man. The underlying similarities between human geography and human ecology are clearly shown by some of the early definitions of human ecology as

> . . . a study of the spatial and temporary relations of human beings as affected by the selective, distributive, and accommodative forces of the environment. Human ecology is fundamentally interested in the effect of position, in both time and space, upon human institutions and human behaviour. [Park, Burgess, MacKenzie, 1925, p.63]

and as dealing with

> . . . the spatial aspects of the symbiotic relations of human beings and human institutions. It aims to discover the principles and factors involved in the changing patterns of spatial arrangement of population and institutions resulting from the interplay of human beings in a continuously changing culture. Knowledge of ecological processes . . . is basic to all social sciences, as social and political institutions have a spatial base, and arise and function in response to changing conditions of environment and competition. Institutional stability is largely dependent on the stability of space relations.
> [MacKenzie, 1942, p.314]

The Sprouts in *An Ecological Paradigm for the Study of International Politics* [1968] state that the central core of the definition of ecology is: environment, environed organism(s) and the interrelations of the two. Some might prefer a reference to adaption to the environment, but to the extent that this implies purpose and a tendency towards equilibrium it is not satisfactory. In any case it is an assumption that is unwarranted for a positive dysfunctional relationship cannot be excluded. The definition preferred here is importantly different from the triad used by the Sprouts, and it is as follows: relevant environment, environed organism and the interdependence of the two. "Relevant" draws our attention to significance, and "interdependence" reminds us of the inextricable, and dynamic rather than genetic, relationship of man with his environment, a difference of emphasis which is important. A further difference is that the definition preferred here does not facilitate a focus on environed organisms in the

plural, as in the Sprouts' definition. This seems to be logical, for the term "environment" pre-supposes the existence of an environed *unit*. Both geographers and ecologists have taken a conventional, but nevertheless somewhat illogical position, in taking an aggregate as their environed unit, for statements about collectivities ignore the process of change between the individual and aggregate level. The focus has been on populations, or social and cultural groups, rather than on individual human behaviour. For a strictly biological study this may be adequate but it is not so for a behavioural study.

The term "human ecology" is more congenial to a focus on the individual in his relationship to his environment than the term "cultural ecology" which logically precludes it. Culture can then be used explicitly as an explanatory tool in human ecology rather than as the basis of a classification system as it often is in cultural ecology. Recently two geographers, Timms [1963] and Robson [1969] have been concerned with environmental effects and have re-emphasised the usefulness of the term "human ecology" for geographers. It will be useful to review its history and development drawing extensively on this work.

Ideas concerning the relationships between environment and human behaviour have existed from very early times [Glacken, 1967], but the basis of modern ecological studies

is to be found particularly in the work of Darwin, although it is only during the last fifty years or so that ecological thinking has been explicitly in terms of man. One of the earliest appearances of the term "human ecology" was in the book by R.E. Park and E.W. Burgess [1921], *An Introduction to the Science of Sociology.*

The term "human ecology" is most closely associated with the Chicago school of the 1920's and 1930's, represented by such outstanding figures as Park, Burgess and MacKenzie, who were primarily concerned with the urban setting. Essentially the concept was based on a biological analogy, and although the role of culture was recognised the emphasis was primarily on the organic relationships at the biotic level. Processes recognised by plant ecologists such as competition, dominance, invasion and succession were carried over into human ecology. Park recognised both sub-social and social factors and related these to his central and discrete concepts of "community" and "society." The concept of community was based on his view that man was subject to the general laws of the organic world and it was this which he saw as the focus of ecology. Park regarded this competitive biotic level of community as natural and fundamental, with the cultural level erected on its foundation.

Concurrently the geographer Barrows was arguing for a similar reorientation along these lines within geography. In his 1922 address to the Association of American Geographers he proposed that human geography deal "only with the mutual relations between man and his natural environment" and be explicitly recognised as the "science of human ecology." In order to avoid the stigma of determinism he emphasised that the approach should be from the standpoint of man's adjustment to environment [Barrows, 1923].

By the late 1930's there was mounting empirical and theoretical criticism of the ecological approach. In geography in particular, despite Barrow's emphasis, the main arguments were that ecological ideas would lead back towards determinism [Sprout and Sprout, 1968, p.23]. This is perhaps largely a result of Barrow's neglect of non-economic social interrelationships in his concept of environment, which, despite his apparent re-orientation towards man, he still thought of in terms of the geographic or natural environment. It may also be that the attempt by Barrows to humanise physical geography muted the response to his call for an ecological approach as well as "the fact that the qualitative and quantitative techniques of the time were unable to exploit the full value of the ecological concept" [Robson, 1969, p.29].

One of the outstanding *empirical* criticisms of the earlier ecological mode of thinking was Firey's work on Boston [1945] in which he demonstrated that sentiment and symbolism associated with the landscape were of such importance as to throw considerable doubt on the assumptions of rational economic land use made by the classical school. Firey's work drew particular attention to the significance of man in the interpretation of spatial patterns.

Alihan [1938, p.6] took a similar *theoretical* position in an earlier highly critical work when she pointed to the unnecessary reliance of the ecologists on the material world, whereby, "The conditions of social change became to them *facts* of social change . . . and their interpretation of social life hinged upon its most concrete aspects." She believed that the classical school gave too much attention to the role of competition in human society and she argued in particular that the distinction between the biotic "community" and the cultural "society" was untenable.

A year later Hartshorne [1939, p.298] was, in effect, arguing in *The Nature of Geography* that such a distinction was a useful one because "the relations between the world of man and the non-human world are of the greatest concern in geography." The dichotomy, however, attracted further

criticism and the tendency for the ecologists to adopt a deterministic bias in their approach to human behaviour was stressed. Gettys [1940, p.471] made a particularly forceful criticism of the tendency for ecologists to dichotomise, which he held to be a common affliction of the social sciences, at the same time emphasising the need for a synthesis based on a recognition of the importance of culture. He accused the human ecologists of promulgating "a theoretical framework for their discipline which is markedly positivistic, deterministic, mechanistic and organismic"--a strange combination of sins!

Robson states that a work by Hawley in 1950 has been taken as the starting point for more recent approaches to ecology.

> Hawley's definition . . . places great stress on the concepts of functional relations in the adjustment of human aggregates to their organic and inorganic surroundings. This emphasis on functional organisation differs from earlier definitions which stress the importance of the spatial patterns which such functions assumed. [Robson, 1969, p.21]

The limitations of a spatial approach are clearly recognised and the basic criticisms levelled against the Chicago school are seen as having been met

> . . . by providing a theoretical system which accepts that all human interrelationships are social, and by concentrating on aspects of organisation which have an economic basis.[Robson, 1969, p.23]

A particularly interesting point brought out by Hawley's framework is that "life viewed ecologically is an aggregate rather than an individual phenomenon" and that the focus of attention is upon the population.

> . . . . In simplest terms, human ecology is the descriptive study of the adjustment of human populations to the conditions of their respective environments.[Hawley, 1944, p.404]

Duncan and Schnore [1959] whose work is built on the theoretical position presented by Hawley [Robson, 1969] also emphasise the central place of population in the ecological approach. A similar position is taken in geography by Trewartha [1953, p.83] when he states that,

> . . . fundamentally geography is anthropocentric . . . . Population is the point of reference from which all the other elements are observed and from which they all, singly and collectively, derive significance and meaning. It is population which furnishes the focus.

Wrigley [1965A, p.69] takes the same viewpoint when he writes that an interest in population

> . . . holds out some promise of being a satisfactory central focus for the subject, a convenient nexus into which all strands can be seen to lead.

These viewpoints seem to reflect the earlier suggestion of Barrows [1923, p.3] that "the center of gravity within the geographic field has shifted steadily from the extreme physical side toward the human side." The emphasis,

however, is clearly on the aggregate rather than the individual. In Hawley's opinion, for example, the psychological properties of individuals are irrelevant, but as Robson [1969, pp.23-24] says "A viewpoint which emphasises the *functional* role of social institutions, as does Hawley's, makes assumptions as to motivations, attitudes, sentiments and values which must at least be recognised and considered" and in fact Hawley has "merely sidestepped most of the criticisms which were levelled at the ecologists of the Chicago school." People are considered, in effect, as objects in the external environment, albeit the most important objects. While this recognition of man as the most significant part of the total environment is important, the question arises as to whether the shift in the centre of gravity within geography that Barrows talked about has gone far enough, for geographers are still overwhelmingly mechanistic in their approach to geographic problems. Man considered as an aggregate may have the trappings of an anthropocentric position but in fact there is a failure to explicitly and directly recognise the logical implications of such a position. As Wagner [1960, p.6] puts it

> An environment is only an environment in relation to something that it environs, and is significant insofar as it interacts in some way with that thing.

That something is man and he is the measure of significance. "Anthropocentric" used in this way suggests looking outwards from man as the centre, and is in direct contrast to the inward looking, self-centred meaning used by White [1967] when he commented that the Christian religion is the most anthropocentric the world has seen for it not only created a dualism between man and nature but also authorised the exploitation of nature for the benefit of man.

While the term "human ecology" is still strongly associated with nature and the physical environment, and a mechanistic approach [Eyre, 1964; Morgan and Moss, 1965; Eyre and Jones, 1966; Stoddart, 1965, 1967], the development of thought in human ecology shows a growing recognition of the importance of both the total environment, or milieu, and of cultural factors, as well as an increasing awareness of the anthropocentric nature of the field. It is this important and valid development--perhaps one is only entitled to call it an offshoot at present--which serves as a datum for the arguments that follow.

AN ANTHROPOCENTRIC APPROACH TO THE INTERACTION BETWEEN MAN AND HIS ENVIRONMENT

It seems clear that neither a study of environment nor organism alone can account for behaviour, and it is therefore essential to focus on the problem of the inter-

action of organisms and environments. Behaviour depends not only on the genetic idiosyncrasies (and similarities), the behavioural "set" and the cultural background of the individual, but also what is conjointly presented to him in a particular place. It may be that regularities in behaviour may emerge not only as a result of a shared cultural past but also a shared environmental present.

There is a growing interest in the physical environment in psychology as noted by Wohlwill [1970]. He draws attention to the inauguration of a graduate training programme in environmental psychology at the City University of New York, and the founding of a new journal "Environment and Behaviour" devoted to this field. More interestingly at Clark University the Departments of Psychology and Geography are collaborating in the development of a joint programme emphasising problems of environmental perception. Recently two environmental psychologists joined the Office of Academic Planning at the University of British Columbia, principally to assist in the creation of an improved learning environment. Wohlwill observes that there is something of a paradox in psychology's relative neglect of the role of the physical environment in behaviour, in the face of the insistence on the environmentally determined basis of behaviour, and he concludes that the area of the relationships between the physical

environment and behaviour remains decidedly under-researched at present. Some of the exceptions he points to are Hebbian animal research on the effects of early experience, and the work of Barker, Wright and their associates [cf. Barker, 1963, 1965].

He distinguishes three forms of this relationship as follows:

1. First of all, behaviour necessarily occurs in some particular environmental context, which imposes major constraints on the range of behaviours permissible in it, and frequently serves to determine in a more positive sense particular aspects or patterns of an individual's behaviour.
2. Second, certain qualities of the environment, such as under/or overstimulation, crowding, severity of climate, etc., may exert generalised effects on broader systems of response within the individual.
3. Third, behaviour is in a variety of ways instigated by, and directed at, particular attributes and characteristics of the physical environment.

Of these three approaches he observes that the first has received by far the most concentrated attention and is encompassed in the work of Barker and Wright. Work in

proxemics by Hall [1966] and Sommer [1969] also adopts this approach.

What seems somewhat surprising is that no explicit consideration is given by Wohlwill to the normative role of a symbolically constituted physical environment, although he both recognises the "need to take into account . . . the phenomena of selective perception and image formation, which may frequently bear little relationship to the experienced stimulus environment . . . ." and admits that no attention has been paid to the mediation and transformation of environmental effects through symbolic activity and interpersonal societal and cultural influences.

In geography, as Mikesell [1969] and Joyce [1969] point out, an awareness of psychological factors in man/environment relationships is not a recent development, but at the same time it would be misleading to infer from this that consideration of such factors has had a cumulative effect on the geography of today [cf. Max Sorre, 1954]. Most of the impetus for such an approach has come from outside of geography itself and until recently the individual has been neglected in geographic work. Harvey [1967] has emphasised how geographic theory must rest upon explicit assumptions about human behaviour and that this is a problem that requires immediate attention.

Today, increasingly, there is a concern with the subjective approach, a concern with "social space", with hidden meanings in the landscape, and the esthetics of the environment. There is a growing awareness of the distorting effects of rational assumptions and, as a counterweight, the importance of such cultural factors as values, attitudes and life-styles is being stressed in opposition to "social 'laws' or mechanistic analyses of make-believe or model worlds" [Parsons, 1969]. As Buttimer [1969, p.417] puts it:

> Geographers ask themselves: should we be satisfied with drafting an opaque, objective map of social patterns in space, or must we supplement this with the subjective or inside view?

A number of writers have specifically argued the need for distinguishing between the "real" objective environment and the subjective environment or psychological image of that environment [Kirk, 1951; Lowenthal, 1961; Sprout and Sprout, 1965; Gould, 1966]. The implicit belief is that while it is the former which has generally been used by geographers as a setting for studying man it is in fact the latter to which men respond. Although the perceived environment is not the only topic of interest to the geographer its current recognition and emphasis represent a most valuable step forward in geographic methodology, if perhaps a rather hesitant one, for from such an explicitly

anthropocentric viewpoint, the environment can *never* be anything but perspectival, that is to say dependent upon man's perceptions and cognition of it. The construct of a "real" or "actual" environment as an *absolute standard* against which we can measure the correctness or truth of our image is therefore untenable. An example of such a belief is found in Boulding's [1959, p.120] statement:

> It is what we think the world is like, not what it is really like, that determines our behaviour. If our image of the world is in some sense'wrong', of course, we may be disappointed in our expectations, and we may therefore revise our image; if this revision is in the direction of the 'truth' there is presumably a long run tendency for the 'image' and the 'truth' to coincide.

This position leads Brookfield [1969] to be concerned with, and puzzled by, such specific problems as the relationship of perceived to real distance and more generally how to relate perception to reality.

Now, of course, we cannot only know what we think we know! The point being made here is that we are being presented with some hypothetical construct of a real world which suggests some absolute and objective entity, independent of man, which we can use as a standard, when in fact that standardization is *created* by man. Learning is essentially the acquisition of the ability to apply a criterion, not necessarily one that can be formulated but certainly one in which it makes sense to distinguish

between a right and wrong way of doing things [Winch, 1958]. Evaluation then, objectively, must be in terms of criteria such as norms and rules, which are created not by individuals in isolation, but by individuals in society. For example, when as geographers we mark a student's essay we do so in terms of our traditions. The justification for our assessment will be in part derived from the norms, rules, customs, standards and criteria, or whatever we label them, which are traditionally adhered to and which in effect constitute geography. This in essence is what being objective means, an evaluation made in terms of a set of rules. Harvey [1969, p.15] makes a similar point with regard to the objectivity of science:

> The criteria set up to judge whether or not a particular explanation is reasonable and satisfying are highly subjective, and there can be no denial of this fact. Science itself has tended to get round this problem by setting up conventions--rules of behaviour for the scientist--to which he must conform if he is to be seen to be explaining in a reasonable manner. The scientific method is nothing more than the explicit development of these rules. By setting up such rules and conventions, a community of practising scientists develops a norm by which to judge whether or not a particular explanation is reasonable.

It is important then to keep in mind the inherent confusion in the use of the words objective (or real, or actual, or concrete) and subjective. At the simplest level objective implies that which is external to man,

and subjective implies that which is internal to man. But this straightforward idea has become associated with another notion which really amounts to this: objectivity is absolute; subjectivity is relative. It is argued here that this association is misleading. When we say we are being objective we simply mean that we are working to *socially* accepted standards. Such standards are not absolute but are instead formed through the agreement of "subjects". The external environment is "objective" if we merely mean by that external, but is not "objective" if we mean that it is in some sense absolute for it is of course relative to the perceiver.

Sprout and Sprout [1965, p.136] suggest that the construct of hypothetical omniscient observer aware of the real world helps to emphasise the limitations of a particular individual's own knowledge of his milieu. There seems no reason, however, why one should not stress these limitations without having a grossly over-simplified and misleading construct. It is human limitations that we should focus on and not the metaphysical notion of a finite and absolute real world. To state that there is *something* external to the individual is to state no more than that man is an environed unit. What that "something" is must be sought in terms of an amalgam of the perspectives of the various environed units themselves.

White [1949, p.285], argues an analogous point in terms of mathematical reality when he states that the following, apparently contradictory, propositions are both valid:

1. Mathematical truths have an existence and a validity independent of the human mind.
2. Mathematical truths have no existence or validity apart from the human mind.

In the first statement, "the human mind" refers to the individual organism; in the second to the human species. Support for the view that mathematical truths are created by man rather than discovered in externality can be culled from many writings. White [1949, p.284] himself quotes the following statements:

> . . . it is the merest truism, evident at once to unsophisticated observation, that mathematics is a human invention.[Bridgman, 1927, p.60]

> . . . we have overcome the notion that mathematical truths have an existence independent and apart from our own minds. It is even strange that such a notion could ever have existed.[Kasner and Newman, 1940, p.359]

And, similarly, in the case of theoretical physics,

> To him who is a discoverer in this field, the products of his imagination appear so necessary and natural that he regards them, and would like to have them regarded by others, not as creations of thought but as given realities, ... [Einstein, 1934, p.30]

Recently the geographer Cole [1969] has re-emphasised this position. The creation of non-Euclidian geometries has dispelled the view that concepts such as space, straight line, and plane arise as a consequence of the structure of the external world. The suggestion of Chorley and Haggett [1967] that *models* should form the basis of a new geographic paradigm is likewise an implicit realisation of an anthropocentric and perspectival viewpoint.

Perception studies in geography, emphasising that order and meaning are imposed rather than discovered, are one of the more stimulating recent developments in the field and may well herald the inauguration of a radical new approach in cultural geography [Brookfield, 1969]. A good, comprehensive survey of work focussing on environmental perception has been produced by Saarinen [1969]. The question arises however, in the light of the argument so far, as to whether this important development in geographical thinking is in fact as far-reaching as it appears, for the dichotomy of man and "real" environment, which has plagued geography for so long, is still implicit and all that has in fact been introduced is some mystical medium between man and the real environment. Typical statements are:

> The importance of attitudes and value orientations is that they act as intermediaries within the relationship between environment and environed unit.
> [Robson, 1969, pp.36-37]

and,

> . . . in daily practice we all subordinate reality to the world we perceive, experience and react in. We respond to and affect the environment not directly, but through the medium of a personally apprehended milieu.[Lowenthal, 1967, p.1]

The argument here is that the notion of mediated relationships is false and on the contrary man is *inextricably* interdependent with his environment, one might even say continuous with it. Hanson [1958] has argued this point extensively in his book *Patterns of Discovery*. He maintains that it is not simply a question of having the same sense-datum experience with different *ex post facto* interpretations of what is seen but that instead the fundamental and visual data are themselves different. He cogently argues a very similar point made by Kuhn [1962] in another seminal work, when he writes:

> . . . physical science is not just a systematic exposure of the senses to the world; it is also a way of thinking about the world, a way of forming conceptions. The paradigm observer is not the man who sees and reports what all normal observers see and report, but the man who sees in familiar objects what no one else has seen before. [Hanson, 1958, p.30]

We do not then see some real world, known to some omniscient observer, and *then* place our meagre interpretations on it. Instead facts are themselves, integrally, theory-laden.

The linguistic relativist Whorf [1956] views language as the major shaper and determiner of subjective experience.

> The categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscope flux of impressions which has to be organised by our minds--and this means by the linguistic system in our minds. [Whorf, 1956, p.212]

Whorf, deriving his argument from Wittgenstein, is suggesting that we cannot know at all except through a linguistic conceptual structure. The usefulness of this hypothesis is demonstrated by considering the various man-made divisions of the continuous gradation of light at different wavelengths in the spectrum. Gleason [1961] maintains that a category system, based on language, is imposed as the diagram below illustrates. This does not mean that the extreme linguistic relativity thesis is valid. Indeed, Berlin and Kay [1969] describe this alleged semantic arbitrariness of each language relative to every other language as a gross overstatement. Their research results suggest that,

> . . . although different languages encode in their vocabularies different *numbers* of basic color categories, a total universal inventory of exactly eleven basic color categories exists from which the eleven or fewer basic color terms of any given language are always drawn.

They are unable to offer any physical or physiological explanation, and suggest instead a historical and evolutionary development of all languages. It is particularly interesting,

in view of this and later arguments, to note their observation that while category foci placements are highly reliable, category boundaries are not at all reliable, even with the same subject. While we need to tread carefully in this matter there is evidence to support the general argument that culture strongly influences perception [Segall, Campbell, and Herskovits, 1966].

English:

Purple	blue	green	yellow	orange	red

Shona (a language of Rhodesia):

cips^{w}uka	citema	cicena	cips^{w}uka

Bassa (a language of Liberia):

hui	ziza

Illustration 1 Colour Categorisation in Three Languages. Source: Henry A. Gleason, Jr., An Introduction to Descriptive Linguistics, 1961.

The question at issue as White [1949, p. 284] says is not, "Are these things real?" but, "Where is the locus of their reality?"

The argument so far then is that from an anthropocentric perspective it only makes sense to view cognition

in relativist terms, that is in terms of time and place. Historians have grappled with this problem in terms of time [Collingwood, 1946] but geographers have yet to make a real start in terms of place.

As a corollary to this relativist position it is argued that the notion of a cultural lens, or some mediation between an implicit real and standard world known to some mystical omniscient observer and the world known to man, only serves to perpetuate a misleading dichotomy in geography. Bews, [1935, p.278] adopting a holistic approach in ecology, said, "while in one sense, ecology is merely a point of view, in another sense it is the most complete science of life, since life is not a thing itself but a *process*, which of necessity continuously involves the environment." It is "not so much a branch of science as a certain attitude of mind with regard to life, ..." [p.1] While *interdependence* is as vague a term as interrelationship it does denote a more continuous and complex interaction. It may be that a refinement of this concept will offer more insight to geographers than traditional ideas of environmental influence and of man as a geographic agent. Instead of the traditional dualism in geography we should take a closer look at the implications of unity.

INTERDEPENDENT INTERNAL AND ENVIRONMENTAL REFERENT SYSTEMS

It is possible to think of interdependence in terms of a certain circularity of thought and action, that is as a system. The environment is conditioned by the human observer and participant both mentally and physically and it, in its turn, conditions man in his totality. Man makes decisions and judgments in the light not only of past experiences in the form of learned behaviour or culture, but also the immediate situation. He makes them not only in the light of attitudes and values but also perceptions. There is a similar interaction on the physical level and the one is sensibly linked to the other. The main focus in this work is on the behavioural aspect and with this in mind the idea of interdependence can be approached in terms of the interlocking reference systems of internal mental phenomena and external phenomena, that is to say these interdependent reference systems or patterns can be thought of as located both inside and outside the individual.

That a frame of reference can determine a man's response is readily apparent. The phenomenon known as the Coriolis force is a stimulating analogy drawn from meteorology. A moving body travelling in a straight line in terms of a fixed frame of reference appears to move to the right in the northern hemisphere when away from the equator. With reference to fixed coordinates it *really* travels in

a straight line, but in terms of the rotating coordinates of the earth it *really* moves to the right. There is, of course, an infinite number of such frames of reference in the universe. Correctness and falseness, decisions and judgments, can be explained in terms of frames of reference, and as Harvey [1967, p.13] noted "Decision making may be regarded as the most convenient focus for the discussion of behavioural postulates in a geographic context."

The human internal referent system can be considered in two parts: the idiosyncratic and the cultural. The former consists of the individual's unique experience, his stored information and his own idiosyncratic values and attitudes--the 'set' of the individual *per se*. The cultural part of the internal referent system can be considered as consisting of the rules and norms of environmentally learned behaviour--a directive information flow. The individual's behaviour can be understood as a result of both his individual 'set' and his culture--both internally patterned.

The tenacity of the internally recorded cultural pattern will be a determining factor in assimilating the individual's behaviour with that of the culture group. Such behavioural attributes as perception will therefore be similar in varying degrees within a homogeneous cultural

group, and will likewise differ from one cultural group to another [Joyce, 1969]. This theme of cultural patterning of behaviour (including cognition) is either implicit or explicit in the theses of such important and diverse works as those of Mannheim [1936], Whorf [1956], Hanson [1958], Winch [1958], and Kuhn [1962].

CULTURE AS AN INTERNAL AND NORMATIVE REFERENT SYSTEM

The concept of culture is potentially of great explanatory importance. Kroeber and Kluckhohn [1952, p. 3] maintain that it is one of the key notions of contemporary American thought. No one would deny, however, that the term is subject to a wide variety of interpretations which lessen its usefulness as an analytical tool. Kroeber and Kluckhohn themselves cite one hundred and sixty-four definitions of culture of which the earliest is by Tylor in 1871. From that time on the number of definitions increases progressively demonstrating a growing awareness and interest in the idea of culture. Kroeber and Kluckhohn distill out of their critical review a central idea of what culture is to most social scientists:

> Culture consists of patterns, explicit and implicit, of and for behaviour acquired and transmitted by symbols, constituting the distinctive achievement

> of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other as conditioning elements of further action. [p.357]

This definition is a comprehensive one and it emphasises some of the terms which have been more recently associated with the idea of culture such as patterns, symbols and values. However, as an explanatory tool the notion of culture as defined still appears somewhat blunt.

One of the central ideas of culture which is implicit in the definition, although not stressed as such, is that of *a trend towards uniformity*, that is to say the normative aspect of culture, which emphasises rule or way. A number of the other definitions referred to by Kroeber and Kluckhohn in their review focus explicitly on this idea. A selection of these follows:

1. Wissler, 1929: 15, 341.

   > The mode of life followed by the community or the tribe is regarded as a culture . . . . (It) includes all standardized social procedures . . . procedures followed by the tribe.

2. Klineberg, 1935: 255.

   > (culture) applies to that whole "way of life" which is determined by the social environment. To paraphrase Tylor it includes all the capabilities and habits acquired by an individual as a member of a particular society.

3. Ford, 1939: 137.

   Culture, in the form of regulations governing human behaviour, provides solutions to societal problems.

4. Gillin and Gillin, 1942: 20.

   The customs, traditions, attitudes, ideas, and symbols which govern social behaviour show a wide variety. Each group, each society has a set of behaviour patterns (overt and covert) which are more or less common to the members, which are passed down from generation to generation, and taught to the children, and which are constantly liable to change. These common patterns we call the *culture* . . . .

5. Simmons, 1942: 387.

   . . . the culture or the commonly recognised mores . . .

6. Kluckhohn and Kelly, 1945: 84.

   . . . those historically created selective processes which channel men's reactions both to internal and external stimuli.

7. Kluckhohn and Kelly, 1945: 97.

   By culture we mean all those historically created designs for living, explicit and implicit, rational, irrational, and non-rational, which exist at any given time as potential guides for the behaviour of men.

8. Kluckhohn and Kelly, 1945: 91.

   Culture is . . . a set of ready made definitions of the situation which each participant only slightly retailors in his own idiomatic way.

9. Frank, 1948: 171.

   . . . a term or concept for the totality of these patterned ways of thinking and acting which are specific modes and acts of conduct of discrete individuals who, under the guidance of parents and teachers and the associations of their fellows, have developed a way of life expressing those beliefs and those actions.

There is a recurring reference in these definitions to what Klineberg calls "the whole way of life" of a particular society. For example Wissler understands culture to be "the aggregate of standardised beliefs and procedures", Frank speaks of a "totality of these patterned ways" and Kluckhohn and Kelly mean by culture "all those historically created designs for living." Traditionally then culture has been associated with the totality of a society's patterns of behaviour. It is useful, however, to classify a cultural group in terms of a few rather than an aggregate of norms, and indeed it can be argued that this is a more realistic way of approaching the complex problem of an appropriate classification of cultural groups. Each individual can thus be thought of as a cultural unit and these units can then be arranged in any number of classes on the basis of one or more commonly held norms. Used in such a non-traditional way culture becomes a more adaptable explanatory tool.

Culture as a set of rules for behaviour, as in Ford's definition, can be characterised as imperative and this contrasts with the more neutral phraseology of Kluckhohn and Kelly who view it as all those historically created designs for living which act as potential guides for the behaviour of men. This is primarily a problem of the appropriate emphasis on which there is no clear consen-

sus at the present time. It appears reasonable to assert, however, that few would take the extreme position of taking cultural norms to be rigid determinants. One reason for such an assertion is that norms are subject to change from individual to individual and from time to time and are therefore themselves somewhat flexible. It is the trend towards uniformity rather than uniformity itself which is the focus of a normative approach. Nor should such an approach be understood as diminishing the value of a coincident emphasis on variability and the individual in cultural studies. Culture is not only created by individuals, it is also internalised in individuals and acts through them in a variety of ways.

While it is useful at times to consider the individual as a cultural unit the notion of culture is intrinsically inseparable from the notion of society, and being a social creature in turn is inseparable from having rights and obligations and thus the acceptance of rules. McPherson [1967] has argued this point at length. He states that it is impossible to understand what it is to be social without understanding what it is to have rights and obligations and *vice-versa*. Ford's [1939] suggestion that culture provides solutions to societal problems is in similar vein.

The philosophy of Wittgenstein lends further credence to this linkage between society, culture and rules. Wittgenstein rejects the possibility of a private language and concludes that language is an essentially social phenomenon governed by rules. He argues that the very notion of verbal communication presupposes rules, and that by obeying a rule one is conforming to an agreed common practice. Winch, [1958, pp.51-52] drawing his inspiration from Wittgenstein, claims specifically that

> . . . the analysis of meaningful behaviour must allot a central role to the notion of a rule; that all behaviour which is meaningful (therefore all specifically human behaviour) is *ipso facto* rule-governed.

Looking at behavioural determinants in terms of rules is a particularly useful idea insofar as it suggests modality in the referent pattern. It is perhaps more appropriate, however, to think of these internal referents as a pattern having a central tendency with a range of variation around it. The concept of rule is too narrow and inhibiting, and it is more satisfactory to think of the cultural pattern as both limit and model. Some cultures will be more loosely organised and flexible than others but there will still remain a core of shared understandings, and these will provide a certain rigidity to our thoughts and actions. These understandings constitute social obligation without which social life would be impossible.

Culture considered as any combination of norms and rules has clearly great potential in the explanation of human behaviour.

While the normative aspects of culture have not been stressed in geography the significance of human antecedents for an understanding of perception of landscape and man's actions in it has been noted and commented on by a number of geographers. Unfortunately many workers in the subject are not adequately equipped for what is basically a psychological approach, and while perhaps in the long run such an approach cannot be avoided it may be possible in the meantime to break into the circle of interdependence elsewhere. It may be that geographic understanding can be furthered by reversing the current interest in this field, which is primarily concerned with culturally patterned perception of the landscape, and instead considering the significance of place as it affects cognition.

The emphasis on culture as normative inspires the notion of a normative environment, and it is to this that we can now turn.

THE ENVIRONMENT AS AN EXTERNAL AND NORMATIVE REFERENT SYSTEM

The significance of the milieu as an *immediate referent system*, this behavioural environment affecting individual judgments and decisions, appears to have been largely overlooked in geography, although not by workers in such subjects as sociology and psychology. Psychology, however, has frequently focussed on the problem in laboratory situations and sociology has generally limited its sights to a consideration of social interaction.

The importance of the influence of milieu on man is one of those things that everyone subscribes to but which most geographers have steered clear from since the raging controversies of the early part of the twentieth century. Early thinking was in terms of simple cause and effect relationships and this came to be seen implicitly as a denial of man's humanity. In attempting to avoid this danger geographers have become more concerned with what man does to the environment than what the environment does to man. This tendency is repeated in the new upsurge in what can be rather loosely labelled as perception studies in geography. As Kates [1966, p. 27] puts it,

> Buried with the ghosts of Hippocrates, Montesquieu, Lamarck, Huntington, and other environmental theorists and theories is the incentive for a sophisticated examination of man's response to the physical environment.

While the external referent system takes a form determined in part by the internal referents it also has certain features of its own. It is a repository and teacher of culture. Values are embedded in its context and are spatially distributed. Like the internal referent system it is both limit and model. Paradigms and value systems are formed by the milieu as well as, in a special sense, creating it. Values and attitudes affect our perception, but our perception also affects our values and attitudes. Decisions and judgments are made not only in the light of values but also perceptions. Truth then is not only personal, it is also regional. It varies in time and space.

When culture is considered as a normative force the question naturally arises, what is the *origin* of these norms? The answer in part is that the norms are learned through experience, that is to say they are environmentally learned. But of course we cannot find an original source *per se*, for the creation of norms is a result of the continuous interaction between man and his environment. Therefore it clearly makes sense to talk about a normative environment as well as the normative aspects of culture, for the one is derived from the other. The interaction between the two can be conveniently conceived of in terms of communication for the very notion of culture is inseparable from that of communication.

The term communication used in a very broad sense can be taken to cover all ways in which one mind can affect another. This would include non-verbal exchanges of information [Ruesch and Kees, 1956; Hall, 1959]. But can one use "communication" properly where the input has not itself originated, however indirectly, in another human mind? Is it meaningful to say one can communicate with nature or must a distinction be made? The answer must surely be that no such distinction can be maintained, for what *amounts* to a message, to information received, must be decided by the recipient alone. Thus if driftwood on a beach is arranged fortuitously by the waves to read LOVE the message is not in itself distinguishable from an identical purposeful arrangement by man. Similarly when a dog growls or wags its tail a communication can be received. What we learn, that is to say what is communicated to us, stems not only from man but also from experience of a material non-human environment. The idea that there is meaning in nature is not new, but its *contributive* role requires much greater emphasis.

There is some parallel here with the argument that has developed in philosophy over Wittgenstein's denial of a private language. It has already been argued that rules and social relationships are closely linked notions, and the rules of language provide a means of social interaction.

Language therefore implies a *social* relationship which is incompatible with the idea of being private. Yet at the same time if it makes sense to speak of communication with the non-human environment, as has been argued, then it is possible to say that one can read the physical environment as one reads a book. Environmental symbols can thus be privately understood and in this way we may say that it is *possible* to have a private language--not one that is spoken but rather one that can be read. At the same time the relative stability of the environment, the biological constancy of human beings and a common internalised culture will clearly be likely to result in a somewhat similar reading of any environmental situation.

The symbolic meaning of environmental actions and objects can thus properly be said to be a receivable communication, although an explicit awareness of this fact has been quite recent as is shown by the impact of Hall's [1959] *The Silent Language*. Hall is concerned primarily with non-verbal *interpersonal* communication. A book by Ruesch and Kees [1956] entitled *Non verbal Communication* anticipates much of Hall's work although it is not referred to in *The Silent Language*. Ruesch and Kees focus on a more indirect interpersonal communication through the medium of objects and arrangements. McLuhan [1964, p.viii] similarly emphasises media and he argues that "environments are not

passive wrappings but active processes" so that the means by which man communicates are seen as having determined his thoughts and actions. There is some indication here that McLuhan understands communication to be not necessarily an interpersonal exchange. Saarinen [1969] in a wide ranging article titled *Perception of Environment* documents a number of studies that deal explicitly and implicitly with the symbolic meaning of environmental stimuli. Seating arrangements for example tend to structure inter-personal aspects of environment as Sommer [1969] has shown. Bunting [1967] and Rockman [1967] focussed on the Toronto City Hall as a progressive urban symbol and concluded that negative and positive reactions were greatly influenced by the individual value systems. It is possible then to think in terms of not only a non-verbal *interpersonal* communication but also a *non-social* communication. The landscape then is like a book, it is legible [Lynch, 1960], and symbolic, and imparts meaning in accord with our past experiences.

The idea that the environment is a teacher and repository of culture is presented by White [1949] in *The Science of Culture*, although he does not direct attention towards the role of the physical environment. Lewis [1961] in *The Culture of Poverty* shows that slum inhabitants acquire early in life a culture from which they find it difficult to escape; their surroundings in effect destroy much of their potential freedom. Firey [1945], in an

article entitled *Sentiment and Symbolism as Ecological Variables*, is more explicit regarding the role of the physical environment. Firstly, he ascribes to space "not only an impeditive quality but also an additional property, viz., that of being at times a symbol for certain cultural values that have become associated with a certain spatial area." Secondly, he recognises "that locational activities are not only economizing agents but may also bear sentiments which can significantly influence the locational process." Wagner and Mikesell [1962, p.3] are also explicit when they write:

> It is impossible to partition off word-language from the other mechanisms of communication always associated with it. Exclamations, gestures, facial expressions, and the like are also language; in another direction, so are pictures, emblems, and everything that is regularly recognised as 'meaning something'. Ultimately, objects and behaviour of all kinds enter into communication. Culture ascribes meaning to everything from deliberately articulated vocal sounds to beings, objects and places.

This statement suggests that the overall context is important in communication. Just as the meaning of words depends on their use, that is their context, as Wittgenstein demonstrated, so do the meaningful elements of the environment vary in their context. Used in this way "context" is similar to "frame of reference", or a "situation"--all have properties of extent and modality. They are normative in their implication providing criteria and standards. Culture

can be considered as the temporal context and location or place the spatial context.

Mannheim [1936, p.86] argued at length, in developing the idea of a sociology of knowledge, that the thinker is bound by frames of reference that are determined by his social location.

> All knowledge is oriented toward some object and is influenced by the nature of the object with which it is preoccupied. But the mode of the approach to the object is dependent upon the nature of the knower . . . since in order to be transmuted into knowledge, every perception is and must be ordered into categories. The extent, however, to which we can order and express our experience in such conceptual forms is, in turn, dependent upon the frames of reference which happen to be available at a given historical moment.

Barker and Barker [1961] studied the psychological ecology of old people in Midwest, Kansas, and Yoredale, Yorkshire and they compared the community behaviour settings. They found that certain types of behaviour occurred which resulted from the total complex of physical space and conditions, time period, and people who comprise them. Similarly, Dubos [1968] in *So Human an Animal* focussed attention on the extent to which we are shaped by surroundings and events.

The relationship of the internal frame of reference to the external frame of reference, that is to say the relationship of man to his environment, can be understood in terms of a dialectic. Culture as learned behaviour, as

the recorded past, can be seen as providing a thesis and the environment as place and the present, can be seen as providing an antithesis, and out of their interaction arises a synthesis--perhaps a judgment of decision. When the standards and norms of the internal and external referents are in harmony the situation is essentially stable, when they are out of phase the situation is unstable and change results. As the perceptual environment changes faster and faster, either within itself or by diffusion from outside itself, so is it harder and harder to adapt traditions to it. Such a situation has been chronicled by Sharp [1952] in *Steel Axes for Stone Age Australians*. The introduction of steel axes was followed by "an appallingly sudden and complete cultural disintegration and a demoralisation of the individual such as has seldom been recorded for areas other than Australia. Without the support of a system of ideas well devised to provide cultural stability in a stable environment but admittedly too rigid for the new realities pressing in from outside, native behaviour and native sentiments and values are simply dead." In this case then the internal frame of reference, rooted in social conditions of the past, no longer relates to the social conditions of the present. The so-called "Revolution of Rising Expectations" can be understood as arising when older internalised norms are no longer in harmony with the new norms pressing in from outside. Similarly a concern with environmental pollution

or urban living may grow despite the fact that conditions are ameliorated, for internal standards of judgment are continuously being raised by external influence. It has been stated by Thomas, Chess and Birch [1970, pp.107-108], who focussed on the individual child, that,

> The paramount conclusion from our studies is that the debate over the relative importance of nature and nurture only confuses the issue. What is important is the interaction between the two--between the child's own characteristics and his environment. If the two influences are harmonised, one can expect healthy development of the child; if they are dissonant, behavioral problems are almost sure to ensue.

Stability then may be related to the nature of the dialectic --the difference in degree between individual thesis and environmental antithesis. It does not seem inappropriate, while heeding the warning over the futility of the nature/ nurture debate, to observe with Barker [1968, p.3] that,

> When environments are relatively uniform and stable *people* are an obvious source of behaviour variance and the dominant scientific problem . . . . But today *environments* are more varied and unstable than heretofore, and their contribution to the variance of behaviour is enhanced.

In other words as a result of rapid environmental change culture is no longer the guide it used to be. The apparent measure of equilibrium or harmony between the physical and social environment that the French regional geographers such as Vidal de La Blache [1917] were concerned with,

pre-dated the industrial age as Wrigley [1965B] has observed. Today rapid environmental change is in a sense drawing man along with it. Marcuse [1962] referred to modern man as *one dimensional*, as being caught up in *the system* like a cog in a wheel. Ellul [1964] goes as far as to argue that what he calls *technique* has become autonomous and has begun to obliterate man's freedom of choice.

The environment of man then is of increasing importance as a source of communication, as the antithesis of the cultural thesis. The ascription of meanings guides action with varying degrees of normative force or "conventionality" as Wagner and Mikesell [1962, p.3] put it. However, as Dubos [1968, p.123] has pointed out "in order that information derived from the environment may become *formative* instead of being merely *informative*, the body and the mind must respond creatively to its impact." There must in other words be a purposeful interaction. The meaning of environmental symbols and the context in which they are embedded depends on our over-all sensitivity to the environment which is in part culturally determined. This immediate environment which is relevant and significant to man makes up what Kirk [1951] called the behavioural environment.

One of the hypotheses generated by the argument so far is that internalised norms are not so deeply embedded and not so imperative as might be thought. Instead our

values and attitudes may well be surprisingly fluid and adjustable to different environmental situations. Goffman [1959] has argued along these lines in *The Presentation of Self in Everyday Life*. His thesis is that the individual plays different roles in different situations and that these roles are determined by the situations themselves. The question is to what extent do we respond to the normative environment? To what extent was the My Lai massacre [cf. Hersh (1970), *My Lai 4*] a reflection of different normative environments? An experimental study at Yale University conducted by Dr. Stanley Milgram [1963] is suggestive:

> Dr. Milgram recruited 40 male volunteers who believed they were to take part in an experimental study of memory and learning at Yale University. The 40 men were between the ages of 20 and 50 and represented a wide range of occupations. Typical subjects were postal clerks, high school teachers, salesmen, engineers and laborers. One subject had not finished elementary school, but some others had doctorate and other professional degrees.
>
> The role of experimenter was played by a 31-year-old high school teacher of biology. His manner was impassive but he maintained a somewhat stern appearance during the experiment. The experimenter was aided by a mild-mannered and likable man, who acted as a 'victim'. The experimenter interviewed each volunteer and, with him, the 'victim' masquerading as another volunteer. He told the two of them that the intention was to investigate the effects of punishment on learning, and in particular the differential effects of varying degrees of punishment and various types of teacher. The drawing of lots was rigged so that the volunteer was always the teacher and the 'victim' was always the learner. The victim was strapped into an 'electric chair' apparatus and electrode paste and an electrode were applied. The teacher-volunteer was then taken into an adjacent room and placed before a

complex instrument labeled 'Shock Generator'. The teacher-volunteer was given a 45-volt shock to demonstrate the apparent authenticity of the machine.

Pulling the Switch

A row of 30 switches on the 'shock generator' were labeled from 15 to 450 volts by 15-volt steps. In addition, groups of switches were labeled from 'slight shock' to 'danger: severe shock'. Following instructions and in the context of a mock learning experiment, the teacher-volunteer was led to believe that he was administering increasingly more severe punishment to the learner-victim, who made prearranged responses. The learner-victim gave incorrect answers to three out of every four questions and received shocks as punishment for his errors. When the punitive shock reached the 300-volt level, the learner-victim--as had been prearranged--kicked on the wall of the room in which he was bound to the electric chair. At this point teacher-volunteers turned to the experimenter for guidance. The teacher-volunteer was advised to continue after a 5-10 second pause. After the 315-volt shock, the pounding was heard again. Silence followed. At this point in the experiment the teacher-volunteers began to react in various ways. But they were verbally encouraged, and even ordered in a firm manner, to proceed right up to the maximum level of voltage.

Test Results

. . . Dr. Milgram states that contrary to all expectations 26 of the 40 subjects completed the series, finally administering 450 volts to the now silent 'victim'. Only 5 refused to carry on after the victim's first protest when 300-volts were apparently administered. Many continued, even though they experienced considerable emotional disturbance, as clearly shown by their spoken comments, profuse sweating, tremor, stuttering and bizarre nervous laughter and smiling. Three subjects had uncontrollable seizures. The teacher-volunteers who continued the shock frequently voiced their concern for the learner-victim, but the majority overcame their humane reactions and continued as ordered right up to the maximum punishment.

One observer related: 'I observed a mature and initially poised businessman enter the laboratory smiling and confident. Within 20 minutes he was reduced to a twitching, stuttering wreck, who was rapidly approaching a point of nervous collapse. He constantly pulled on his earlobe and twisted his hands. At one point he pushed his fist into his forehead and muttered: 'Oh God, let's stop it.' And yet he continued to respond to every word of the experimenter, and obeyed to the end.'

It can of course be argued that the disclosed values were latent, but it may also be that it is not only the values of individual people that can be criticised but also the normative environment in which their resultant actions take place.

The research that follows was designed as a straightforward first step to test the usefulness of this idea, and, perhaps more importantly, it was intended to be an experience which in its turn might generate a more sophisticated future approach.

CHAPTER II

RESEARCH DESIGN

THE RELEVANCE OF THE WORK OF PARDUCCI [1968]

The research design used in this work is specifically concerned with the effect of milieu on judgment. It draws its inspiration from and is based on an article by Parducci [1968], entitled *The Relativism of Absolute Judgments*. Parducci's relevant argument is that not only do judgments such as "fair" and "unfair", "good" and "bad", "large" and "small", reflect a relativism that belies their absolute grammatical form but also that this is more pervasive that is commonly believed. Students in one test were asked to rate the moral value of different acts of behaviour in terms of their "own personal set of values". Half of the students were given a list made up mainly of twelve relatively mild acts of wrong-doing; the other half got a list of twelve actions thought more likely to evoke moral indignation. In addition to this each list contained six items that were common to both. These six actions were judged more leniently in the context of the list of more serious and unpleasant items. The results demonstrated that despite the instruction given to the students to use their own set of values their

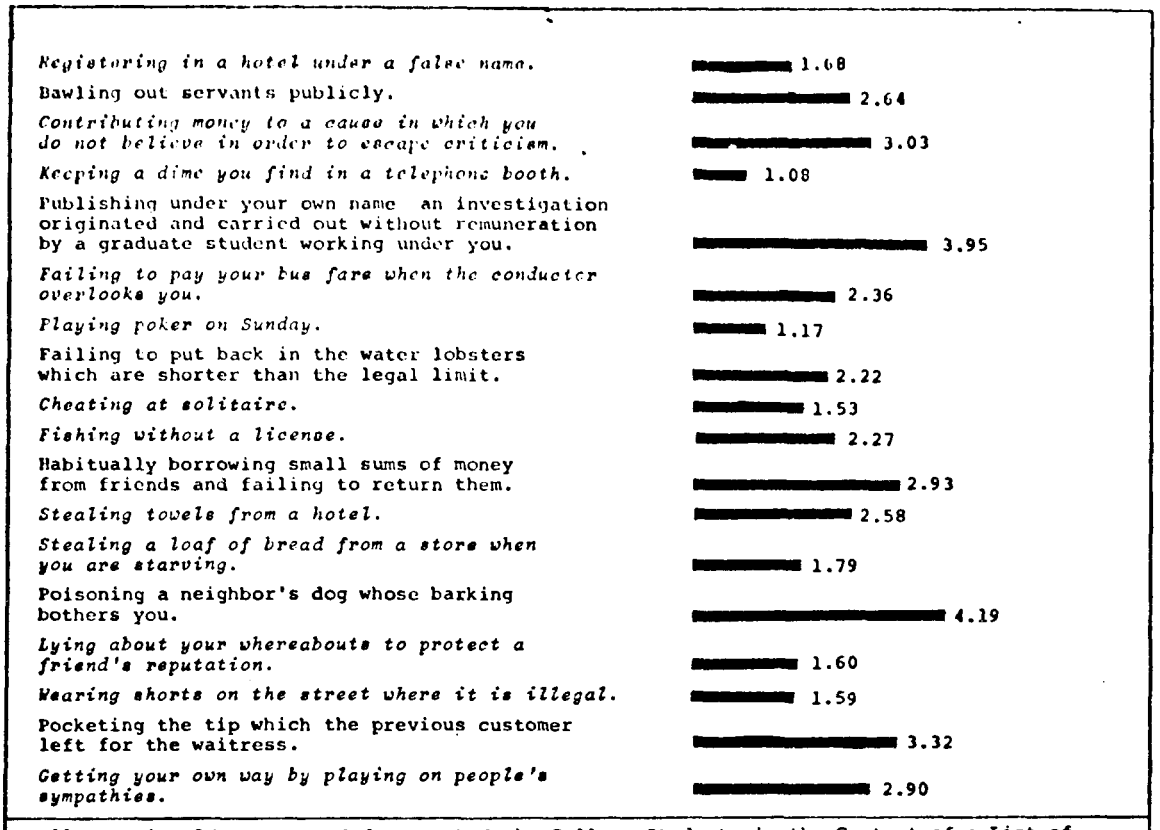


Illustration 2(a) Mean Judgments Made by College Students in the Context of a List of "Mild" Actions [Parducci, 1968]

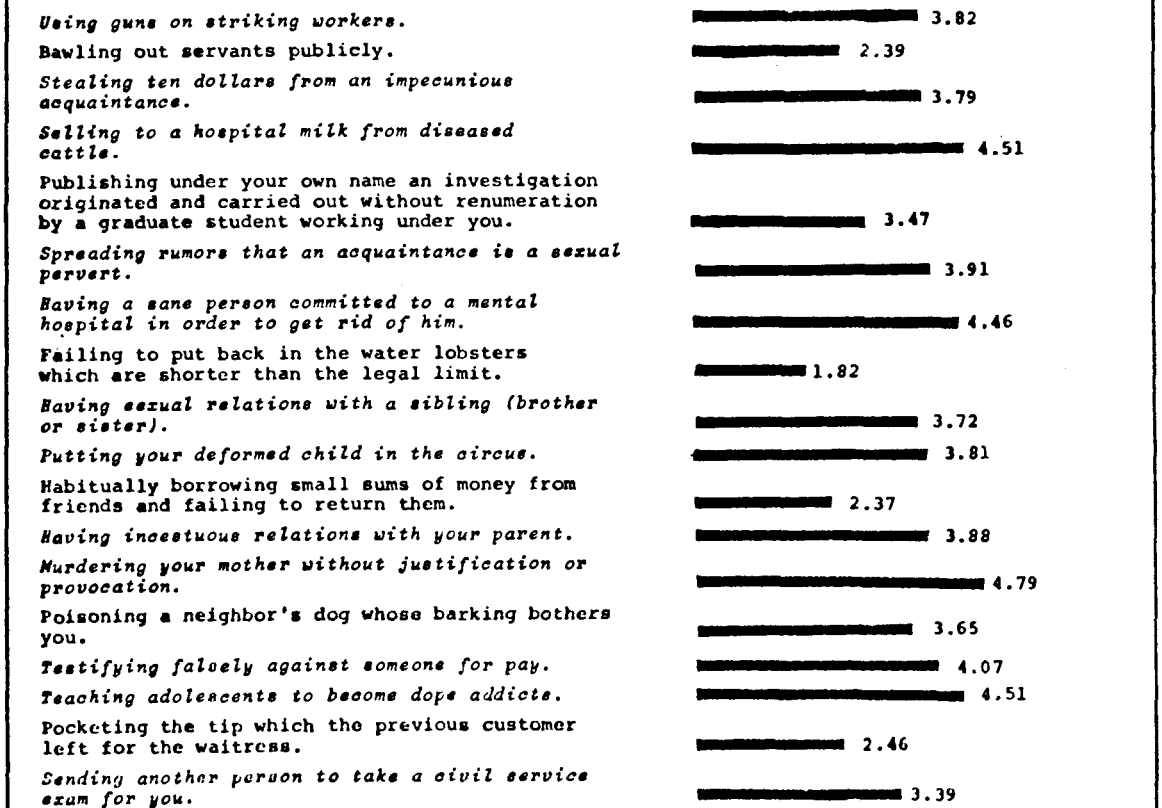


Illustration 2(b) Mean Judgments Made by College Students in the Context of a List of More Serious Actions [Parducci, 1968]

judgments were closely related to the verbal context of the set of questions themselves, as shown in Illustration 2(a), (b). Parducci points out, for example, that "Poisoning a neighbor's barking dog" got a considerably harsher rating (a mean score of 4.19) in the mild contrast than it did in the nastier one (where its mean score was 3.65).

In other tests Parducci outlines what he calls a range-frequency theory in which judgments are made on the basis of the range of a set of values and the frequency of their occurrence. The tactics used in making the judgments appeared to represent a compromise between range and frequency, that is to say results tended to be scaled halfway between the midpoint and the median of the series of events. It would appear then that the external context has a central tendency, similar to that of the modality of the internal cultural pattern. Nevertheless, as Parducci's work indicates there is no reason to believe that there is a universal balance for judgments. The particular imbalance that is found apparently depends on the context for judgment.

Parducci's observations lead one to hypothesise that the spatially differentiated milieu would itself be a significant context affecting judgments. While it would be extremely difficult to specifically identify the relevant elements embedded in the milieu and to quantify their range

and frequency it is possible to differentiate environments in a general, descriptive way, and to test the responses to identical lists of statements in each setting.

The internal referent system formed as a result of life experience, of total environmental interaction through time, serves as one determinant of behaviour. The question at issue here is, what is the significance of the external referents of the milieu? Is it the *personal integration* with the setting, the uniqueness of the individual in time and place, which is always the more basic fact? If culture is environmentally learned clearly cultural change is going to be environmentally induced, but to what extent does the immediate milieu, the immediate context, overrule the cultural pattern? It seems reasonable to suggest that the immediate context will play a greater role where the tenacity of the cultural pattern is less, and this will in part be a function of people's age. In addition rapid environmental change, either through space or time, could lead to disharmony between the internal cultural criteria and the milieu, and in this way serve to undermine the cultural determinants of behaviour. This is a time of rapid change both culturally and environmentally and it may be that culture is not the guide, is not the constraining force, it was in the past.

Just as there are certain elements of the internal referent system which are held in common so there are certain

elements of the external referent system which are shared, and there seems no reason to doubt that responses can be categorised on the basis of setting as well as culture.

TESTING PROCEDURE BASED ON A MAJOR MODIFICATION OF PARDUCCI'S RESEARCH

The research design was based on the "test" carried out by Parducci as outlined above. The principal modification was the substitution of differing locational contexts for the verbal contexts used by Parducci. Two groups of students systematically sampled from college lists were each sent to a different location where they were asked to make judgments on the six actions common to both of Parducci's lists in terms of their own personal values. The test form used in the investigation is shown in Illustration 3. It is noteworthy that people are much clearer about what they are *against* than what they are for [Sherif, 1970, p. 152] and therefore the type of statement used on the "test" form is particularly appropriate.

You are asked to rate the moral value of the different acts of behaviour listed below in terms of your OWN PERSONAL SET OF VALUES.

Assign each act to one of these five categories:

1. not particularly bad or wrong
2. undesirable, a good person would not do this
3. wrong, highly questionable
4. seriously wrong
5. extremely evil

Please Circle the Appropriate Number

Bawling out servants publicly.	1	2	3	4	5
Publishing under your own name an investigation originated and carried out without renumeration by a graduate student working under you.	1	2	3	4	5
Failing to put back in the water lobsters which are shorter than the legal limit.	1	2	3	4	5
Habitually borrowing small sums of money from friends and failing to return them.	1	2	3	4	5
Poisoning a neighbor's dog whose barking bothers you.	1	2	3	4	5
Pocketing the tip which the previous customer left for the waitress.	1	2	3	4	5

Illustration 3 Test Form Used in the Investigation

The hypothesis is: *that moral judgments will vary with a milieu which is differentiated over space.* That is to say that judgments will vary with place, with geographic location, with spatial as well as temporal context. It is implicit in this thesis that such variations in moral judgment will relate to milieu. However, it is not the aim of this research to establish explicitly such relationships,

but instead only to suggest them.

The central problem was how to hold the organism statistically constant while varying the background. To apply the test to a single group of students successively at two locations necessarily meant disentangling the effect of the first test on the second, for otherwise a systematic significant difference could clearly have arisen merely as a result of the duplication. For example the second cigarette tastes milder than the first. An alternative procedure entailed dividing the participants into two "similar" groups so that one could attribute significant differences in response to the differing locational contexts. Ideally this meant a random assignment of students to the two groups, but the administrative problems and the inconvenience that would have resulted for the large number of students involved made this impractical. As an alternative seven college class lists of Vancouver City College, which were already arranged in alphabetical order, were systematically sampled so that even numbers were assigned to one group and odd numbers to the other. This procedure for assigning students to groups was considered to be adequate in eliminating any *systematic* differences between the two groups resulting from their previous experiences [Gregory, 1968, p.123]. Any statistically significant differences in the aggregate judgments of the two groups

could then be attributed to the different environmental contexts in which the judgments took place.

Seven classes took part with an initial class list total of 230 students. One hundred and seventy-seven students actually participated in the investigation and two of the resultant "test" forms were rejected for incompletness or duplication of judgment. Of the remaining 175 participants 86 were tested at the south east corner of the intersection at Cordova and Carrall, which is part of the Vancouver Skid Row area, and 89 were tested at the Crescent, Shaughnessy, which is a small treed green in an area of old, large and prestigious, residential homes. The map and photographs below show the location and appearance of the two areas.

The participants spent approximately 15 to 20 minutes at their respective locations. In order to assure that they were fully aware of their surroundings they were asked to write a short description of their location before proceeding with the test.

The two locations were chosen so as to show considerable contrast in life styles, architecture, and "atmosphere" within easy reach of the downtown college. It is sufficient here to assert that the Skid Row area and Shaughnessy are quite distinct environments. An "objective" description by the researcher, in order to gauge *the personality of place*,

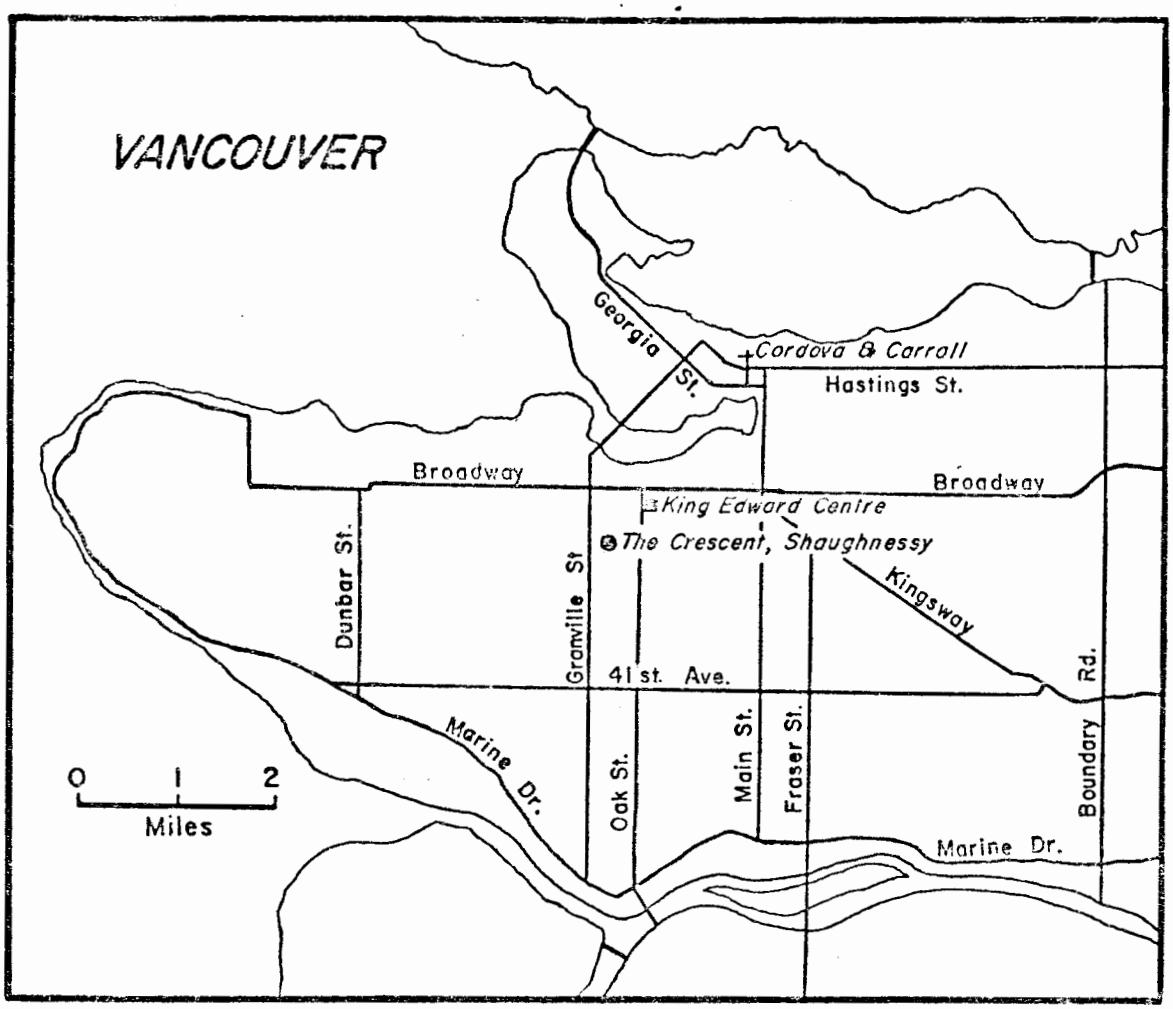


Illustration 4 Locations of the Crescent, Shaughnessy and the Intersection of Cordova and Carrall in Vancouver where the tests were conducted

or a statistical datum [Mayhew, 1967] only serves to draw attention away from the descriptions of the participants themselves. Further an attempt to suggest a positivistic interpretation would be quite contrary to the relativistic position maintained throughout. The objective is to differentiate places in a general descriptive way without, at this stage, attempting to delineate them with exactitude.

Illustration 5 The Crescent, Shaughnessy

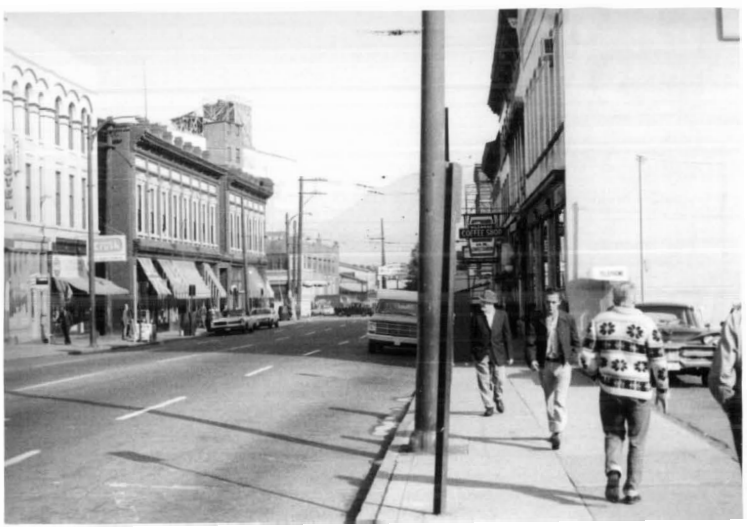


Illustration 6 Cordova and Carrall

Indeed, it is beyond the scope of this work to relate such delineations to the results obtained.

The comments and descriptions of the students themselves are indicative of the major differences. Two descriptions of "The Crescent" Shaughnessy which are representative are as follows:

> The focal point of the crescent is a central park, landscaped with numerous trees that serve as a protection of privacy and have an aesthetic value. This park is surrounded by elegant houses of very varied architecture. Each house is surrounded by gardens that appear well kept and landscaped. The privacy of the inhabitants is ensured by hedges many of which are privet. There is a closeness to nature--the spatial arrangement allows much of the noise of the city . . . to be blocked and the birds can be heard. It is peaceful, the air is fresh--it can almost be called a world apart. In our day it would be considered an affluent area, in former days it was an elegant one. The roads leaving the crescent all slope downwards--the highest point is the park centre . . . .
>
> . . .
>
> On first glance around I see a well kept peacefully laid out park. A picturesque setting of park benches spaciously laid out in a circle. Soft green trees with full foliage and thick, soft green grass. The people in the park, beside the students are well dressed, affluent looking, retired gentlemen. One chap has distinguished grey hair, a white mustache and is dapperly sporting a walking stick. Bordering the park are stately traditional houses literally shouting of affluence and sophistication--all protected by uniform, well kept hedges that seem to personify the well dressed [users] . . . of the park . . . . Indeed this is a park that not [only] accents the surrounding houses but seems to blend together with them as if to be part of a large pastoral scene set apart from the adjacent areas of the city and yet in juxtaposition to it.

The written descriptions paint a picture of peace and quiet, and little activity. Occasionally a bird is heard singing or a dog barks, but there are few adults around and fewer children. The setting is picturesque, and often described as English or Victorian. There is a feeling of permanence and the whole "exudes an aura of respectability," so that as one student puts it, "each one of my classmates spoke in hushed tones." The expensive cars and large old houses, signs of obvious affluence, were generally noted and the status of the area was recognisably high.

The contrast between these descriptions and those representative of the Skid Row location was marked as the following comments show:

> Relatively large, traffic-light controlled intersection. Two parking lots occupied two of the corners. Another corner was occupied by a Chinese grocery and the other by the only stone building in the area. Most stores were dirty, dingy and run-down looking--a few appeared vacant. Many of them were brick buildings with stone decorations over the tops of the windows. Fire escapes were hung from the buildings everywhere, and many of them had Army and Navy written on them. The buildings consisted mainly of hotels, small grocery stores, junk shops, and a couple of boutiques further down the road. The people I would consider also part of the location. On the whole they were poorly dressed and groomed. Many men hung around listlessly in groups of four and five, saying very little to each other. I feel people viewed us with either a rather detached interest, or slight hostility. I almost felt I was intruding on private property.

It was interesting to find that in both Shaughnessy and the Skid Row area some students felt themselves to be intruders, suggesting that they were unable to fully integrate with the setting during such a short exposure. The following description again conveys this feeling:

> Skid Row is a heavily congested area with an abundant supply of very rundown, dingy looking hotels and restaurants. There is sort of a look of dejection, and loss of hope on the people's faces.
>
> Both the men and women are poorly dressed. The women seem to wear a lot of heavy makeup applied carelessly. Some of the men and women seem to be talking aimlessly to themselves.
>
> I feel as if I am an intruder, but it wasn't the people who give me this impression because they seem to go out of their way to say something to you even if it is only just 'it's raining out to-day'.
>
> In sharp contrast to the run-down, economically deprived, area of Skid Row is its fringe counterpart Gas Town, formerly known as Granville village, with its renovated antique shops and galleries. There seems to be little crossing over this imaginary boundary between the two strata of people.

An evening group encountered a wider cross-section of people than the above descriptions suggest, "including alcoholic 'skid row' types, particularly older men; quite a few hippies, and ordinary 'respectable' type shoppers patronising the fashionable shops in restored buildings."

The different atmosphere of Gastown a block and more away was commented on several times and one student observed that Gastown was making the chosen location more socially accepted.

Many described the area as colourless, faded and seedy looking, and they felt it to be noisy, and commented on the lack of vegetation. There was a nearby liquor store and drunks, and the "abnormal number of police patrolling the area" was a repeated observation. Pigeons, billboards, overhead wires and soot were part of the scene, and to some the air "didn't smell fresh." Frequent references were made to the personal degradation of the people and their despondency, and many felt the location to be unattractive and depressing.

In short then, as the descriptions indicate, Shaughnessy would be ranked high on a scale of social desirability like Walter Firey's [1945] Beacon Hill in Boston, and Skid Row would be ranked low. Both places have their own symbolic content as Firey emphasised and this symbolic content is quite distinctive.

The six statements chosen for the test in these two quite different locations were those common to Parducci's two lists [p. 60]. Since the objective of the research was to gauge the applicability of his results to a wider context than the two lists this was clearly appropriate. It also had the additional advantage of allowing a direct comparison to be made with his results. The judgments made were "absolute," that is to say they were estimates of a single stimulus rather than a comparison between two stimuli. This

obviates the need for a standard stimulus which would have served as an anchor for judgments and distorted the locational influence. There was no reason to think then that the selection of statements would mask a distinct response in different settings and amongst different life-styles, and therefore the choice of statements seemed to be justified.

AVOIDANCE OF SYSTEMATIC DIFFERENCES OTHER THAN THAT OF LOCATION

The testing was carried out in two periods--February/March and June/July. As far as possible one group went to Shaughnessy and one to Skid Row on the same day. Where, for administrative reasons, this was impractical care was taken to ensure that weather conditions on the separate days were alike.

The scheduled times for the seven classes involved were 9:30 a.m. (two classes in consecutive semesters),10:30 a.m., 11:30 a.m., 12:30 p.m., 3:30 p.m., and 8:30 p.m., and this provided a considerable diurnal time spread.

Less than ten students were transported to the different locations by the researcher, the rest found their own way to the two meeting-points. There was thus no apparent systematic difference in the transfer of students from the college.

Many of the students were, of course, acquainted with the locations although none actually lived in the immediate areas. It would have been particularly interesting to have carried out the testing procedure in areas with which they were unfamiliar but this was not practical with the large number of students involved.

Since most work on attitude change [Sherif and Hovland, 1961] emphasises the factor of social communication it is necessary to emphasise that the "test" forms were handed out on the site and then filled in independently, so that there was no opportunity to establish a group norm.

Clearly, however, Parducci's results show that the verbal context itself acts as a group norm thus reducing the sensitivity of the test to the influence of the *wider* context. The small number of statements judged was an attempt to minimize the effect demonstrated by Parducci while still allowing some variety in the data.

CHAPTER III

RESULTS AND ANALYSIS

RESULTS

The results of the tests are shown below and can be compared with the results obtained by Parducci [p. 60 above].

	Cordova and Carrall	"The Crescent" Shaughnessy
	Mean	Mean
Bawling out servants publicly.	2.63	2.76
Publishing under your own name an investigation originated and carried out without remuneration by a graduate student working under you.	2.53	2.55
Failing to put back in the water lobsters which are shorter than the legal limit.	2.75	2.65
Habitually borrowing small sums of money from friends and failing to return them.	3.33	3.26
Poisoning a neighbor's dog whose barking bothers you.	4.37	4.41
Pocketing the tip which the previous customer left for the waitress.	3.31	3.57

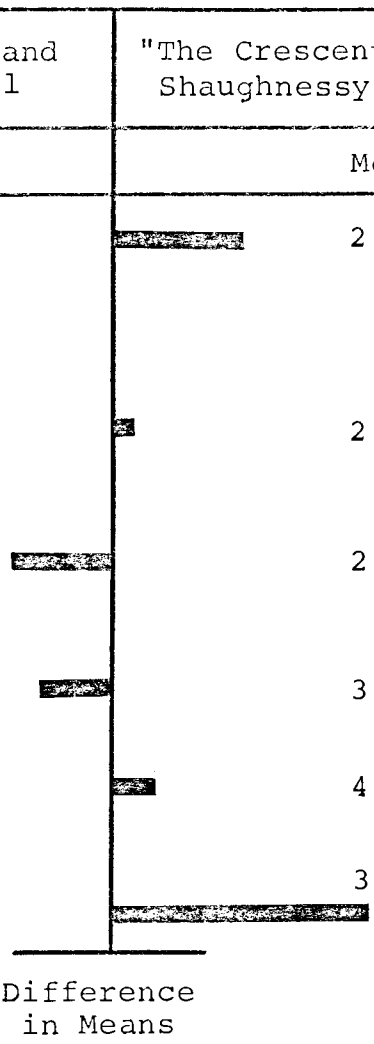


Illustration 7 Mean Judgments Made by College Students While at Cordova and Carrall and at the Crescent, Shaughnessy

In order to test whether there is any statistically significant difference in the mean reactions of the two groups of students to the six statements a Student's t Test was employed. The t-test is appropriate where the scales of measurement are restricted to a small number of values and where the data may not be normal [Snedecor and Cochran, 1967, p.132]. The index t represents the relationship between the difference between the means and the standard error of this difference, so that

$$t = \frac{|\bar{a} - \bar{b}|}{\sqrt{\frac{\hat{\sigma}a^2}{n_a} + \frac{\hat{\sigma}a^2}{n_a}}}$$

No correction for continuity is necessary because of the large sample size.

For the six individual statements in the order on the test form [p.64] t is computed as,

$$t_1 = \frac{0.13}{\sqrt{\frac{1.0995}{89} + \frac{0.7985}{86}}} = 2.789$$

$$t_2 = \frac{0.02}{\sqrt{\frac{0.9565}{89} + \frac{1.1919}{86}}} = 0.057$$

$$t_3 = \frac{0.10}{\sqrt{\frac{1.3699}{89} + \frac{1.4298}{86}}} = 1.768$$

$$t_4 = \frac{0.07}{\sqrt{\frac{1.0625}{89} + \frac{1.0396}{86}}} = 1.429$$

$$t_5 = \frac{0.04}{\sqrt{\frac{1.0086}{89} + \frac{0.8794}{86}}} = 0.8626$$

$$t_6 = \frac{0.26}{\sqrt{\frac{1.1271}{89} + \frac{1.4117}{86}}} = 4.8202$$

Consultation of the "t-table" [Snedecor and Cochran, 1967, p.549] shows that with 174 degrees of freedom (na+nb-1) the value of t shows a significance level of more than 95 per cent, which is the lowest acceptable level, for two of the six statements as follows:

Statement	Significance Level
Bawling out servants publicly.	99%
Pocketing the tip which the previous customer left for the waitress.	99.9%

Therefore statistically significant and highly significant differences exist between the means of the responses to these statements and this supports the hypothesis that moral judgments will vary with a milieu differentiated over space.

ANALYSIS OF RESULTS

There are some interesting differences between Parducci's tests and the ones carried out in Vancouver. Firstly, Parducci's results show only one statement rated appreciably more severe than the mean responses at both locations in Vancouver. Generally the moral value of each statement in his test is rated much more leniently, although the means of the statements are *ranked* similarly in both investigations. It is true that the six statements used in the Vancouver test are by themselves a milder list of actions than either of Parducci's complete lists, but Parducci's work was designed to show the effect of the verbal context *surrounding* the six embedded statements common to both lists and not the effect of the overall lists themselves. If his conclusions regarding context are accepted the explanation must be that the context in which the six statements were perceived in Vancouver was "milder" than the verbal contexts of his two lists. This suggests that the "real life" locations in Vancouver formed milder contexts than his verbal ones. An alternative and less satisfactory explanation is that the Vancouver students are more intolerant of relatively minor moral acts of behaviour. The similarity in ranking indicates at least some correspondence in the rating of moral values in all groups.

A second difference arises in the degree of consistency of the apparent contextual effects. Parducci's research leads one to expect a *consistent* difference in the responses to the statements that correlates with the context. In every case the six actions were judged more leniently in the list thought likely to evoke moral indignation and more severely in the context of the "mild" list. The responses in the Shaughnessy and Skid Row locations, however, do *not* vary consistently with the locational context. An assumption that in the "milder" context of Shaughnessy the acts of behaviour would be judged more severely than in the context of the Skid Row area is only partially borne out. This is very important, for Parducci's results strongly suggest a *one way environmental (contextual) influence*. The whole thrust of the methodological argument here is that environmental or contextual influence can *only* be understood in terms of *interaction* between organism and environment. The results obtained in Vancouver fit well with such a methodological position. The inconsistency in means of the responses at the two locations is in sharp contrast with the marked systematic bias in response, as a result of context, demonstrated by Parducci.

One way this could be explained, although such explanation is necessarily somewhat speculative at this stage and serves no more than to suggest future avenues of

research, is to examine both the relevance of the statements to the context and the degree of ego-involvement in each one. It can be hypothesised that statements which are irrelevant to the context would not be affected by it to the same degree as those which are clearly more relevant. The second statement on the list "Publishing under your own name an investigation originated and carried out without remuneration by a graduate student working under you" is a statement, which, while it appears to be relevant to the relationship between the researcher and the students, is not particularly relevant to the specific locational contexts. The results indeed indicate a remarkable similarity in response to this statement at both locations. On the other hand the statement, "Pocketing the tip which the previous customer left for the waitress" appears much more relevant. For the "rich" to pocket the tip might be considered especially mean but for the very poor and the ill it is at least understandable, so that a more severe judgment would be expected in Shaughnessy than in Skid Row. The difference in means of 0.26 is in fact the largest that was obtained and is statistically the most significant. Similarly the statement "Bawling out servants publicly" might be more severely criticised in Shaughnessy, and this statement does show the second largest difference in means of 0.13.

Ego-involvement is also likely to affect the response made [Sherif, 1936, p.xx]. The act of "Poisoning a neighbour's dog whose barking bothers you" specifically relates to the individual, and that of "Habitually borrowing small sums of money from friends and failing to return them" implicitly relates to the individual. Such a degree of ego-involvement is likely to override contextual effect and both statements in fact show a difference of only 0.04 and 0.07 in the means of the responses at each location. As Sherif [1936, p.xx] writes, "the more committed (ego-involved) the person is, the more consistent a pattern he exhibits in his acceptances and rejections on an issue." In other words the less external factors will change his attitude.

It is somewhat more difficult to account for the fact that "Failing to put back in the water lobsters which are shorter than the legal limit" is rated more serious in the Skid Row area than in Shaughnessy and indeed the difference is not statistically significant, but it is possible that the reference in the statement to *legal*, coupled with the large number of police in evidence, may have affected the response--although this is really quite speculative.

It is, of course, always possible to rationalise statements in this way, and indeed supporting evidence may be garnered for almost any thesis. Although little, if

any, weight should be put on these explanations they do serve to illustrate the point made earlier regarding the very important notion of relevance [Bevan, 1968; Sherif and Hovland, 1961].

CONGRUENT THOUGHT IN SOCIAL PSYCHOLOGY

Many of the standard principles regarding judgments have been developed by Sherif in *The Psychology of Social Norms* [1936] and *Social Judgment* [Sherif and Hovland, 1961]. The general principle he advanced in his earlier experiments, where the situation was somewhat fluid or ambiguous, was that

> The psychological basis of the established social norms, such as stereotypes, fashions, conventions, customs, and values, is the formation of common frames of reference as a product of the contact of individuals. Once such frames of reference are established and incorporated in the individual, they enter as important factors to determine or modify his reactions to the situations he will face later--social, and even non-social, at times, especially, if the stimulus field is not well structured. [Sherif, 1936, p.106]

This is essentially the same thing as the concept of normative culture, which has been emphasised in this work. Perception is in terms of a range of norms brought from the group situation. A particularly relevant observation regarding these internalised norms, or psychological reference scale, is that the scale itself

> . . . is readily susceptible to adjustments with the addition of new stimuli to the series or with shifts in the total range of the objective stimulus series. This may be one reason why psychological scales related to technological developments in various societies change somewhat more readily than scales related to socio-political and religious values. [Sherif and Hovland, 1961, p.12]

Clearly then individual scales of moral judgments, which are psycho-social in origin, will be gauged against the sort of social realities presented by the Shaughnessy and Skid Row locations.

The internal and external reference scales together form for Sherif the frame of reference of an observed behaviour at a given time. The model below is a modification of Sherif's position in this regard.

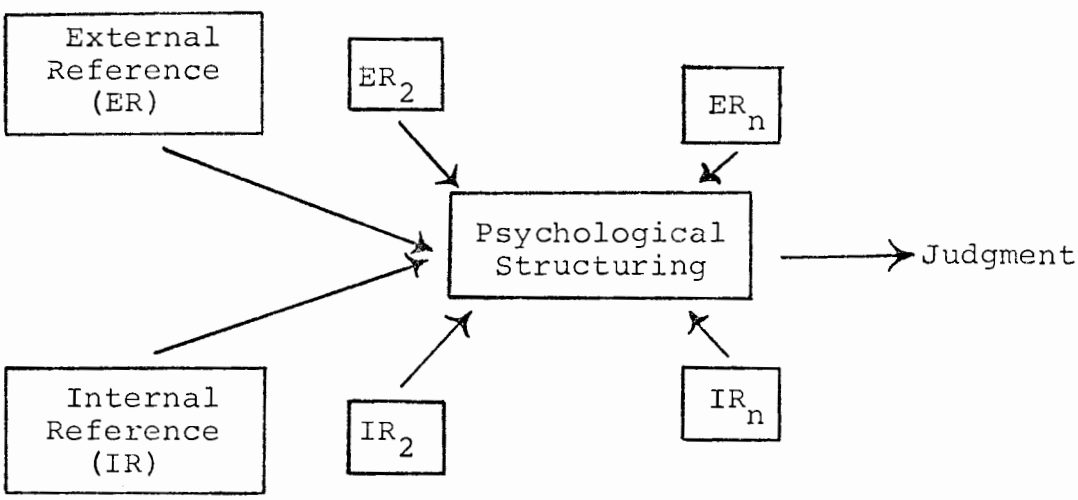


Illustration 8 Diagrammatic Representation of the Interrelated Internal and External Frames of Reference Used in the Making of a Judgment [After Sherif, 1936]

This static model can be conceived dynamically as indicated below

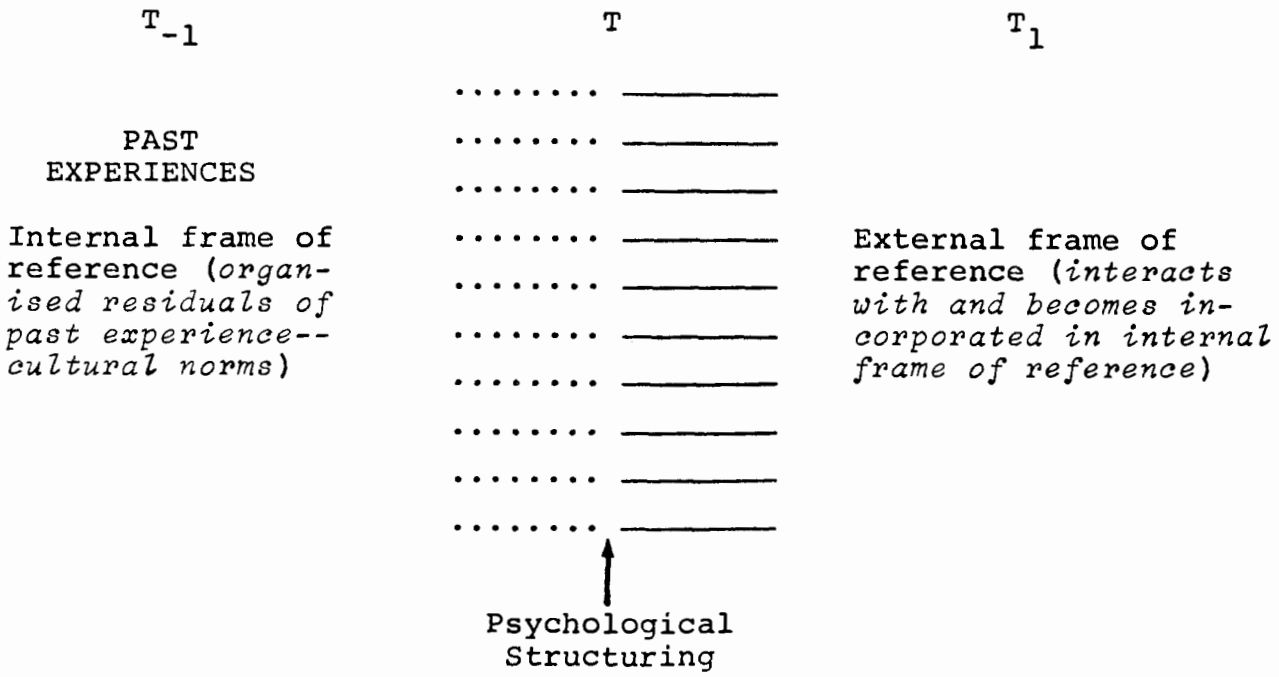


Illustration 9 Temporal Relationship of Internal and External Frames of Reference

While the usefulness of this concept of frame of reference is readily apparent, the problem, referred to by Kates [1966, p.23], of defining "the stimulus properties of the symbolic environments that men create" still remains. As the geographer Robson [1969, p.216] concluded in his research "location can be considered to be exerting certain influences in the determination of the attitudes which are held . . . ." but while "the mass of evidence on the effects of the external environment suggests that it does indeed play a role in the development of a wide variety of social

phenomena . . . the difficulty lies in teasing-out the complex relations between the variables involved."

Regarding this difficulty Sherif [1970, p.145] comments that "in research on attitude change in response to communication, the inconclusive and contradictory results have long been noted." He suggests that this state of affairs is a problem of substance rather than technique and concludes that "The apparently contradictory findings on attitude-communication discrepancy fall into a meaningful pattern when the social situation is specified."

Sherif sees the core problem in these inconclusive research findings as the *definition of the stimulus* in social psychology, or in other words the definition of a social situation. He writes,

> Any social situation is composed of sets of factors that far exceed the variables deliberately introduced into the situation or deliberately accounted for by a researcher. These sets of factors include the relationships among the persons present. They include the properties of the task, problem, or activity, for example, its familiarity, difficulty, structuredness, etc. *They include the physical and social location of interaction*, with all its potentially limiting and facilitating features, including social definitions of the use to which they are to be put. Furthermore, all these sets of factors in a social situation are interrelated. The individual participant's appraisal of others, his judgment of the task or problem, and the way he sizes up the location and its facilities (including the persons in charge of them) significantly affect his behavior in the situation. [Sherif, 1970, p.145, italics mine]

In other words it would seem that unsought inputs may change attitudes more than directed communication. Verbal assertions

are patently manipulative but environmental cues are to a greater extent ungovernable and may therefore convey more reliable information.

The social situation then is seen by Sherif as creating a psychological *atmosphere* which is different from the sum of its discrete parts. The connection with Gestalt psychology is readily apparent. Events must be studied at a meaningful and patterned level. Similarly Bevan [1968, p.701] believes that the problem of frames of reference and the associated problem of relevance holds the key to "an understanding of behavior in an impressive array of settings and for a wide range of subjects."

The importance of the notion of relevance has already been emphasised, although the term is perhaps somewhat nebulous. Bevan [1968, p.710] in *The Contextual Basis of Behaviour* argues "that for a stimulus to influence judgment through the mechanism of pooling it must be assumed by the judge to share membership along with other stimuli in a class relevant to the judgmental task," but as he points out this cannot be identified on purely *a priori* grounds and instead of looking at the purely physical nature of stimuli and responses and their correlation we must look at their function within a perceptual system.

One of the few theories of contextual behaviour that have been presented (despite the wide acceptance of

contextual effects) adopts this functional emphasis. This is the adaption-level theory [Helson, 1947, 1948, 1959, 1964], which assumes that stimuli fall into two broad classes: focal and contextual. The latter can be further subdivided into "the ambient background and residuals of past events." Bevan explains this approach in terms of a computer model. In his words,

> The organism is conceived of as integrating stimulus magnitudes, or the analogs of magnitude, over successive periods of time to produce a reference value, the adaption-level, which determines the effective magnitude of focal stimuli. The adaption level is thus a floating null point, capable of being changed with changing patterns of stimulation. [p.702]

There can of course be multiple adaption levels (perceptual norms). Bevan goes on to outline experiments which demonstrate three important principles implied in the concept of adaption level which he states as follows:

> First, behavior reflects the influence of functionally effective rather than direct physical magnitudes of stimulation. Second, functionally effective magnitudes are directly related to a discrepancy between a focal stimulus process and an intraorganismic standard . . . . Third, the subjective norm is not a static value, but changes as the pattern of input changes; that is, it is a product of pooling, the process of integration . . . . [p.703]

The attraction of the theory is its emphasis on the behavioural effectiveness of physical stimuli rather than the stimuli themselves as in the stimulus-response approach.

Nevertheless neither Bevan nor Sherif seem to give due regard to the total external situation and its significance. The Vancouver research, while lending some small support to the arguments of Sherif and Bevan, goes considerably further in emphasising not just the "social situation," but the symbolism, the meaning, of the *total* situation. It has been argued that it is this wider interaction between the internal and external frames of reference which should be taken into account. Cues from the environment may be more numerous and directive than we have hitherto thought. Our sensitivity to meaningful environmental stimuli may be much greater than the focus of current research indicates.

If we assume that this degree of emphasis on the total situation is valid and that it has a normative force, the question arises as to whether the individual is always assimilated to the norms of the setting or whether there may be at times a contrast effect reinforcing his own position. The research results indicate an assimilation, but Sherif and Hovland [1961, p.46] point out that judgment shifts are reported both *toward* and *away* from an anchor or standard value. It is beyond the scope of this work to go into the extensive research findings in detail, but generally the work cited finds that there is an assimilation of judgments to the anchor except where the anchor itself is remote, in which case there is evidence of a significant displacement

of judgments away from it. For example an individual will shift towards the opinion of another close to his own, but away from a remote position. There is no reason to believe that the experience of either Shaughnessy or Skid Row would be a "remote anchor" to most of the student participants, but the degree of assimilation or contrast effect in given situations would be worthy of further study.

SPECULATION ON THE MEANING OF THE RESEARCH AND ITS RELATIONSHIP TO THE METHODOLOGY

The methodological argument has emphasised the importance of the notion of context (referent systems) in human behaviour. It has been maintained that the methodological separation of man and his surroundings is unsatisfactory in the analysis of meaningful behaviour. Indeed one is almost led to say that a *person* does not exist without an external context. Let us imagine a man wrapped in an air cushion kept at body temperature, with his senses muffled, and immobile--for how long would we be able to say that he existed as a person? Yet the unilateral focus on man *per se* is ubiquitous. Laing [1968] offers his experience in psychiatry:

> I began to see that I was involved in the study of *situations* and not simply of individuals. It seemed (and this still seems to be the case) that the study of such situations was arrested . . . . In the first place the behaviour of such people was regarded as signs of a pathological process that was going on *in* them, and only secondarily of anything else.

The applicability of a focus on *external* context (or situation) in evaluating behaviour is widespread. We can, for example, expect multiple-choice examinations in geography to be answered not in the way the individual *per se* thinks but rather in the way that he thinks the examiner thinks. This does not teach dishonesty, as one might think, but instead demonstrates the normative affect of context, the *oughtness* of the situation; its *formative* rather than informative nature. This is more than a simple *trigger* action it is *creative per se*, a direct contradiction of an untypical statement by Barker [1963] when he writes,

> . . . it is generally agreed by students of perception and learning that the ecological environment [that is, the operational milieu] does not demand behavior, but that it is, rather, permissive, supportive, or resistive. It is true that a language is often used that implies at least a triggering function for the ecological environment: events in the environment are said to stimulate, to evoke, to instigate behavior . . . . However, the fine print of psychological theory always, so far as I have been able to determine, makes the intrapersonal sector of the [E-E] arc [that is, environment to organism to environment] the arbiter of what will be received as stimuli . . . .

This is close to sophistry. Man is *not* the complete arbiter of what will be received as stimuli--these exist independently

of his will. Nor as this research demonstrates is it correct to say that the operational milieu does not demand behaviour, if by that is meant that it has no normative force. Power is inextricably related to place. Examples are legion--indeed what situation does not demand behaviour? Man is analogous to a computer to the extent that he depends not only on the internal workings of his mind but also what stimuli are presented to him.

Let it be re-emphasised at this point that the research results indicate a *wider* ambient affect than just that of the social situation. Barker [1965, p.10] takes this position in a later work than that quoted above when he writes that "there was systematic evidence that situations *in total* influence behaviour; that more than people are involved in the mutual causal relations between the environment and behavior." All constituents of a situation can be considered symbolic in the sense that they stand for something other than themselves, for they all have a variable meaning depending on the experiental background of the individual. It is pertinent to ask how *can* things stand for themselves?--the notion of essence or absoluteness is untenable. The research suggests that a reading of these environmental constituents affects judgment. Thus the research "means" that behaviour can be affected by situation. A room with heavy,

velvet drapes, high ceilings, polished antique furniture and a heavy air is likely to mould behaviour differently than a room with plastic furniture, a record player, scattered rugs, psychedelic works of art and the smell of incense. The norms of one room are not those of the other, just as the norms of one teacher are not those of the other and students respond accordingly. This does not deny the methodological point made earlier that environmental inputs may vary greatly from individual to individual and from time to time--art itself is an expression of such variety of existing.

The research results are unquestionably tentative but the potential implications are large. To what extent are interviews, simulations and laboratory researches distorted by their very context? What effect do the structured situations of car and air travel have on us, with their similar experiences of gas stations and airports and so on? What effect does a variety of experience of unstructured situations have on transient youth? Is it catastrophic? Would the United Nations' decisions be different if made somewhere else than New York? Would politicians located in a slum area decide differently about welfare programmes? And would lawyers who spent 48 hours on Skid Row make different evaluations of petty crimes?

The research indicates that place may be an important variable but it also raises more questions than it answers.

Cultural geography is the geography of shared experience, and this experience interacts with the geography of the present--with existence--in the formation of decisions. The writer has already admitted a certain empathy for both the work of the environmentalists, who, despite excessive and unsophisticated claims, began on a pathway which has been abandoned too readily, and also for that of the classical regional geographers who looked at the unity of man and his setting. But it was Barrows [1923] in particular who seems to have anticipated many of the arguments presented in this work. He asserted that geography proper deals largely with the present, with what we ourselves see in the field, and that it was concerned to examine the responses of man to environmental features, considered individually and in combination. As he wrote [p.12], "It is not the human fact which is geography, any more than it is the environmental fact, but rather the relation which may exist between the two."

CHAPTER IV

CONCLUSION

Social scientists have long appeared to hold a prejudice that the non-social environment is of little consequence for behaviour. Even geographers, who have been especially concerned with the non-social environment, have succumbed to this prejudice, largely as a result of the inadequate work of the environmental determinists. However, we live in an era when the words "environment" and "ecology" have become household words. Today we, as individuals, live in a public crisis focussing on environmental problems brought about by the acts of men. The time is now appropriate to re-examine the notion of environmental influence, emphasising the interaction between man and his surroundings. Not the simple interaction of physical stimulus and response but the interaction between man and a meaningful and significant environment.

The "tests" carried out at Shaughnessy and Skid Row do little more than to point in a direction and to encourage one to search deeper. They indicate that judgments vary spatially, as well as temporally and from individual to individual. Perhaps their greatest merit is to disentangle the Gordian Knot referred to by Robson [1969] as to whether

"the individual living in an area comes to reflect the attitude and behaviour of that area, or whether he has moved to the area because its attitudinal and behavioural norms were close to his own." The data from which such attitudes can be inferred are judgmental reactions by individuals who are taken to a location rather than choose to go and live there.

The difference in means found in this research is not as dramatic as the difference found by Parducci--indeed it would have been somewhat disappointing to have found such a simplistic contextual relationship applied to the "real world". At the same time such a small difference in means between the responses at two locations resulting from a 15 minute exposure, or thereabouts, suggests that a longer exposure, where the individual could integrate more completely with the setting, would have had even greater impact.

The adoption of the identical six statements used by Parducci had merit in allowing direct comparisons to be made and in highlighting the problem of relevance. However, several questions seemed inappropriate or irrelevant and one can hypothesise that a more carefully chosen list would increase the sensitivity of the test.

The argument and research results point in many directions. It would be grossly simplistic to link the

notions of external and internal referent systems with philosophic realism and idealism, but it is nevertheless tantalising to do so. The mediation of the former, as put forward here, may then be linked with the mediation of the latter--existentialism. An *Existentialist Geography* to match Bunge's [1962] *Theoretical Geography* is an interesting prospect.

Man is unquestionably sensitive to the myriad symbolisms and cues of his total external situation, which varies both in time and space, but to what degree we have only begun to guess.

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