SCIENCE, KNOWLEDGE AND EXISTENCE:

A CRITIQUE OF THE EPISTEMOLOGICAL
BASIS OF HUMAN GEOGRAPHY IN EDUCATION

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ABSTRACT

The academic recognition of human geography as a
discipline of knowledge is determined by the
definitional rigours of scientific criteria. The
development of human geography has been largely
orchestrated by the philosophical underpinnings of
'normal' science. Logical positivism has prescribed the
epistemological and methodological dictums of its terms of
reference as well as for the meaning of rationality and
social reality. The scientific paradigm otherwise
validates and affirms the credibility of human geography
as a social science. Many of its presumptions have been
adopted from those employed in the physical and biological
sciences. Empiricism and nominalism are the fundamental
axioms for the investigation of socio-spatial phenomena by
the 'scientific method'.

Recent developments in geographic thought challenge this
view. The emergence of alternative themes in human
geography - namely those of structuralism and
reflexivity - have appealed either to a Marxist critique
of political economy or to phenomenology and
existentialism in an attempt to uncover the dynamics of
interaction between man and his spatial environment.
The pluralistic face of human geography has not only
raised a hermeneutic dilemma but also questions the
acceptability of 'normal' science and the parameters which
it seeks to impose.

The ethos of this study is grounded in the presupposition
that all the major philosophical positions which currently
influence geographical research and education must
initially tackle the question and purpose of human
existence. Its contention is that the individual social
actor cannot be objectified as an impersonal particular
within the corpus of geographic inquiry. Nor can he be

made subordinate to technico-scientific, ideological or philosophical contingencies.

Moreover, the ontological clarification of socio-spatial relations is a necessary precondition for the formulation of an epistemological standpoint and of methodological procedure. Failing this, human geography cannot adequately explain present-day spatial problems and must either resort to some emancipatory futuristic view of 'optimistic humanism' quα utopian idealism, or concede that pessimism and nihilism constitute the actual epistemological backcloth of its premises.

ACKNOWLEDGEMENTS

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PREAMBLE

The central thesis of this study is based on the contention that there is a pressing need to reappraise the epistemological status of human geography in education. This charge, in turn, demands a clarification of the philosophical terms of reference which underpin the theory and practice in human geography. Equally, it is a necessary precondition towards the formulation of an epistemological backcloth and a methodological procedure whose orientation is geared to a reconstitution of socio - spatial reality. This issue is fundamental to the educational context of human geography as an applied discipline of knowledge in the social sciences insofar that it is an expression of the authenticity and credibility of its content. Epistemology and methodology in human geography must, however, be preceded by the ontological imperative. Put otherwise, in order to tackle the question of 'how do we know' - that is, the reality of the categories which support either the promulgation of a truth, or the exposure of an untruth - it is first necessary to verify the postulate of what 'there-is' that needs to be known - that is, to establish the origins and nature of existence of which geographical phenomena are a part.

The contemporary development of human geography has largely appealed to the scientific method for its validation and academic respectability. In so doing, geography has primarily allied itself to the tenets expounded by logical positivism. More recently, the areas of syllabus development, curriculum innovation and the structure of teaching-learning relations have been increasingly orchestrated by the vested interests of governmental and corporative agencies. These have tended to impose debilitating financial and ideological constraints on the social sciences in general so that any notion of 'progress' and 'development' broadly

corresponds to their institutionalization within the technocratic scientific state. A moribund and uncaring human geography, stripped of any measure of critical reflexivity, and which is increasingly compelled to pay lip-service to a stereotyped educational policy grounded in state ideology, is a reflection of its entrenchment in a positivist-inductive mould of enquiry. The potentially totalizing impact of the technocratic orthodoxy, together with a naturalistic and impersonal science, renders the impending fossilisation of geography in education as a condition of its survival.

Moreover, the inherent danger of the steady erosion and ultimate surrender of affective values (particularly the role of social ethics and the exercising of independent judgement and freewill) in geographical decision-making invites a complete dehumanisation of human geography. A human geography that is compelled by legislation or which elects through ideological persuasion, to collude in a political process of the anaesthetization of knowledge in education will soon discover that its function is reduced to a position akin to a socio-spatial rigormortis. This view of a cumulative shift towards the 'epistemological blinkering' of human geography echoes some of the anxieties expressed by Graves (1981) as well as reinforcing the ground for Johnston's (1986) pessimistic outlook. Current educational policy strongly suggests that geographers increasingly risk becoming inebriated within the confines of a limited and monotonous philosophical discourse, whose methodological expression is marked by the non-explanation of external phenomena and events.

The intensification of developmental constraints, distributional imbalances and the apparent mismanagement of environmental resources have increasingly focused attention of the social organisation of space from the local level to the international domain. In response to

these problems, human geography has, to some extent, gradually begun to widen its philosophical and methodological horizons, thereby challenging the legitimacy of the scientific qua positivistic status quo which predominates in the social sciences per se. These trends have precipitated a plurality of paradigms within geographic thought whose thematic content attempts to cover a wide range of considerations from social justice and mutual self-understanding to the meaning of emancipation and realism. All are fundamentally preoccupied with the complexity of intersubjective relations and man's existential interaction with and understanding of space and place. This would seem positively invigorating for the dynamics and well-being of geographic inquiry but is, at the same time, fraught with problems. Competing paradigms do not generally enjoy a peaceful coexistence. Rather, the fragile concept of parallelism will readily collapse as soon as a paradigm seeks to impose itself with view to invalidating the propositional truth-claims of any juxtaposed standpoints. The tenets which are propounded by any one particular school of thought do not easily lend themselves towards an accommodation with the categories exposed by another. The tension generated by the irreconcilabilities of philosophical disagreement is unlikely to lead to a genuine consensus in human geography until certain preconditions are met. Failing this, the contribution of human geography to the wider spectrum of the unity (totality) of knowledge will remain fragmentary and problematic as long as its own espistemological position is obscure. Essentially, this study undertakes a broad philosophical critique of the limitations and deficiencies of the scientific method. It attempts to achieve this by uncovering the inconsistencies which are grounded in the pre-suppositions that underpin the terms of reference of the main paradigmatic approaches in scientific thought. Its ramifications on the nature and constitution of empirical reality can be used to

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identify the ways in which ideological contradictions and self-deception have been superimposed on and integrated in the areas of human rationality and scientific reason. For geographers in education, this has a significant bearing on the interpretation and meaning of socio-spatial reality, that is, towards a sufficient explanation of social process and spatial structure.

Normal science - with geography as an integral part of its corpus - is geared to providing an atomistic and exclusively causal explanation of the phenomenal world. In geographical terms, this implies the scientific and technical domination of the natural environment as well as the manipulation of individual social factors located in specific spatial contexts. Research findings in theoretical physics have compelled the scientific community at large to recognise that much of the phenomena which underpin the symptomatic manifestation of empirical reality are grounded in an indeterminate acausality. The interplay of meta-inferences has also been acknowledged by other disciplines of science - biology and psychology in particular - and would appear to have an equally important leaning on the epistemological foundations and development of the social sciences, albeit problematic. Mysticism and spirituality are endemic to the question of existence and cosmological understanding as well as the problems inherent in the human condition with which geography is concerned in a spatio-environmental context. Geographical inquiry increasingly demands an holistic approach to the interpretation of man-space-place relations, rather than one which attempts to isolate particular aspects of the socio-spatial mosaic.

The ambiguities and inconsistencies which pervade the existential dilemma of human geography largely arise from the confusion and uncertainty associated with the mechanics and tempo of external events. The global dysfunctions prevalent in the organisation of society

and space suggest that the categories which underpin
rationality, reason and reality have become distorted
and mis-represented. In the last resort, the apparent
opacity of these problems and the ineffectiveness of human
action to resolve them points to the inability and/or
unwillingness of the individual actor to internalize the
feedback which he receives in his social relations with
the 'outside' world. The redressing of the balance is
contingent upon a re-evaluation of the motives, intentions
and values which constitute the basis of decision-making
(knowing) and action (doing). Failing this, human
geography risks participating in the tendency towards a
condition of 'collective psychosis' (see Koestler 1978).
Nor does an instrumentalist philosophy of geography geared
to the terms of the 'survival value' qua materialist
imperative provide a solution on account of its impersonal
terms of reference. By this token, the contribution of
neo-Darwinian theory to the applied social sciences has
done little to enhance geographical awareness in
education.

The preoccupation with understanding and explanation - and
particularly when related to the antimonies of human
behaviour in socio-spatial practise - is otherwise a
search for meaning and order in geographical phenomena.
This is marked by an impending need for the affirmation of
the personal and unique within the totality of human
social relations. That there should be any order at all
clearly points to the fact that it is inherent in the
cosmos. Progress in human geography is restricted by
concepts such as 'randomness' and 'chance' since this
would suggest that man is the author of his own existence
and that all things can be known exhaustively. Rather, the
ecosystem tends to exhibit a purposefulness by design
whose unity-within-diversity constitutes the basis for
man's participatory interaction in the natural world. By
this measure, man exercises a quasi-autonomous function
within the given order of things. Exhaustive knowledge of

a cosmological 'organising principle' always seems to 'point beyond itself' (see Munitz 1987). Atomistic knowledge thus collapses into the domain of metaphysical speculation.

This study attempts to make a case for an 'eco-spiritual' approach to the social organization of spatial structures in human geography in education. Its central thesis urges a respect for the developmental limitations and uses of environmental resources through the mutual reciprocation of human responsibility, dignity and accountability in the distribution of goods and services. It rejects the technico-scientific view of growth which admits to the proliferation of geographical imbalances and disparities within and between regions on the basis of an enforced commercial pressurizing of both society and the environment (see Lindfield 1986). The promulgation of a 'materialist ethic' based on the accumulation of goods ad infinitum clearly precipitates the structural disintegration of the social and spatial fabric of human relations. The relative strength of the 'technocratic rationality' in human geography is partly a reflection of the spiritual (inner) impoverishment of Western socity. Much of the enterprise of human geography is sapped in 'energy-draining' activities rather than those which are 'life-enhancing' and which correspond to the fulfillment of both material and spiritual need (see Bord and Bord 1983).

In order to tackle these problems, human geography must explore those avenues which promote the activation of unconscious awareness (intuition and perception) in cognitive reception and understanding. This permits those perspectives which are of concern to geographic inquiry to be reconsidered from the standpoint of an 'alternative' reality. Whilst human geography in education tends to be culture – specific in terms of the backcloth upon which its structures of knowledge are

constituted, the tenets of its epistemological claims are
ultimately grounded in philosophy and belief systems.

The case made here is thus: that the validation of any
propositional truth-claims expounded through the
epistemological context of geographical science in
education rests unequivocably on the clarification of an
ontology of socio-spatial relations. This, in turn,
confirms the measure of adequacy attached to the meaning
of empirical reality in human geography. The
explication of these issues is both necessary and
inescapable to the field of applied social science for
which geographers in education surely bear a heavy
responsiblity.

INTRODUCTION: THE DEHUMANISATION OF HUMAN GEOGRAPHY

Contemporary human geography - alongside all other
disciplines in the social sciences - is locked in an
identity crisis. By definition, it is concerned with the
process and structure of human socio-spatial
relationships, but as a part of the grand ensemble of
science, it is seemingly compelled to adopt the procedural
methods and the connotative terms of reference acceptable
to this body of thought. Yet, the very ethos of scientific
theory and practice, and the consensus which supports its
current paradigmatic status, is one of contingency.
Moreover, science - with human geography as a part of its
corpus - is fast eclipsing the subject of its enquiry,
man. Scientific knowledge reflects man's philosophical
nominalism and his idealism. It not only has an uncertain
and wavering epistemological basis, but equally lacks any
sound ontological foundations. Any claim of certitude in
the areas of reason and reality on the basis of human
material and physiological existence is proving to be
shallow.

The efforts of 'normal' science and instrumentalism to
provide an adequate explanation and understanding about
the socio-spatial organisation of society fein
rationalism. Their assertions are speculative because they
are unable to confirm man's purpose or place in the world
in the context of his existential finitude. Save, at the
last resort, an appeal to the scientifically unacceptable
sphere of metaphysics, 'normal' science preoccupies itself
in the circularity of empiricism and must ultimately
concede that the intrinsic nature of man as a socio-
spatial actor is either obscure and discursively 'silent',
or that it is non-existent.

The historical development of geographic thought and
geography in education has been comprehensively reviewed
since 1945 (see Graves 1980. 1980a; Stoddart 1981a,
1981b), but it is only since the late 1960s that Western
geography has begun to critically examine the

philosophical premises which underpin its theoretical presuppositions, and those which might possibly be explored. Huckle (1983) shows that the 'new geography' of the 1960s has remained influential in terms of its ongoing impact on curriculum structure. The educational curriculum, of which geography is a part, is largely defined by the prevailing political and corporative interests. The insistence on a positivist scientific method and a technocratic instrumentalism to pursue spatial problems has not however, gained unequivocal support in human geography. The limitations and shortcomings of the positivist epistemology have imposed an increasingly conservative and authoritarian grip on education in general. All disciplines of knowledge are subsumed into the social process and spatial structure; positivism and instrumentalism fail to diagnose the causes of socio-spatial disparities and imbalances. Their methodological and philosophical rigidity are both stifling and insensitive towards any expression of the aesthetic, ethical and spiritual needs of people.

Human geography as a positivist social science has largely been preoccupied with de-ontologising the apparent restrictive and paralysing theistic basis of knowledge. Darwin's evolutionary theory provided science with an emancipatory premise for a new naturalistic and experimental status from which it might construct fresh epistemological perspectives. Bowler (1983), however, notes that the fortunes of Darwinian ideas were only revived when the modern 'synthetic theory' of evolution was advanced in the 1930s. Further, Julian Huxley's campaign for a revival of Darwinism did much to re-establish the theory as a central feature of scientific thinking. Although a good deal of Huxley's platform was based on the naturalistic 'necessity' to purge any element of divine control from scientific thought once and for all, he ultimately sought some form of evolutionary humanism with a quasi-religious content, but one

essentially free from all connotations of external
supernatural beings: "Religion today is imprisoned in a
theistic frame of ideas, compelled to operate in the
unrealities of the dualistic world... with the aid of our
new vision it has the opportunity of escaping from the
theistic impasse and of playing its proper role in the
real world of unitary existence" (Huxley 1961, 46).

De Chardin's (1979) evolutionary monism had outlined
similar objectives and was subsequently supported by
Huxley. These efforts were shortlived and soon collapsed
into a hard, deterministic scientific behaviourism which
fully embraced positivist philosophy and its empirical
methodology (Lorenz, Pavlov, Skinner and Desmond Morris).
All social behaviour could then be explained in bio-
genetic jargon devoid of any ethical commitment.
Behaviourism did not escape the attention of human
geography which saw it as an opportunity to gain
intellectual credibility and scientific respect and
recognition. Wilson (1985) has more recently argued that
sociobiology can explain religious beliefs and practices
by reducing them to the terms of the individual biological
organism. Wilson - as with his predecessors - concedes
the necessity for a quasi-religious evolutionary humanism
in order to 'rationalise' the meta-constituents of the
human condition. Such a model cannot, however, discuss
questions about the validity or falsehood of belief
systems, nor about the values which may provide the basis
for a code of social ethics. Notwithstanding, the
attractiveness of sociobiology and behaviourism to the
social sciences is indisputable: their methods and
techniques have been adopted and applied by both the
capitalist and Marxist systems and used respectively
towards their own ends.

A naturalist science has largely substituted the
ontological dilemma by an epistemological primacy grounded
in anthropocentricism upon which it is hoped that science

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will say something about human rationality and reason, and
social reality: "If positivists can provide only limited
and biased explanations of natural phenomena, their
ability to explain our social world is even more
restricted" (Huckle 1983a, 144).

The optimism of scientific instrumentalism during the
1960s is proving to be illusory and deceptive insofar that
social class barriers have widened while the equality of
opportunity has correspondingly diminished. Its
prejudicial presuppositions and the inflexibility of its
methodological inquiry are both dependent on the
separation of knowledge from values. From this
perspective, social process and spatial structure must
necessarily be kept divided: spatial problems should not
be related to their socio-economic, political or moral
contexts, but rather described and accepted in a
scientific vacuum. In 'A Framework for the School
Curriculum' (DES 1980), the affective attributes of
education - social and ethical consciousness - were
confined to the context of religious education. Geography
was not even mentioned. Moreover, the social sciences and
humanities were to be retained in a technocratic vein,
broadly in line with the political status quo. Geography
students have rarely been encouraged to fully integrate
the unity of knowledge into a socio-spatial context. With
some justification, Storm (1983) draws attention to an
already overcrowded syllabus acting as a deterrent towards
curriculum modification/innovation.

Consequently, much human geography is contained in a
'man-land-resource' ecosystem approach which is generally
unconcerned with ontological and epistemological criteria.
Ethnocentricism is the general rule while many intrinsic
human values are swept aside as non-rational scientific
irrevelances. Problems related to human dignity and
social justice in geography are often treated passively
and partially or are otherwise 'normalised' as an

unavoidable product of the systematic mechanics of the scientific method. Contradictions and ambiguities are frequently seen as an embarassment and one undeserving of a thorough critical reappraisal.

A dogmatic educational policy which is increasingly regimented by those with governmental and corporative interests not only encourage social extremism, intolerance and even nihilism, but equally attempts to restrict human geography's horizons by fostering a climate of myopia and naivety. Meaning and purpose in human geography risk becoming more elusive and ill-defined. Little can be said about socio-spatial relations unless the whole area of man is disclosed. This not only requires closer harmony and exchange between geography and other social science disciplines (Cook 1983), but may also demand some appreciation of the recent advances of scientific theorizing in the physicalistic domain. These suggestions may raise some uncomfortable ramifications concerning the status of the components of the social sciences as independent disciplines of knowledge: is perhaps a multi-disciplinary integrated social science syllabus a more realistic and wholesome unit of study at the 16-19 and degree levels? If so, then the case for the primacy of man as the 'subject' of inquiry may become emphatically reinstated. As 'normal' science would presently have it, man is the 'object' of study, while in a geographic context, space retains overall primacy.

The application of phenomenological and existential philosophical ideas to geographic thought has attempted to switch the emphasis to the 'subjective' attributes of man. This has drawn upon a variety of standpoints from Husserl's (1970) claim for a 'pure' consciousness and Schutz's (1962) attempts to combine transcendentalism with empiricism, to Merleau - Ponty's (1962) and Sartre's (1943) rejection of an 'inner man'. Humanistic geography has clearly made an important contribution towards a

deeper understanding of human thought, culture and beliefs in a spatial context, but has largely failed to gain wide scientific recognition on account of its epistemological shortcomings and its methodological ambiguity: it is "a form of criticism rather than an alternative scientific approach" (Entrikin 1977, 629). Otherwise, phenomenology has been criticised for its individualistic stance and its failure to recapture 'lived experience' by the transposition of the transcendent to the real world. Existentialism even further exposes itself to the rigours of scientific accreditation: it terminates in absurdity and meaninglessness about existence, while knowledge is about 'nothing'. Although Husserl was concerned with ontological issues (essence and truth) of social phenomena, most humanistic geographers have been preoccupied with epistemological questions. Tuan (1976, 266-267), however, has unconditionally reverted to (positivistic) biological evolution to explain man's ontological dilemma.

In its search for 'relevance' in the social sciences, human geography has explored the domain of political economy in an attempt to sharpen its socio-spatial perspectives. The impetus for a Marxist interpretation of social process and spatial structure was initially provided by Harvey (1973) and Peet (1977). This radical orientation has also been supported by Habermas (1976) and Kolakowski (1978) who have directed geography's attention towards a possible impending crisis in advanced capitalist nations, thereby making a case for the collapse of its political and economic structures. The unravelling of power relations and conflict remains a complex area for human geography (Foucault 1982; Giddens 1984). The track-record of advanced capitalist economies and their governmental structures manifests a history of disreputability in both the developed and developing worlds. The critiques provided by radical geographers (Castells 1975, 1977; Lee 1979; Peet and Lyons 1981) do

not generate simplistic practical alternatives but rather retain a primacy for theoretical considerations.

Smith (1978), in his liberalistic 'welfare' approach to human geography, argues that political and military power - implicit of the territorial and economic control over resources and manpower - is in reality the overriding priority of socio-spatial analysis. There is little room for concepts of 'welfare', 'justice' or the 'spiritualisation' of society.

Geography as a 'critical social science' (Gregory 1978; Sayer 1984) has opened new vistas for exposing the shortcomings and misconceptions of diverse philosophical and ideological positions. Yet - with few exceptions - it curtails the objective reality of its own position by an ongoing insistence of an autonomous-man/science basis for its epistemological backcloth. Much of critical theory is geared to a futuristic emancipatory idealism which embraces the fields of political theory, hermeneutics and linguistics (see Ricoeur 1981). There is no apparent methodological consensus so that the emphasis tends to oscillate between the standpoints of an optimistic (utopian) humanism to one of pessimism and hopelessness. There is, however, a general agreement amongst critical theorists for the condemnation of positivist epistemology and the technocratic nation state, but they have deviated widely from an orthodox Marxist (materialist) theory insofar that its contributers have largely treated social interaction in isolation from the deterministic infrastructural inferences (see Keat and Urry 1975; Bottomore 1984).

That the mastery of language is a precondition for understanding (Gadamer 1975) underlines a fundamental facet of critical theorizing. For Habermas (1976, 1979, 1984), the 'purification of discourse' is imperative for the realisation of an 'ideal speech situation', but this

should be read against Heidegger (1962) and Wittgenstein (1961) who have both asserted that in the absence of some point of reference, language soon collapses into either meaninglessness (nothing) or metaphysics and mysticism. When 'ideal speech' is combined with some neo-Marxist ideal, it will hopefully provide a new basis on which socio-spatial problems may in the future be reviewed (Gregory 1978).

Critical theory must, however, seek to accommodate the 'double hermeneutic' problematic in the social sciences. This means that social scientists should develop not only an 'objectivised' knowledge about externalities, but equally a critical self-awareness of people as subjects. For some critical theorists (Hudson 1982; Sayer 1984), the recognition of a metaphysical interaction which structures causal phenomena in a social context is a most forceful point. The cause-effect relationship is not a fixed mechanism, but contingent. Probability and prediction therefore have little relevance in social causal mechanics. Marxism too is possibly a metaphysics of a 'not-yet-conscious' futurism which cannot precisely say what people want, because they do not yet know. This again raises the issues of not only 'how' causal powers work (episteme) but equally 'what' their origins are (ontology).

Scientific knowledge can be acquired in a spirit of humility or power. Much contemporarty science seeks to demystify the natural world with ambition, competitiveness and vanity (Johnston 1979, 1-17; Koestler 1978, 134) and is increasingly becoming an adversary of man. Moreover, it assumes a position above society from which it asserts its autonomy. Human existence does not, as Gregory (1978, 21) fears, necessarily need to collapse into "abstract and mystifying proportions which offer no prospect of a critical understanding of the relations between man and his

material universe". Social reality, however, is not
merely a phenomenal or materialist term. Man does not
conveniently fit into exclusive empirical categories any
more than those of the physical sciences do themselves in
the quantum field of inquiry: "Science can never make any
statements about the ultimate orderliness and unity of the
universe without slipping into metaphysics" (Hill 1981,
58). For Adorno (see Held 1980; Jay 1984), a world
potentially based on disorder in the absence of any
metaphysical or theistic precepts invites a pessimistic
epitaph of chaos and destruction.

A scientific human geography which is value-free must
rely on pragmatism as a matter of practical adequacy.
The disequilibrium between innovations in scientific
technology and finite environmental resources, and the
unclear notions of an unlimited progress and the socio-
spatial and economic imbalances which this unleashes,
makes it impossible for moral philosophy to be
dissociated from social policy (Jonas 1984).
Government, moreover, employs an 'ethics of concealment'
which frequently degenerates into one of corruption and
evil intentions (Bok 1984). Nor do self-interest and
morality constitute a basis for reason in geographical
decision-making when they are obscured by governmental and
corporative interests (Parfit 1984).

The fundamental issue of socio-spatial problems relates to
the impact of cultural stupefaction through the acceptance
of ideological propaganda which, in itself fails to
legitimate its methodological premises or its
epistemological foundations. Moreover, it completely
ignores the need for an ontological reappraisal of human
existence. For Olsson (1978), this is indicative of "the
authoritarian enslavement of society". Conflict,
contradiction, ambiguity and uncertainty are persistent
features in socio-spatial phenomena. Much contemporary
social science promotes a climate of egotism, hedonism and

utilitarianism against a wider social background whose reality is one of despair, fear and even dread. Human existence becomes an existential wilderness based on apathy, hatred and prejudices (Ley 1974).

Science, in many ways, is transformed into: ".. a kind of gamesmanship .. a complicated game within a very limited area so that [a scientist] never has to think of the real problems or of meaning" (Schaeffer 1972, 105). If the purpose of any science is the pursuit of truth, then: "any understanding of science which ignores it runs the risk of undermining the whole edifice which scientists have constructed" (Trigg 1985, 109). Conversely, if there is no truth, there can be no hope present or future, nor is there any basis for discussion in any area of knowledge. Existence is reduced to a spatio-temporal nonsense. The scientific treatment of man's metaphysical and religious content has increasingly been one of outright condemnation and rejection. It has been devalued as an irrational and unreal expression of man's historical development and his mythical traditions which are manifested in the forms of symbolism and totemism. Religion and mysticism, however, have always fulfilled "an indespensable function within culture" (Malinowski 1954, 90). They constitute a part of man's knowledge and purport to say something about his existence – past, present and future. Equally, they provide a key to the recovery of the wholesomeness of man as 'subject', and of science as man's tool which may then reaffirm and reflect all that man 'is'.

The elevation and idolisation of a naturalistic science to a position of supremacy is a fundamental inversion of the former relationship between man and natural science. Normal science has discarded any genuine concern for human social wellbeing and has largely abandoned any sense of spatial defence. For scientific instrumentalism, the 'end' increasingly justified the

'means' regardless of the turmoil which it may generate. Instrumentalism tends to explain social systems in terms of no change: it advocates social control rather than social change so that the institutional status quo is maintained. Kolb (1961) argues that the capitalist social control system_ which attributes an autonomy to the resulting spatial structures which it generates - is contrary to the assumptions of Judaic-Christian doctrines on which Western societies were built. Equally, a Marxist geography assumes that 'social consciousness' is moulded as a result of the productive relationship between men and their economic existence. It therefore presupposes that man is 'nothing' until he engages in the mode of production. Environmental relations (natural and spatial) are structured by their social formation. Both systems of thought insist that knowledge is drawn from sensory experience alone (see Nagel 1961), suggesting that the undermining of cultural, moral and religious values is paramount to the survival and predominance of each system (Horkheimer and Adorno 1972).

The dehumanisation of human geography may initially appear to be a hyperbolic and alarmist proposition, but on the basis of social reality 'as-it-is-to-be-found', the geographer is increasingly compelled to recognise the impasse into which an autonomous science drives him.

PART ONE: SCIENCE, PHILOSOPHY AND MAN:
A METHODOLOGICAL EXPOSE

THE MEANING OF HUMAN GEOGRAPHY

The study of spatial phenomena - as the central
criterion on which human geography deliberates -
reflects man's thinking, his philosophical beliefs and
his ideological terms of reference, his decision-making
and his value systems, the sum of which culminate in his
movements and actions as a social actor in geographic
space. Space and man are both components of the
fundamental question of existence (being). The primary
consideration of human geography as a discipline of
knowledge in the social sciences concerns its
philosophical status. The use and organisation of the
spatial environment by man immediately raises an
epistemological question. There is no consensus of
thinking in this respect but moreover a polarisation of
views which are broadly contained under two discrete
standpoints.

First, that human geography is concerned with the study
of empirical phenomena which can only be undertaken by
the use of experimental methodologies. In this case,
the guiding presupposition is that knowledge is
initially fragmented and must be cumulatively
reconstructed until some form, sense and meaning are
apparent. This is achieved on the basis of 'normal'
scientific rationality and reason. Alternatively, space
and man may be propositionally viewed in an integrated
holistic context. Knowledge is pre-assumed to comprise a
unity-of-all-things, whose coherence - although forming a
complex whole - provides a working basis for its
conceptual universality. This case does not exclude the
possibility for the interplay of meta-inferences in the
study of socio-spatial behaviour. Consequently, its
concatenations are often strongly contested by those
opposed to its claims on account of the absence of any
marked 'normal' scientific eloquence, and equally since it
may also appeal to teleological forms of explanation. In

these respects, a holistic human geography may assume the characteristics of an 'extraordinary' science.

The search for spatial order requires that decisions must be taken. This, by implication, necessitates the formulation of a value system. An appeal for a social ethic in human geography - or indeed, any consideration towards the negation of its relevance - immediately demands some accountability for man's moral predicament.

On the basis of these precepts, the socio-spatial field of geographic inquiry - and other disciplinal areas with which it is inter-related - can be investigated according to one of two fundamental premises: either, there is a case in which the existence of the underpinning principles of human geography can be rationally and logically considered and which can be communicated and discussed on an individual and collective basis; or, that there is no logical or rational answer for the existence of any constructive principles which might emerge from the interaction of socio-spatial relations.

The former case is hinged on an optimistic expression of hope, meaning and purpose and asserts an implicit responsibility and expectation for geographic wellbeing and stability. Conversely, the latter view underlines the belief that man and his natural environment are chaotic, irrational and discontiguous aspects of a meaningless state of being, so that the formulation of any positive attributes in human geography will be abortive, devoid and non-sensical. In this context, explanation and understanding are irrelevant and exclusive categories.

As its outset, human geography is seemingly locked into an epistemological dilemma. Either, it may adopt a concern with the case for a propositional truth-claim holistically based on a fundamental preassumption or

conviction that the nature of rationality, knowledge, reality, truth and goodness can be ultimately substantiated against some permanent, ahistorical logos which transcends all historical space-time continuums; or alternatively, the epistemological claim may be atomistic where it is maintained that no 'a priori' matrix can be scientifically proven so that all values are mutually exclusive and no single conceptual scheme can claim to have a universal validity - all truth-claims, as such are ambiguous and pragmatic and do not represent the discovery of any absolute principle in human or natural existence.

Human geography clearly has an important contribution to make towards an explanation of the meaning and purpose of man's interaction with space and the ensuing social relations which pervade throughout this spatial spectrum. In a contemporary setting, where each authoritative pronouncement of science is increasingly believed to be wholly true, or the outcome of incompetence, distortion or fraud such as to make it wholly false, human geography bears a heavy responsibility to uncover a unity and understanding about socio-spatial phenomena.

The scientific study of human geography has tended to streamline itself into four broad schools of thought, each with its particular philosophical underpinnings and attendant methodologies. First, scientific instrumentalism, based on logical positivism and which frequently appeals to behaviouristic theory to explain the dynamics of socio-spatial configurations. Its political and economic expression is notably reflected in the technocracies of advanced capitalist nations, but similar claims may equally be vested with bureaucratic socialist states which frequently revert to behaviourism to explain the human condition. Secondly, where political economy is used to explain socio-spatial relations, and moreover, where materialism is adopted as an autonomous ideological

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precept. This particularly corresponds to a Marxist
interpretation of human geography. Thirdly, by
establishing the primacy of 'subjectivism' from a
humanistic standpoint. The emphasis may either tend
towards a phenomenological appreciation of 'essences' and
aesthetic values, or an existentialist treatment motivated
towards an individualistic orientation of perception.
Finally, human geography has appealed to the primacy of
language because it is a universal experience. This
branch is largely concerned with the problematic issues
raised by hermeneutics and semantics and has attracted the
attention of some critical theorists.

The juxtaposition of conflicting standpoints in human
geography immediately reflect epistemological
differences of opinion, yet as a human science whose
spatial characteristics are never devoid of social
repercussions, it has hardly begun to tackle the problem
of man's ontogenesis. Failing this, there can be no
substantial discussion of science, values, the
identification and understanding of problems and of
decision-making, because epistemology can only provide a
highly fragmented view of content, meaning, purpose and
certitude. Human horizons are contained within restricted
parameters which afford a limited perspective when it
attempts to assess the rationality and reasonableness of
socio-spatial activity. In any event, the fundamental
dilemma concerns the question as to whom or to what are
geographers addressing themselves? Modern science
generally provides an examination of the ontogenesis of
man and the environment using the Darwinian evolutionary
basis of explanation. This view is the accepted credo of
scientists in many different philosophical schools of
thought including not only the logical positivists, but
also Marxists, humanists and critical theorists. Human
geographers too have largely adopted the evolutionary
standpoint when ontological considerations are pressing -
it is an indication of scientific rationalism and

respectability. Philosophies - usually those with strong
reflexive persuasion - which attempt to offset the
evolutionary theory of origins by some alternative
explanation generally encounter the need to make an
irrational unscientific 'leap' into metaphysics and
mysticism, or collapse into a nihilistic, chaotic
'nothingness', reductio ad absurdum.

Paradoxically, it should also be noted that a
significant number of prominent evolutionary biologists
continue to entertain De Chardin's evolutionary synthesis
with Christian theology. Julian Huxley recognised the
potential of De Chardin's evolutionary monism as a means
of re-mythologizing science into a secular evolutionary
humanism. This would essentially be a 'religion without
revelation' which would provide a basis for human values
while simultaneously giving an account of present and
future trends in human social behaviour. Human geography
has yet to make any profound inroads by using these
sociobiological concepts. Social Darwinists in advanced
capitalist nations have largely overlooked the issues of
urban-social deprivation and economic disparities from the
regional to the global scale. Moreover, technocracy and
scientific progress have upheld the precedence of human
law-making as opposed to the finite limitations imposed by
natural and environmental processes. If Darwinian
evolution is interpreted as man's ascent towards an
ultimate unity with the environment - and as De Chardin
would have it, towards the 'Omega Point' of unity with God
- then the grounds for a 'Scientific theology', albeit
ambiguously defined, may appear to be a challenging
proposition in the social sciences. The only proviso
which governs such a theory is that all questions of
origins and the optimistic future direction of mankind can
only be discussed in impersonal terms.

Chappell (1981, 186) attempts to make a case for some
reconciliation between science and religious values in

human geography, but clearly insists on the paramouncy of the former over the latter: "A new kind of objectivity is needed related perhaps to religiously-based humility, which in its own way might lead to new scientific insights as the dawn of modern science".

In this context, the definitional terms of rationality, meaning, purpose and reality are strictly predetermined by scientific procedure. Human geography as a social science also confers itself with an autonomous scientific status where man proclaims himself as the sole source of all legislation and judgement. Kant, however, has shown that this standpoint could only be valid if man was his own first cause, which clearly he is not. As long as an autonomous science attempts to borrow and utilise metaphysical concepts (however 'irrational' these are by its own terms of reference) that are refashioned and interpreted against the background of 'normal' scientific parameters, so that they might be integrated in its theorizing, then human geography cannot but hope to generate partial and disjointed insight into socio-spatial human behaviour and its related problems. Moreover, in its geographical context, social science tends to become an increasingly restricted and elitist area which is consciously or unconsciously preoccupied with questions of dominance, power and socio-spatial manipulation. It may frequently attempt to disguise its overriding objectives and/or pacify its skeptics with a facade of quasi-mystical linguistic connotations or pseudo-religious symbolism, particularly in the areas of social ethics and futuristic assertions which are bound into a belief of 'optimistic humanism' dictated by some form of scientific technocracy.

An important pre-requisite to an understanding of contemporary human geography as a social science is a brief review of the history of scientific development and thought, and the ways in which philosophical changes have shifted its epistemological emphases towards

disunity and fragmentation. These changes have not only influenced the area of knowledge, but also the questions of morals, existence and origins.

THE DEVELOPMENT OF SCIENTIFIC THOUGHT:
A HISTORICAL REVIEW.

The epistemological claims of contemporary human geography are conditioned by the presuppositions of its philosophical and ideological underpinnings. The historical evolution of geographic thought - and indeed, the development of the other social science disciplines - has been adequately documented in terms of the ways in which it has been influenced and has adopted to shifts in the philosophical climate (see Schaefer 1953; Davies 1955; Haggett 1965, 1977; Graves 1980, 1980a). Significantly, the dynamics of change and emphases within and across the philosophical backcloth, which otherwise provides the fabric and supports the bases of geographic theorizing, has largely been overlooked. This is particularly the case in the historical and developmental contexts.

Modern philosophy and the development of the natural and social sciences with their attendant methodologies broadly stem from the epistemological foundations prescribed by the Greeks.*

*The Greeks, with their variety of 'gods', failed to resolve the epistemological dilemma first, because the 'gods' were basically inadequate in terms of the content which mythology could provide to explain human existence and empirical phenomena, and secondly, insofar that a marginal majority or a small powerful elite exclusively carried and propogated the status quo of knowledge.

Between the sixth and thirteeth centuries, knowledge and existence in European society were entrenched in the theocentricism of the Judaeo-Christian ethic. Man's thinking and perception were largely Byzantine with an overwhelming emphasis on mystical symbolism. Moreover, this position was unrealistic insofar that the 'higher sphere' of heavenly things and essences could neither be

related to nature, nor were they attainable in the finite context of human existence. The Byzantine age did little to enrich geographical knowledge: man and his relationship with the natural environment held no interest, except as part of the world to be lived in.

By the thirteenth century, two important shifts took place which generated a movement towards humanism and the foundations for an autonomous structure in the area of knowledge. First, the old and growing humanism in the Roman Catholic position increasingly suggested that man was autonomous in the area of salvation: according to its promulgations, Christ died for man's salvation, but man had to merit the merit of Christ. Equally, the Roman Church at this time can be charged with motivating people towards utilitarianism and hedonism in the interests of economic gain under the auspices of an authoritarian capitalist political structure, in which the church played a significant role (see Horkheimer and Adorno 1972, 222-225). The growth of European capitalism in the Middle Ages, in advocating social and economic gratification, reduced individuals to economic receptacles and provided an early impetus towards the dehumanisation of man and his relationship with others, and with the natural environment.

Secondly the contention held in the philosophic-theology of Aquinas (1952) introduced a new perspective of the biblical Fall insofar that although the will of man was fallen, the intellect - claimed Aquinas - was not. This not only implied that man's intellect became autonomous, but on the basis of the presupposition, both man and philosophy were now independent and emancipated from the propositional revelation of the Judaeo-Christian theology. Aquinas's standpoint initiated a schism between 'nature' (empiricism) and 'grace' (metaphysics), yet Aquinas did not accept a complete discontinuity between these two

spheres since the intellect represented a concept of unity
between them.

In some respects, the resultant birth of the humanistic
Renaissance which superceded Aquinas's views clarified
many aspects of reality. The natural environment, and its
inter-relationship with man, received a more proper place
insofar that it was not something to be despised, or held
as contemptuous. For the geographer, this implied that
man's management of the spatial environment demanded
responsiblity and care in the measure of his decision-
making. Conversely, Aquinas's 'autonomous-principle'
established both a dichotomy and a constant struggle for a
unity of 'nature' and 'grace', 'subjective' and
'objective', 'explanation' and 'understanding', and a hope
that rationality would say something about the resolution
of this dilemma.

Aquinas's ideas soon permeated into the arts, whereby the
'autonomous principle' of nature-as-nature was reflected
in the work of Giotto, Dante, Boccaccio, Van Eyck and
Lippi, amongst others. Landscape art - albeit still imbued
with religious themes - became increasingly naturalistic,
yet true perspective and true space emerged for the first
time. Paradoxically, the increasing reality of nature in
artistic representation did not provide a holistic
understanding of knowledge and existence. Rather, the
autonomy of 'nature' begins to consume 'grace'. While
Aquinas had introduced Aristotelian thinking, this
position had compounded the search for a unity-within-
diversity. Prior to the Reformation period, the
philosophical climate switched to one of neo-platonism
once that it was recognised that having liberated the
particulars, some directive was required to evolve
universals. This was otherwise an attempt to reinstate
ideas and ideals. Leonardo da Vinci recognised that if an
'autonomous rationality' was presupposed to be the basis
for knowledge and existence, then mathematics is the ideal

yardstick because it is concerned with that which can be measured.

The impact of Aquinas and the subsequent climate of neo-platonism introduced a fundamental and lasting weakness into the educational process insofar that the natural associations between disciplines were severed. All disciplines have tended to be studied in unrelated parallel lines while failing to understand that all aspects of knowledge focus on man.

By constrast to Aquinas's position, the Reformation repudiated both the Aristotelion and neo-platonic views. The Reformers rejected the incomplete Fall in Aquinas's work which had set loose an autonomous man. Instead, they claimed that there was nothing autonomous either in the area of final authority or in the theological concept of salvation. Moreover, the Reformers accepted the biblical explanation of a complete Fall, where only God was autonomous. No humanistic or autonomous, religious or moral effort of man could provide universals. Although the Judaeo-Christian scriptures might not provide exhaustive truth, it gave, they contended, sufficient knowledge to say something truly about God, man and nature, and the relations contained therein, in a unified form. Indeed, in an historical and societal context, there could have been no Reformation and no Reformation Culture in Northern Europe without the recognition that God had spoken to man in the scriptures, and that this communication needed to be based on a propositional revelation of truth. Under the Reformation position, Northern European culture understood that while man is normally guilty before a God who exists, man, notwithstanding, is not nothing. This did not imply that there was no freedom for art, literature or science, but that they too were contained in the propositional truth of scriptural revelation and could not, therefore, claim to be autonomous.

Prior to the age of Enlightenment, scientists and philosophers had accepted the possibility of a universal in the areas of knowledge and ethics. Absolutes imply a logic of thesis - antithesis and although there was disagreement as to what absolutes might be, there was nonetheless a basis for reason. Classical apologetics rarely analysed their presuppositions profoundly and so fell short of a full demonstration of Judaeo-Christian tenets. Early scientists such as Copernicus, Kepler and Newton based their work on the presupposition of the uniformity of natural causes in a closed system. Early science was natural science which accepted that the Biblical position gave an explanation for an objective reality akin to a cause - effect system operating in a limited time span. It was not a science contained within a naturalistic philosophical framework.

Bacon, in his Novum Organum Scientiarum, understood that the 'fall of man' entailed a fall in both his 'state of innocence' as well as his dominion over nature. Bacon claimed that man could to some extent repair these losses; the former by religion and faith, the latter by the arts and sciences. Therefore science as science, and art as art were understood to be religious activities. Bacon did not regard science as autonomous, but man - through the content of scientific inquiry - could use his reason to rediscover universals. The ethos of original science, based on the Christian doctrine of creation, supported the expectation that the physical world should be one of rational order, reflecting the reason of its Creator. Equally, since the world was God's free creation, it was one of a contingent character which could be discerned by experimental investigation. This was made possible by the distancing of creation from its Creator, but because the world was God's creation, there could be no impiety in making it a fitting object for study (see Russell 1985). In seeking to eradicate the methodological deficiencies and the metaphysics of superstition of medieval thought,

Bacon (1960, 47) recognised a measure of irrationality
in human thought implicit of scientific distortions and
deformations, in which could otherwise be detected the
ideology.

Bacon's influence on philosophy and science in the
seventeenth and eighteenth centuries is decisive (see
Larrain 1979, 22-23). Bacon had not sought to make
scientific inquiry subservient to the roots of religious
faith based on fear and ignorance, but rather had intended
to show a clear demarcation between theology and
philosophy and ethics. Notwithstading, the impact of
early science and its insistence on the Judaeo-Christian
explanation has not been discredited for the development
of contemporary scientific inquiry. Marx (1975), although
an adversary of theology, acknowledged Bacon as the father
of modern science. Similarly, Oppenheimer (1962) concedes
that Christianity was necessary for the beginning of
modern science because it created a climate of thought
which put man in a legitimate position to investigate the
form of the physical world.

Many Enlightenment philosophers revised Bacon's
interpretation of irrational prejudices which pervade
over man's judgement (the 'idols'), so that the concept of
irrationalism followed by Condillac, Holbach and
Helvetius, amongst others, became 'prejudices' embodied in
traditional religious representations. Religious
'prejudices' were identified as being ideological and an
impediment to human wellbeing. Religion was no longer
regarded as an integrating force, but the source of all
false notions, preconceptions and superstitions. Moreover,
Machiavelli (1970) and Hobbes (1975) had exposed the
legitimating social function of religion so that it was
made coextensive with political power and economic gain.

Holbach (1966, 332-233) argued that human misery
reflected man's misunderstanding of nature. Reason, he

claimed, must be experiential and challenge ".. the prejudices.. ignorance and uncertainty.. consecrated by religion".

Helvetius (1959, 103-111) made a distinction between 'true virtues' (those under the dictum of 'L'education peut tout') and 'virtues of prejudice' which belong to mystics, magicians and priests.

The post-Newtonian age is therefore one where the sense of the autonomous, which had been derived from Aquinas, becomes fully developed, but with an increasing influence on the formulation of the problem. Kant's failure to reconcile the phenomenal world of nature with the noumenal world of universals finally eroded any concept of revelation in any area. There could no longer be any notion of metaphysics ('grace') on this interpretation of rationalism, rending the idea that the universe is reasonable through the creation of any absolute power as defunct. The problem for philosophy and science – which included sociology and psychology and indirectly, human geography – was no longer the dualism between 'nature-and-grace', but of 'nature-and-freedom'.

The naturalistic scientific rationalism evolved during the Enlightenment was so totally autonomous that determinism, which had almost exclusively been confined to physics and mechanics, permeated into the area of social science. Science, newly defined, increasingly constituted a threat to human freedom and individual self-expression. In the absence of any metaphysical constructs, 'freedom' too had become autonomous. Rousseau's concept of 'autonomous freedom' necessarily refuted any notion of mysticism, but as absolute freedom, his ideal emancipated man not only from revelationary concepts but equally from social constructs (polis). By definition, Rousseau's freedom is both destructive, chaotic and nonsensical. If universals are non-existent, then man is hedonistically

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free, but there can be no distinction between reality and
illusion. Yet a freedom that is without restraint or
limitations cannot be accommodated into a rational world,
though Rousseau had nonetheless retained the logical
consistency of the age in his analysis and philosophical
standpoint.

The Enlightenment position was ultimately bolstered by
Compte's (1975) contribution towards the removal of the
theological and metaphysical states of any science, which
he dismissed as 'imagination', 'supernaturalism' and
'personified abstractions'. Compte's positive critique of
theological and metaphysical philosophies is in itself
metaphysical: his main presuppositions about the
inevitability of social domination and elitism, the need
for the class structure and the preservation of the
economic status quo are not scientifically verifiable
truths. Nor did Compte have any terms of reference to make
a critique of 'imaginary' or abstract notions, which, if
by definition are dogma and ideology, unless it can be
accepted that Compte's critique itself is ideological. If
science is to assume a position of neutrality whereby it
may arbitrate over questions of truth, reality and
meaning, it will collapse into an ideology immediately
that it accredits itself with an autonomous status. The
fetishization of science and progress can only be
discussed by appealing to the metaphysical concepts which
have previously been repudiated.

The Enlightenment philosophers continued to follow the
classical ideal of unity, but increasingly realised that
unity could only be achieved on this bases by ruling out
'freedom'. German idealism at this point continued the
critique of religion in the sense that philosophy must
emancipate Christianity from its outmoded historical form.
This required a more radical and profound criticism. Hegel
made philosophy coextensive with theology insofar that
both are concerned with revealing the relationship between

the finite spatio-temporal realm (empirical phenomena) and the infinite sphere (metaphysics). Certainly, any postulation which elucidates origins is necessarily of philosophical and theological interest and will raise questions of meanings, purposes and destinies. Philosophy and theology, however, deal with the same basic questions, but will give different answers and in different terms. Hegel was aware of these problems and contended that classical philosophic humanistic thought had robbed Christianity of its rationalism and therefore, of a unified field of knowledge. Moreover, Christianity for Hegel had become deformed into an authoritarian and dogmatic system which had alienated man from his true self. The Hegelian dialectic restructured the areas of epistemology and methodology. He argued that the synthesis with its relativism would somehow provide an insight to the rationality and reasonableness of the relationship between the finite and infinite categories of existence. Effectively, the idea of rationalism was retained, but (classical) rationality was discarded. Any concept of 'truth' was radically revised and in many respects became an ambiguous concept.

Feuerbach's extension of Hegelian thought was rooted in the presupposition of God as a projection of man's essences and thus a product of objectivization of the human being. Feuerbach otherwise attempts to reduce theology to anthropology and to show that talk about God was really talk about man. Religion, therefore, has been the product of a necessary state in man's process of self-awareness. Feuerbach (1957, 184) claimed that any notion of the "existence of God" was external to man and the world. Religion, as such, is seen as a symptom of man's alienation from himself, inhibiting man from acting, and distorting man's knowledge about himself, and his relationship with others and with nature. Feuerbach (1957, 33) therefore attributes the disunity of all man's categories to setting "God before him (self) as the

antithesis (alter ego) of himself". Although Feuerbach sought to eradicate all metaphysics and supernaturalism, he neither discusses the underlying causes of human alienation, nor succeeds in identifying the reasons for the dichotomy in human thinking. In sum, Feuerbach asserts that God corresponds to the infantile stage of man's development, but one which is dispelled once philosophy has discovered man's real nature.

The most radical shift in contemporary philosophical thought can be attributed to Kierkegaard who categorically severed any final hope of a unified field of knowledge. Kierkegaard emphasised human existence before science. Man, he claimed, cannot be an instrument or an object of scientific inquiry. Accordingly, any 'objective' scientific inquiry will be insensitive to movements and changes in history. Kierkegaard's understanding of 'truth' is interlocked with existence, but not with a platonic contemplation of essences, nor with intellectual pursuits. The apprehension of 'truth', he claimed, requires a (self) commitment in a subjective sense so that it becomes a part of human nature. The human dilemma is found in the individual's necessary engagement and participation in society which urges people to be objective, and where knowledge consists of abstract generalisations. Although Kierkegaard's concept of 'truth' is grounded in the Christian ethic, God is 'ever-pervasive' so that 'rational' deductions from first premises are untenable.

Kierkegaard thus rejected Hegelian dialectics and contended that no synthesis could be achieved by 'reason' alone. According to Kierkegaard's position, modern philosophical and scientific reasoning were compelled to accept that on the basis of their own definition, the 'real' (empirical) world embraced all that was rational and logic, while conversely, the 'unreal' (metaphysical) world became non-rational and illogical. There was an absolute dichotomy between these two spheres. Furthermore,

on the basis of philosophico - scientific reason, 'rational' man is 'dead' since he has no categories or terms of reference with which to discuss his meaning, purpose or significance. All philosophical 'rationality' is therefore pessimism, while any appeal to 'non-rational' concepts(i.e. those predilections whose internal logic becomes at some point inconsistent with its system of philosophicl reasoning) is motivated by an untenable optimism.

Kierkegaard asserted that on this basis, 'progress' can only be realised by initiating 'irrational leaps' within 'rational' logic. The key which motivates these 'leaps' is man's realisation of his own inauthenticity (i.e. the absence of any adequate terms of reference with which to discuss his lack of unity). On the basis of Kierkegaard's 'philosophy of despair', man has existentially shown that there are no 'rational' answers to unity. Nothing can be verified because there is no basis for 'reason'. Man responds to his innate need for 'hope' in the 'non-rational unreal' sphere by abandoning the real world against his 'reason'.

This trend has subsequently been the case in much contemporary philosophy, science and ideology. Kierkegaard - supported by the later works of both Heidegger and Wittgenstein - recognised that the necessary 'leap' is achieved through the medium of language, yet even this area provides no resolution to man's dilemma. In semantics, the focus is on undefined connotation words acquired from the 'unreal' sphere of (non-) reason. They provide an illusion of communication, but it is precisely in this area that science and philosophy attributes values and directives to their systems of thought. As long as the dichotomy and 'leap' are accepted, the actual content of the verbalisation - whether in secular or religious terms - is committed to find understanding in a 'more real upper sphere'. The transition between 'normal' and

'extraordinary' science (empiricism and metaphysics), or
between philosophy and mysticism becomes the critical
element, but the terms of reference by which it is
accomplished and expressed are seemingly irrelevant, since
'optimism' or humanistic 'faith' are all that matter.
Whenever the categories of an 'optimistic humanism' are
applied to scientific inquiry and philosophical discourse,
they cannot be conceptually challenged because there are
no terms of reference by which they may be analysed.
Moreover, by removing theological explanation from the
context of scientific inquiry and placing it in a 'non-
rational' sphere, anything can be discussed without fear
of implicating 'truth'. Nothing can be conclusively proven
or disproved. This becomes especially conspicuous in the
area of social ethics.

PHILOSOPHY, THEOLOGY AND SCIENTIFIC MYSTICISM

Post-Kierkegaadian 'pessimism' permeated not only into philosophy, the arts and literature, but subsequently into the physical sciences, the social sciences and more lately, theology itself. Its dualism establishes man as a 'zero', that is, as one particular category against an infinite number, but none having any meaning. The rationality of classical philosophical thinking embodied a metaphysical content which had always assumed that 'something was there'. Contemporary scientific and philosophical 'mysticisms' are semantic, dealing only with words. They reject the notion of 'anything being there'. Moreover, any reference of a universal absolute or 'God' becomes 'Being', or as Schaeffer (1970, 78) lucidly suggests, a "Pan-everythingism". The more towards the most recent secularisation of theology may almost entirely be attributed to Heidegger's work. Heidegger's influence has been equally paramount in the area of semantic mysticism, whose connotation words and categories of thought have been applied to the social sciences at large.

Modern naturalistic science - by contrast to the Baconian era of natural science - can no longer accept the idea that the supernatural and natural are intrinsically intertwined in an historic space-time continuum. This position is coextensive with the presupposition which rejects the Judaeo-Christian standpoint, based on a personal God who has communicated to man by a propositional, verbalised revelation of content. Science and philosophy cannot, therefore, accept the 'extraordinary' or supernatural as a part of reality. Alternatively, they are left with a nihilism and the dread of 'nothingness', or may resort to some form of irrational 'optimistic humanism'. Modern science and philosophy have enacted an important epistemological shift in their reasoning: either man 'knows' exhaustively, or not at all.

Yet, this standpoint places man at a point of tension, because he can hold neither of these positions.

According to its own definition, 'normal' science must 'live-in-its-time': it can neither afford to try and re-enact a past age on which to base its presuppositions, nor look towards some futuristic ideal. These paths, according to Bultmann (1961, 4) lead to "schizophrenia and insincerity". The 'rationalisation' of theology and mysticism has subsequently become a prime task in the physical and social sciences. As long as theology is seen to be under the sociological and scientific forms of control, and is in some way always 'evolving', it can be accepted as part of the 'normal' field of knowledge (see De Chardin 1970, 1979, 1979a; Huxley 1961). This implies that an 'autonomous' science must invalidate the Biblical claim on accound of its 'historical irrelevance' and its mystical content. Alternatively, if it does contain social truth, it must be 'demythologised'. Kee (1971, 26-28) suggests that the problem of establishing an absolute or 'God-Being' is prevented insofar that man's reason makes no correspondence with any personal experience or revelation which might be interpreted as 'God', yet inexplicably concedes that "(men) are in fact already seeking something".

The social sciences, in which human geography plays its part, generally seek the validation of their underpinning philosophical and ideological presuppositions by an analysis of the truth-claims of their experimental/experiential methodologies. This is broadly the case for all scientific standpoints - positivist, structuralist and reflexive. Many commentators have attempted to legitimate the contribution of theology as a constituent part of scientifically and socially acceptable rational knowledge. Using the basis of 'experience,' it has often been hoped that theology would enhance the development and clarification of theory, as well as

providing fresh insights for decision-making. This has
proved to be a difficult case.

Schleiermacher (1963) tried to establish an empirical
basis for 'religious experience' and argued that it was
widespread throughout all social levels of existence, and
not confined to the exceptional or the 'extraordinary'.
He claimed that the consciousness of 'being' (existence)
was unconditionally dependent on relations with God.
Schleiermacher implied, therefore, that through an
analysis of his own experience, man would be led to the
acknowledgement and recognition of God. Otto (1959, 24),
in a similar vein, referred to the man-God dependence as
"creature consciousness". Robinson (1965, 117-118), while
attempting to construct a 'new theological atheism'
acceptable to scientific norms, concedes that it is not
possible to depersonalise basic theological tenets in a
social context on account of "the inescapable and
unconditional reality of who he [man] 'really' is".
Robinson contended that the human experience of
theological reality must in some way manifest itself in
personal human existence, i.e. man's being-in-relations
with the world.

The inevitable problem raised ᴧthis standpoint concerns the
extent to which - if any - an individual's or socially
collective 'experience' may be interpreted as a religious
encounter, and therefore to the presupposition of God's
relationship with man in a socio-spatial context. In this
respect, it is possible to argue that man is conscious
both of his finitude and of the phenomenal experience of
the world in which he lives, but to say that he
'experiences God' may be taken as an irrational
deductionism on account of his finitude so that in
reality, such an 'encounter' is not a part of that
experience (see Hume 1968). From a more arguably
scientifically acceptable viewpoint, James's (1982)
pragmatic assessment of mystical experiences was more

inclined towards an understanding of the effects and change which were apparent in people's lifestyles, especially their socio-ethics. James was noticeably unconcerned with the origin and content of such experiences.

The ambiguity, uncertainty and apparent irrationality of religious viz 'extraordinary'/metaphysical encounters in the socio-spatial reality of phenomenal experience have largely initiated the ostracization or outright rejection of theistic overtones in the body of scientific knowledge. Marx (1974a, 244), following Feuerbach's critique of religion, claimed: "Man makes religion, religion does not make man". Marx's materialist critique of religious representations situated religion as a social product, so that 'reason' - emancipated from dogma and prejudices - will ensure progress and material wellbeing.

The scientific outlawing of theology from all aspects of physical and human existence in the nineteenth century was not only attributable to Darwin's evolutionary theory on origins, but philosophically and ideologically to Nietzsche's 'Death of God' concept. Nietzsche differentiated the 'non-religious man' from the 'religious man' not only on the basis of the 'supernatural and his rejection of it, but equally by the repudiation of all morals and every aesthetic point of reference. For Nietzsche, this was not only a question of logic, but one which necessitated the collapse of all metaphysics. Nietsche accepted the tenets of Darwin's theory and was therefore compelled to find a new naturalistic basis for judgement and values. Alternatively, he was confronted with nihilism and social amoralism. Nietzsche (1973, 57) understood religion as a illusion and an expression of man's inauthenticity: "The Christian faith is from the beginning sacrifice: sacrifice of all freedom, all pride, all self-confidence of the spirit, at the same time enslavement and self-mockery, self-mutilation".

There could be neither eschatology, nor teleology, nor could Nietzsche replace God with an historical process which apparently 'led somewhere' in a futuristic sense. Nor could there be any 'making sense' of existence: 'being' was necessarily devoid of meaning, purpose and significance: "The goal of humanity cannot lie in the end but only in its highest specimens" (Nietzsche, quoted by Kaufman 1956, 127). Nietzsche fails to show how some individuals are either different from or qualitatively superior to the 'average' person. To resolve this dilemma, he introduces the concept of 'the will to power', in which, he claims, some men strive to 'go beyond themselves'. The rejection of the will is made coextensive with weakness of logic and an obstacle to self-assertion. Religous faith and conviction are placed in this category. Nietzsche's (1968a) 'world-without-God' was both liberating and terrifying to him and once again reinstates the anarchic idealism found in Rousseau's concept of 'autonomous freedom'.

The significance of Nietzsche's widely accepted statement that 'God is dead' has been reverberated throughout the social sciences, so that in human geography social process and the spatial structures it generates have become wholly secularised. Anthropocentricism dictates all terms of reference in decision-making and policy implementation, yet increasingly runs the risk of losing both its form and content. This confusion has been accelerated by the growing climate of relativism in the social sciences together with man's separation from the developmental stages in factual historical thought in the areas of epistemology and origins.

Nietzsche's contribution towards the demystification of existence and the solidification of atheistic man precipitated a 'Death of God' doctrine within theology itself. In contradiction to the Baconian and Reformation standpoints, this school of thought relates to a complete

loss of any former reality of God at the deepest
existential level. It otherwise presupposes a richness
which has since disappeared, presumably for ever.
Nietzsche's influence on the early work of Heidegger was
profound and in turn, Heidegger's impact in the social
sciences, theology and philosophy is indisputable.

Tillich (1953, V.I; 1957, V.II; 1963) based his
'systematic theology' on Heidegger and concludes that God
'is not'; He is beyond essence and existence. MacQuarrie's
(1955, 1967) 'existential - ontological theism' - also
based on Heidegger - fails to find any 'new way' of
talking about God, or of any notion which might
'secularise' His existence.

Altizer's (1967, 111) 'new technology' claims that: "God's
death has actualised in our history a new and liberated
humanity". This clearly implies that there is no sense in
rejecting the 'secular autonomous-man' way for a
primordial relationship with the sacred. For 'rational'
scientific man, there can be no 'present' God in an
historic space-time context. Only the word 'Jesus' has
any apparent validity in the spheres of historicism and
empiricism, but even this has attracted the attention of
those who seek to 'demythologise' its content and
therefore sterilize its meaning and significance to man
(see Cupitt 1980; 1985).

In contradiction to the pessimism expressed by
contemporary European Philosophy, man cannot be shown
through experience to be meaningless or 'dead': existence
on an individual or collective basis does not support this
proposition. Human geography - along with the other
social sciences - is primarily concerned with developing a
methodology which arrives at 'truth', but is largely
uncommitted to the terms of reference used to express
these ideas. The growing epistemological uncertainty and
confusion in geography and further, its ontological

obscurity, have increasingly generated a trend towards
relativism. When the concept of 'relevance' is applied to
social geographical problems, it gives the impression that
scientific laws are in a constant state of flux. This is
far from being the case. In the physical sciences, the
speed of light in a vacuum is considered to be an absolute
standard. Relativity cannot, however, be applied to human
existence in the same way. Social scientists do not agree
on a unity of knowledge and therefore invalidate any
concept of relativeness. Against his background, there is
no way of testing experience.

As long a modern philosophy and ideology contend that
there is an absolute dichotomy between empiricism (reason)
and metaphysics (non-reason), a 'new mysticism' will
become necessary to stop the gaps in the methodologies of
the social sciences. Much of 'new mysticism' has
attempted to enhance its status and respectability by
adopting a form of scientific symbolism. In the physical
sciences, a mathematical symbol ideally has a well-defined
communication of content and accuracy. This position can
be consistently held for atomistic phenomena and their
determinate characteristics but which render complexity
and inexactitude in the area of sub-atomic (quantum)
theorizing. In the case of the social sciences, the
position is highly ambiguous. It has no definition, but
gives an illusion of meaning. The word-connotation
implies the personal, endowed with meaning and a
communication between the symbol and its reader, but such
a relationship and understanding cannot exist where the
symbol fails to clarify either its content or the terms of
reference by which it might legitimate the internal
consistency of its logic.

Such forms of scientific symbolism and philosophical
mysticism do not expect to find a unified field of
knowledge but rather affirm that meaning and reason are
irrevocably separated and that this is intrinsic to both

the nature of the universe and to human existence. Any
'leap' into an 'optimistic humanism' is a faith-in-faith
which is otherwise in contradiction to scientific
rationality. Man cannot think and act responsibly with
modern dichotomy between reason and meaning, no more than
he can accept a state of meaninglessness in his being. As
a social actor, the individual must, in practice,
methodologically function in terms of thesis-antithesis.
Failing this, he experiences a totalising alienation and
will experience some form of psychological disorder (see
Laing 1972; Jung 1983; Smith 1983).

Human geography will only be able to make clear inroads
into socio-spatial phenomena when a firm epistemology has
been established. This, by implication, requires an
ontology on which knowledge can be based. An expression
of 'faith' in its content can only materialise from a
belief in the knowledge which is available to man. Belief
cannot be acclaimed until the truth (verfication) of an
explanation is established on the basis of historic space-
time evidence. Knowledge in human geography cannot be
based on an emotional, existential experience, nor can it
be said that an 'impersonal + time + chance' equation has
produced a personal man, since this presupposition is
against all experience. If geography adopts a normative
standpoint, claiming that man will at some future time
resolve his problems, current issues remain untouched and
devoid of explanation as to where or how this process will
begin. Rather than attempting to offer some social utopia
- where political, socio-economic, psychological and
ethical dilemmas will be resolved - human geography must
account for man's present sociological tensions and his
disunity with the spatial environment.

GEOGRAPHY AS SOCIAL SCIENCE: BACKGROUND PRACTICES.

Human geography deals with an increasingly wide and
complex range of socio-spatial considerations, most of

which are problematically defined. The field of inquiry is seemingly limitless. In the advanced capitalist nations, it covers the geographical implications of inner city deprivation with its social, economic, political and psychological ramifications; regional economic imbalances and distributional disparities which generate inconsistencies to the accessibility of goods, services, welfare and employment opportunities; the continuing over-production of consumer goods and foodstuffs in Western trading markets. The widening schism between the relative wealth and affluence of the 'North' and the impoverishment of the 'South' is equally of growing concern to Western Geographers. Associated with this phenomenon are the problems of the economic exploitation, ideological subversion and political coersion of many developing countries, often against a backgound of a geography of starvation. The continuing tensions along sensitive geo-political frontiers in the Middle East, Central and South-East Asia, Central and Latin America and the African continent are not only dynamic and unpredictable, but generate a variety of geographical repercussions, not least the oppression of both indigenous nationals and minority groups. At a time when science has fully embraced technology and made it coextensive with the ethos of 'progress', it is both : inconceivable and alarming that the contribution of human geography in this package exhibits a proportionately diminishing prescriptive impact towards the resolution of socio-spatial problems.

Modern man is confronted with an existential dilemma - if not, despair - because he has failed to evolve a scientific or humanistic universal which might be used in decision-making and problem solving. Since the rise of scientism, epistemological inquiry has restricted its vision to methodological issues, rather than the underpinning traditional concern into the conditions of possible knowledge and the meaning of knowledge. Science increasingly denies man the role of the 'knower' and

therefore impairs his philosophical reflection. Moreover, science seeks to establish an infallible position for itself, insofar that it maintains that there can be no independent source of knowledge which might arbitrate over science and its claims. Under a scientific technocracy, society is largely contained by fictional (unreal) institutionalised world-views. These become legitimised and a scientific 'consensus' is claimed. At this point, some doctrine or ideology is formed whose duration is dependent upon its ability to exploit human uncertainty about knowledge and existence. Fear, neurosis and forms of schizophrenia become socially regularised aspects of 'normal' behaviour which otherwise support an unreal scientific 'rationality'. No social theory can dic tate and justify action because the element of risk and uncertainty are ever-present.

The predominant paradigm of the age, under which human geography and the other social science disciplines are subsumed, is based on technological power. This has not ensured health and wellbeing in a socio-economic sense, not does it seem concerned with any notion of truth. If science is concerned with developing views which may be counted as acceptable theory, then only 'rational' concepts of truth can be expected, which will tend to collapse into a disjointed pragmatism. Hubner (1984) argues that there can be no ahistorical, external standpoint from which it might be claimed that science grapples with 'the truth', or conforms to some absolute standard of 'rationality'; nor should it explore this problem by purely philosophical methods. Under these guidelines, scientific inquiry becomes an autonomous form of knowledge in which it is unable to clarify 'what is wrong' with those people who reject many of its claims. All issues which focus on the meaning of truth immediately raise the question as to why any truth-claim should be believed. Definitions of truth have inspired philosophical controversies which can only be fully

discussed in terms of metaphysical and aesthetic concepts.
Science however, insists that questions about truth and
belief can only be pragmatic. It demands concrete
outcomes which provide practical applications to everyday
living which are generally expressed as improvements in
the material quality of life alone (see Rorty 1983).

Given the presupposition that all metaphysical and
aesthetic considerations can be overruled in
epistemological and existential matters, science - as the
perpetrator of 'what is good in the way of truth and
belief' - must still find a way of legitimating a claim
that all knowledge can be objectively constituted within
its field of inquiry. Any attempt by science to transcend
the dilemma of the Kantian subject - object division on
this basis can only be satisfied under the classical
'thesis-antithesis' position. Failing this, science is
compelled to reconstruct Kant's claim that there are
"universal and unavoidable presuppositions of theoretical
and practical reason" (McCarthy 1982, 59).

Any social science which makes claims of normalcy and
objectivity in the positivistic sense becomes self-
deceptive and self-limiting. An 'objective' human
geography must presuppose cultural practices and shun the
social background which mades its objects and methodology
possible. Yet any account of socio-cultural practices
cannot be value-free nor context-free, but require an
interpretation. Likewise, the 'subjective' or humanistic
geography cannot claim to attain normalcy since it
attributes the final explanatory power either to 'everday
meaning' - as in Sartre's existentialism - or to 'deep'
meaning akin to the Husserlian notion of a meaning-giving
transcendental subject.

Neither the scientific nor the social paradigm has any
intrinsic validity. By determining what is a 'problem'
and what may be a 'solution', 'normal' science - and

therefore, 'normal' society - become totalising fields of activity, providing an endless source of prediction and control for those who manipulate the paradigmatic order. Normal science is coextensive with the accumulation of knowledge using predictive techniques which are not truths about how things are themselves. Instrumentally, it is a powerful and insidious form of domination where, under the banner of an elitist ideal (i.e. the paradigm), rules or laws can be derived/devised to suit the purpose. Paradigms may therefore remain intact even in the absence of rules (Kuhn 1970, 42).

Furthermore, the relationship between 'normal' science and the technology which it embraces in its functional coalition is a contradiction: ..."whereas normal science aims in principle at the final assimilation of all anomalies, disciplinary technology works to set up and preserve an increasingly differential set of anomalies, which is the very way it extends its knowledge and power into wider and wider domains" (Dreyfus and Rainbow 1982, 198).

A reassessment of human geography's epistemological status and scientific practice necessitates a return to the background practices of the human subject, because these provide the key for understanding society and its institutions. There is, however, much contention concerning the choice and legitimacy of the basic presuppositions which structure the reasoning and methodology of the inquiry. This is fraught with pitfalls. The individual may seemingly believe what he wants to believe, providing that he can substantiate his claims within a 'logical system' within which: "he can explain all the physical data upon any one of any number of mutually exclusive and contradictory premises" (Morris 1966, 109).

The 'normal' or positivistic scientific method is

concerned with the reproducibility of empirical data in the study of present natural processes. It asserts that the pressupposition leading to the most logical and self-consistent system of interpretation must be based on experimental techniques and statistical arguments. Moreover, a striking shortcoming of positivist methodology is its failure to consider the knower of what is known, yet he is accredited with the full knowledge of things without actually 'being-there'. If, as its system claims, the observer is impartial and neutral, there can be no certitude of a correlation between the subject and the object of the inquiry. Nor is there any reason to assume that anything exists, i.e. 'that data is data'. Positivism, far from clarifying the area of epistemology, generates statistical averages and approximations, with no certainty that anything 'was-there' nor any notion of continuity in the things that were-there. In sum, it can only make statements about that which a thing 'is- not'. Neither 'normal' science nor technocratic instrumentalism appear to have grasped any real understanding of the origins, purpose or meaning of man and his natural environment. In the environmental realm, technocracy's apparent mastery over nature is generally tantamount to the abuse of its resources. The natural environment gives of its best response when man's interaction with it is reasonable and harmonious which, in turn, is dependent on man's measure of responsibility and care. The environment seemingly resists the exploitative and coersive tendencies expressed by technical interests; as soon as its equilibrium is seriously disrupted, its productive utility can fast deteriorate from a lucrative asset to a financial and social liability. The loss of respect and moderation in the relationship between man and the environment largely reflects the obsession for greed and power on the part of technocracy.

For Marx, the basic tenet of any theory of social relations needed to be evaluated in the context of the

environment and natural resources, and thus in terms of
human interaction in the production process (see Bottomore
1984). Marx understood the problem of proving social
reality and reason as a practical question which would be
achieved by an analysis of the ways in which man
transforms the environment and his material world. His
epistemological position could not therefore be divorced
from historical materialism. Production otherwise
'socializes' man's inner nature, from which moral issues
are translated as the self-understanding of a classless
society. This, presumably, may be made coextensive with
the socio-economic 'ills' which are generated under a
capitalist wage system where class differentials are
necessary a part of its functional organisation (see Peet
1977).

According to Marx's analogy, the revolutionary
transformation of society and the environment make
'subject' and 'object' as one because social reality is
neither to be found 'outside' of man, nor as an abstract
form of internalised idealism (see Kolakowski 1978).
Marx's unitary idealism about socialist societies tends to
be an illusory concept in this light. Three important
considerations may be immediately raised. First, social
democracy requires an active, self-disciplined working
class who control the means of production and participate
fully in decision-making at all levels (see Kitching
1984). Secondly, the realisation of Marx's socialist
ideals is, moreover, a normative theory which bears little
impact to the present. Thirdly, a collective social order
does not mirror the individual will. Lukes (1982, 139)
points out that such a standpoint cannot possibly show
that people would reach a 'rational consensus', but
conversely: "there is ... every reason to suppose that
they would not ...".

Any conception of social reality, truth and ethical norms
which are expressed in classical philosophical terms or

which are connected with metaphysical values is categorically rejected by Marxism. Otherwise, it would be tantamount to a recognition that nature and the human condition are contingent upon certain external limitations. This contradicts the Marxist vision of an alternative future and the emphasis on social actors creating their own destinies (see Worsley 1984).

Although Marxist theory overlooks the 'irrational' characteristics - fear, greed, pride, prejudice, and so on - inherent in the human condition, they are manifest in reality. No political ideology can eradicate individual 'irrationality', except by imposing collective restrictions by force, in which case, coersion is merely a temporary masking of the real dilemma. Rather, it provides a fragmented view of who man really 'is'. Truth, social reality and social values in the Marxist sense correspond to some fundamental 'human good' which can only be defined and substantiated from a materialist standpoint (see Lukes 1985).

Alternatively, others have attempted to reconstruct the problem of background practices by appealing to psychological inferences and language. While Freud largely reduced all aspects of human background practices to the 'libido', and Jung to the pursuit of (self) 'individuation' and the uncovering of 'archetypes', both methods fundamentally agreed that no meaningful 'rational consensus' could be achieved unless their subjects willingly and voluntarily accepted and recognised the problems inherent in their conditions. In a modern technocratic society, social action and communication have become distorted and conditioned by dominant power groups and repressive socio-economic policies. Man has been denigrated to the role of the 'object' and has thus surrendered much of his subjective creativity and realism. This, by implication, demands a definitional unveiling of 'progress' which concerns not only an interpretation 'how'

socio-economic geographic inequalities are generated by a particular system, but equally the question 'why' these should arise.

The discussion of background practices from the presuppositions of a psychological line of inquiry require that human characteristics such as conscious deception/unconscious self-deception, insincerity and inauthenticity be recognised and eradicated if any 'rational' consensus is to be forthcoming. How are individuals to be made aware of these conditions? By whom and by what means? Do people have any real interest in reviewing/recognising these problem? Such a discussion is once again contingent on the interpretation and meaning of 'truth'. It may be evolved, modified or reconstructed to suit social praxis under a political ideology, but unless its ontological and epistemological bases can be fully expounded, it is no longer 'truth'. Individuals have different conceptions of life, where the diversity of philosophical and religious beliefs, and of political and social doctrines tend to obscure the meaning of any 'rational consensus'.

LANGUAGE: THE UNIVERSAL EXPERIENCE

An examination of background practices through the study of language has become a potent contemporary medium of both philosophical and social inquiry, to which human geography has also been attracted. Notwithstanding, there is no agreement for the application of linguistic or semantic theorising in the social science to that a variety of theoretical approaches prevail. The aim of all linguistic work is to discover the relational and structural characteristics which make meaningful communication possible in human existence. Rossi (1981, 63) refers to this as 'transformational structuralism', in which there is a need to penetrate beyond the surface issues that largely preoccupy the positivist and behaviourist

assumptions. The axiom of language is contained in an examination of the 'deep and real structure' which shape 'observable phenomena' and 'conscious explanations' as well as their 'apparent contradictions'.

Language as a branch of transformational structuralism, is thus based on the presupposition that human existence is governed by basic universal structures which provide uniform categories of the human mind. The analytic depends on the unravelling of the meanings of language found in the deep abstract levels of human existence. These 'deep' structures do not easily lend themselves to an analysis by an empirical scientific methodology, but rather their transformational mechanics must be uncovered and explained in social praxis and behaviour (see Leach 1981). This approach is not without its problems and moreover, the fundamental arbitrary and obscure nature of language. This is further compounded by the use of signs and symbols which shroud the content and meaning of language (see Harvey 1969, 32).

Chomsky's (1965) work with structural linguistics has attempted to identify the fundamental characteristics of language systems which govern everyday speech useage. He considers that there must be basic, genetically imprinted rules which govern all forms of human communication and that all language systems are biologically determined. Chomsky's aim has been an attempt to isolate the general principles which permit the transformational aspects between the rules in language systems (langue) and everyday speech acts (parole).

Piaget's work on analytical structuralism investigates the structures which govern the development of human intelligence. The methodological approach and problematic orientation are similar to those found in Chomsky's analytic. Piaget's structure is a system of transformations based on three concepts: wholeness (compositional laws),

transformation (the mechanics which structure and organise laws), and self-regulation (the dynamics which maintain stability in, and which give meaning to the structure). Piaget understood the human intelligence as man's ability to learn and assimilate new material with which he could experience the phenomenal world. Man must therefore aspire to greater levels of intelligence and action.

Much of Piaget's reasoning appealed to the integration of evolutionary theory so that his transformational structuralism is essentially a closed system which is not open to reordering by any philosophical or psychological notions of 'insideness' or 'outsideness': "... man can transform himself by transforming the world and can structure himself by constructing structures; and these structures are his own, for they are not externally predestined either from within or without" (Piaget 1971, 118-119).

By contrast, Levi-Strauss's (1963) examination of the deep structures which underly human existence and social systems focussed on the theory and practice of transformational structuralism in social anthropology. His methodology provided scope for the integration of cultural, mythical and mystical inferences not uncommon to the psychoanalytical work of Jung and James. Levi-Strauss believed that all deep structures which govern human behaviour and speech are "... preordained by unconscious forces beyond human control" (Kurzweil 1980, 27). Akin to the views of transcendental phenomenologists - and particularly those of Husserl - Levi-Strauss's analytic must also accommodate the metaphysical phenomena which comprise a part of those unconscious forces which he hopes to identify as the transformation of deep structure.

The methodological complexities in Levi-Strauss's work, together with the assimilative and interpretative difficulties of its metaphysical content, have largely

tended to isolate it beyond the parameters of normal
scientific inquiry.

Habermas argues that in language man can discover the
essence of rational personality in which autonomy and
responsibility are couched. In this concept, he suggests,
the history of reason is contained. For Habermas, speech
must be made the condition where man's internal nature
(insideness) and the external world and society
(outsideness) become fixed. Habermas contends that if
human existence is made coextensive with debate, then the
bases for an undistorted and prejudice-free discourse must
be uncovered. This he terms as an 'ideal speech
situation'.

In contrast to Marx, Habermas substitutes a theory of
action related to a class struggle for one of
enlightenment based on rational argumentation. Man
somehow has to reach a point of self-recognition which
will provide a basis for a consensus and therefore,
rational action and positive decision-making. According
to Habermas (1971), Marx failed to recognise the
distinction between work and language, and by subsuming
the latter into the former, failed to grasp the potential
of dialogue as the vehicle which provides "the
inseparability of truth and virtue, of facts and values,
of theory and practice" (Held 1980, 250). Similarly, in
his critique of capitalism, Habermas (1974) suggests that
the increasing authoritarianism of the capitalist state,
maintained by class contradiction, jeopardizes the
possiblity of some 'pure' form of dialogue. Habermas sees
people as locked into systems of administrative
rationality, but with no means of establishing a
democratic consensus so that decision-making can become a
collective activity.

Accordingly, Habermas grounds his claim for an 'ideal
speech situation' within the presupposed existence of an

'emancipatory interest' amongst those seeking liberation from state power, or, for that matter, from any kind of authority. This is an ambiguous concept because it implies some combination of work, language and decision-making. Habermas requires an ideal institutional basis where social and political conditions foster and promote the free and equal access to participation in discourse and debate (see Bernstein 1984). The notion of a 'debate among equals' is an exclusive concept, promulgated within an utopian ideology.

Habermas's idea of communicative rationality is grounded in the classical notion of 'logos'. His linguistic-truth dialectic claims are not addressed - as Plato would have it - to a 'particular audience' who already have some prior understanding with the teller, but to a 'universal audience' (Habermas 1984). This corresponds to an Aristotelian view of some unspecified form of egalitarianism, where the pre-requisite for a participatory politics calls on the 'common sense' of the mature citizen rather than on any specialised scientific knowledge. In this case, the dangers of self-deception and delusion constitute an omnipresent dilemma insofar that the individual is given self-accountability for his responsibility and decision-making as a social actor. Furthermore, Habermas fails to acknowledge that in an 'ideal speech situation', many people will not gain access to a certain circle of understanding because they continue to lack the necessary insight required for the relevant understandings. Modern political structures of all ideological persuasions deny the masses an undistorted and complete view of rationality, not least because technocratic instrumentalism increasingly demands that the nature and scope of human action in the contemporary world must have some degree of theoretico-technical knowledge in order to 'participate' (see Bell 1974).

Habermas's theory of language as a precondition for a

rational consensus in the social sciences may be critically reviewed from various standpoints. Habermas (1979; 1984) rejects the view of classical philosophical inquiry that a complete view of knowledge can be uncovered. Instead, he finds contemporary philosophy is 'post-metaphysical'. This means it can establish the 'formal conditions of rationality' in knowing, in linguistic understanding and the truth claims of social actors. Habermas does not seek any substantive theories of nature, history or society. His epistemological standpoint differs from that of Kant insofar that Habermas rejects any notion of an ahistorical transcendental subject which might determine the preconditions for any experience. For Kant, reason must reflect upon itself to discriminate between an unprejudiced valid knowledge and that of mere speculation. This implies that if authentic social relations can be discovered, then society can emancipate itself from the illusions imposed by ideological conditioning and self-deception. It might then be possible to develop a profound critical faculty which penetrates all forms of social and political conditioning. In opposition to Kant's conception of an autonomous self, Habermas dismisses such claims as monodological mythico-magical world-views whose internal structures resist verification and which imply that man is 'more than man'. Habermas rejects that Kantian ideal that man discovers 'pure reason' first at the individual level. 'Individuation' for Habermas must be "a process of sociation" (McCarthy 1982, 76). Habermas's efforts to reconstruct Kant's thesis through emphasis on language rather than an historical consciousness, fails to uncover any claim that man possesses any rational autonomy of a history of reason. Habermas has no grounds to attenuate the notion that man is a rational being, or that he has the potential to an autonomous self-revelation of 'self'.

In a 'speech situation', where people realise their potential as rational social actors, Habermas must account

for the linguistic content of that which is
communicatively shared. Equally, in order to claim an
'ideal speech situation', Habermas must first establish
the grounds for the generalisability of interests. If he
seeks to unravel a systematically distorted communication,
Habermas must, at the outset of his critique, presuppose
some idea of what undistorted communication is. Habermas
cannot, however, account for the ways in which
communication is distorted, or how it might be removed, or
as to how a legitimate consensus may be established.
Habermas tends to underscore the fact that in any analysis
of language, some consideration must be made of the
communicative competence of each participant.

Every speech-act contains certain validity-claims which
make speech comprehensible and recognisable and open to
verification. Without validity-claims, speech would have
no intelligibility, nor could the 'truth' of its
propositional content be tested or debated. Philosophy
has always presumed that the language not only asserts an
autonomy which is anticipated, but also which is real.
Language is thus accorded the status of an 'interest of
reason'. This itself is an 'a priori' assertion and
cannot claim to be empirically derived. Any theoretical
presupposition which are grounded in an analytic of ' pure'
language or 'ideal' speech-content constitute a 'faith' or
a 'belief' which has no historical validation. Habermas's
position is therefore ideological and his notion of
'anticipatory emancipation' through a prejudice-free
discourse appears to be theoretically fictitious. It
follows that "the conditions of ideal speech may be
neither necessary nor sufficient for the attainment of a
'rational consensus'" (Thompson 1982, 130). Equally, in
attempting to reject the classical philosphical dilemma of
'hope' and 'despair', the utopian overtones of Habermas's
rationalisation of discourse effectively reduce his theory
to a form of optimistic humanism reminiscent to a
Kierkergaardian 'leap' of faith: "... the concept of

communicative rationality does contain a utopian
perspective" (Habermas 1982, 227-228).

Habermas's insistence on an 'ideal speech situation' fails
to take account of the origin, content and diversity of
cultural traditions or of the geographical distribution of
material and technical resources. It is unlikely that all
speech is ultimately going to provide a universal
consensus for a rational, free and just society. Moreover,
human 'rationality' and 'understanding' are generally
prejudicial towards their own (self-) interests.
Habermas's theory of language is not a fulfilled
proposition because it expresses the philosophy of 'as if'
ideal speech 'was' the case in hand. The crucial factor
concerns the content of knowledge contained in any (ideal)
language, about which Habermas can say nothing. Similarly,
his 'emancipatory' interest in 'ideal speech' is a
normative assertion which is hardly a generalisable social
condition.

The real structure of society is, moreover, fraught with
irrationality and contradiction. It is precisely these
aspects of human existence which man tries to conceal.
Habermas has broadly recognised this tension and refers to
its condition as a 'quasi-transcendental' interest.
Habermas's assessment of the human condition is deviod of
any sensitivity - it is all too mechanical: "Habermasian
man has ... no body, no feelings; the 'structure of
personality' is identified with cognition, language and
interaction" (Heller 1982, 22). The real dilemma and
shortcoming of all Habermas's theorizing is his refusal to
integrate any concept of moral rationality within his
linguistic idealism. Any discussion of a substantive
social existence and human interaction with the spatial
environment are constrained by metaphysical limitations.
Without such considerations, theoretical and practical
reason are at best only partial truths insofar that the
epistemological backcloth remains incomplete and

fragmentary. The real essence of 'self' in human
existence remains preclusive.

Foucault adopts political reality as the presupposition
for uncovering the truth-claims of linguistic background
practices. Language is part of a larger field of power
and practice whose relations are articulated in different
ways by different paradigms. Foucault wishes to eradicate
any ethical or metaphysical content from his analytic of
language. The legitimisation of discourse cannot, he
claims, be realised by appealing to some idyllic,
futuristic priniciples; nor is the reinterpretation of the
origin of language possible in the phenomenological
context of some past 'golden age'. Foucault (1973; 1975)
rejects these hypotheses as the 'herneneutics of
suspicion'. Rather, something in man's historical
practices seems to have defined him.

All empirical investigations into linguistic practices
ultimately collapse into mysticism. Man, although
seemingly divorced from his origins, is 'already there'.
He cannot get behind his language, but uses it with some
understanding (Foucault 1973, 332). To make mystical and
metaphysical provisos in linguistic practice presents an
impossible exegesis steeped in theology which, in
Foucault's (1975, XVII) view is "ever secret, ever beyond
itself".

Foucault (1972, 16) attempts to make discourse autonomous
within an "archaeological" structural holism, "purged of
all anthropologism". Discourse, he claims, unifies all
systems of practices - social, political, economic,
technological and pedagogical, but nothing is
transcendental in its workings. Speech-acts are part of a
"rule-governed system" (Foucault 1968, 29).

Beyond this, Foucault concedes that the source of man's
meaning is unobtainable. He can neither justify the

autonomy of discourse, nor the philosophical position of
phenomenological detachment necessary to establish the
ahistoricism of his 'archaeological method'. Foucault
(1979, 75) attempts to offset the dilemma by introducing
the notion of "truth effects within a fictional discourse"
where his terms of reference are contemporary society and
its problems. There is no resort to past, historical
conceptualisations which might be used to explain the
cumulative development of present-day issues. Foucault's
work indicates that although discourse is based on
knowledge, the dilemma of the knowing and telling of
'truth' remains as long as man's ontological origins are
untouched. Otherwise, any attempt to make discourse
autonomous requires the denial of any teleology of reason,
deep meaning or 'concealed origin' in history or outside
it, and moreover, of any logos which is before, he behind,
or beyond history while remaining situated in history.

In his final pronouncements on 'ordinary philosophy'
Wittgenstein (1961) attempted to construct an
(unambiguous) 'ideal language' based on a Russellian
philosophy of logical atomism. The fundamental problem
concerned the description of the structure of the atomic
propositons. This raises an epistemological dilemma -
what is knowledge; what is the essence of knowledge?
Wittgenstein could find no strict definition, nor did he
think it possible or desirable. The mystery of meaning
would only disappear when an 'unprejudiced' vision was
adopted to the way words are used. Much philosophy,
according to Wittgenstein, treats a word as if it has a
name. The personalisation of the basis of language is a
seemingly unavoidable metaphysical trap. Such analyses
assume mysterious 'pseudo-entities' which are set up as
the objects of reference. It tends towards a belief in
universals. Alternatively, 'understanding' a word, or
'learning a word's meaning' is also a way of deciphering
epistemological complexities, yet it still creates the
necessity for an 'idea' or 'content' which must then be

comtemplated by the inquirer. This runs the risk of collapsing into a fragmented array of possible interpretations.

In the case of 'language games', meaning is only derived if the speaker is talking to someone who already understands the game. By this, Wittgenstein does not mean one who understands the mechanics of the internal logic of learning structures, but how the meaning of our (own) language is understood. Wittgenstein's crucial presupposition to linguistic practices is that every proposition must have a clear and definite sense. In Russellian terminology, most propositions contain complex expressions which cannot be called 'logically proper names'. If propositions are to have a definite sense, then the sense must refer to names, otherwise the 'sense' or 'object' will remain undisclosed (silent) because it cannot be discussed if it has no identity. It follows that all the 'truths' of philosophical and scientific logic consist wholly of tautologies. According to Wittgenstein, a 'proof' is merely a mechanical expedient for recognising tautologies, so that all propositions of logic say one and the same thing – nothing.

Wittgenstein's dilemma was to somehow dispense of the human mind and of knowledge responded to some transcendental influence or entity. In such a case, this would raise a host of intractable problems as to how spiritual essences interact with body and mind, for which philosophy and science have no answers. Wittgenstein dismissed this problem in claiming that metaphysics arises out of the fact that the 'logic of language' is not understood. In an 'ideal' or 'pure' language, logic would be unnecessary and metaphysics impossible – all things would be known and understood. Wittgenstein understood metaphysics as an attempt to transcend the limitations of language, beyond which nothing can be said. The ethos of human background practices is 'silence' while the

metaphysical content of language is unrecognised or refuted, yet without it, speech is ambiguous and meaningless because none of its propositions have any real sense of identity. Nor can any speech act on this premise either establish or justify the terms of reference through which is must validate its content and 'truth' claims.

Alternatively, to presuppose that the structure and content of language begins (and is maintained) on an impersonal basis would render all communication between man and man, and man with himself, an impossibility and a nonsense. In such as case, nothing can be known about anything. Wittgenstein's assessment of this dilemma is inescapably implicit for a return to origins: if it is presupposed that the telos of reaching 'understanding' is to be found in the concept of speech with a communicative content, then no explanation of what it is 'to reach an understanding' can ever be thought or discussed unless it is first known what it is 'to speak'.

Heidegger's (1958) hermeneutic study of language signified a methodological digression from his initial phenomenologico-ontological standpoint - his work, Being and Time - in which he hoped to uncover the source of reality ('Being') and the meaning of existence ('being'). Although Heidegger's early (non-linguistic) work is confusing and ambiguous, it is clearly influenced by the possibility of an encounter with metaphysics and mysticism. Simplistically, the object of Heidegger's analysis is man ('Dasein') as an object in a world of objects. Man as 'Dasein', however, enjoys a special position because he relates to himself in terms of his own 'essence' (see Heidegger 1962, 105-106; Pivcevic 1970, 114). According to Heidegger's 'concept of possibility', man either authenticates (voluntarily choses-to-seek) or inauthenticates (chooses not-to-seek) his understanding of his own existence. There is no certitude, however, that anything is-there to be discovered; the proposition of

'being' or 'Sein' (an existence-with-meaning) must be counterbalanced against that of 'non-being' or 'Nichtsein' (an existence devoid of meaning, or 'nothingness').

The elusiveness and vagueness of Heidegger's terminology is equally prevalent for his concept of 'Being' (what is-there to cause existence to-be). For Heidegger, the source of 'Being' is unknown to man in which there is a dualism insofar that 'Being' is ambivalent (see Heidegger 1962, 24-28, Pivcevic 1970, 121; Kee 1971, 34-35): 'Being' is not itself an existent, but it is not nothing; it is not one entity among others; it is not that of a 'class' or 'genus'. 'Being' cannot be disclosed in normal terms - it strictly has no definition at all - but is something 'primordial'. 'Being' then is both hidden and revealed; it concomitantly appears and withdraws from 'Dasein's' view. The relevance of truth and meaning which it contains can only be apprehended by philosophical reflection about its fundamental ontological essence. The history of Western thought has been forgotten: "... the beginning is the veil which conceals the origin" (Heidegger 1972, 152). Heidegger places the onus of this omission on man and refers to it as a 'failure' on his part. In this sense, man has abandoned the questions of his origins and meanings, substituting them with his own (autonomous) version of 'truths'.

The 'early' Heidegger of Being and Time failed to reveal both the nature of 'Being' and the meaning of 'being'. At this point, his attentions are drawn to the possibilities of language as a vehicle which may provide the authentic access to the subjects of his inquiry. The 'later' Heidegger's shift in emphasis was towards the language of poetry in which, he claimed, all 'authentic' thinking and metaphysical truths were contained. Conversely, Heidegger shunned any reference to the language of the scientific and technological rationality whose logical reasoning was seen by him as impoverished, formalised and

philosophically inferior, and moreover, set in
contradiction to his expectations. Reflexive and
contemplative thought, according to Heidegger, encounter
things which cannot be accommodated nor understood by
scientific logic.

Heidegger's 'new' position is that 'Being' communicated
with 'Dasein' in poetic language during a 'golden age' at
the time of the pre-socratic Greeks, prior to Aristotle
when, he claims, man had a unity of knowledge and an
'ideal' universal speech situation existed. There is no
historical evidence for such a 'golden age', yet Heidegger
insists that the 'essence' and 'message' of 'Being' could
be found in the "oracular obscurity of the pre-Socratics"
(Blackham 1982, 108-109). This is Heidegger's basis for a
'mystical hermeneutics', which otherwise is another form
of philosophical 'romanticism'. Equally, Heidegger could
not justify his presupposition that in the Greek language
alone is logos from which he hopes to recover the lost
fact of authenticity and meaning which 'Being' speaks to
us.

Heidegger's linguistic position is thus based on the
premise that a part of 'Being' is the existent, 'Dasein'
(man), who verbalises. Because speech is a universal
experience and was supposedly 'pure' in a pre-Socratic
era, Heidegger believes that it can shed some kind of
meaning to 'Being'. The poet becomes the prophet because
in him there may be mystical explanation and hidden
meanings, as yet obscure. In this way, Heidegger is
presupposing that something ('Being') is-there, 'Being'
does reveal itself, and that language (a communicated
speech) is both central to, and reveals the identity of
'Being'. Language is in itself a hermeneutic.

Heidegger, however, cannot clarify the 'message' of this
poetry. He concludes with the admonition 'but look at the
poet'. This implies that somehow (an 'irrational'

optimism) there may be a greater 'truth' about reality and existence that what could rationally and logically be expected, merely on account that the poet and poetry both exist. When Heidegger says 'listen to the poet', he does not in fact mean that we must reflect on the content of what the poet says. The area of content is immaterial because it is a hermeneutic and therefore sets up contradictions. The real emphasis is poetry as-it-is, because for Heidegger, its mystical linguistic connotations provide the speculation for a 'more real world', yet, according to Heidegger's analysis, one without any content or meaning.

The most intriguing point of tension in Heidegger's linguistic analysis is, by implication, the attempt to integrate the notion of an historic Fall into his new system. Aristotle, and all those who follow him are 'fallen' because they begin to think in terms of a rationale alien to the pre-Socratic Greeks. Aristotle's philosophy somehow instigated this schism so that, for Heidegger, Aristotle, by implication, substitutes the place of Adam as 'the one that fell'. Heidegger appears to see himself as the one to recapture the 'saving grace' of 'Being'.

Heidegger, however, rejects the Judaeo-Christian insistence for the recognition of sin, repentance and deliverance. As he sees it: "Theology is seeking a more primordial interpretation of man's Being towards God, prescribed by the meaning of faith itself and remaining within it ... its system of dogma ... conceals and distorts it" (Heidegger 1962, 30).

Unsurprisingly, Heidegger's concept of the Fall has no moral content, but rather emphasises an epistemological and methodological abnormality in man's thinking. Heidegger, nonetheless, ensnares his case in his own linguistic standpoint, metaphysics and all. Heidegger

otherwise shows that since Aristotle, man thinks and
reasons 'abnormally', yet Heidegger has no historical
basis by which he can explain this occurrence.
Furthermore, Heidegger's analysis supports the contention
that philosophy lacks the explanatory power to account for
the dilemma of man's loss of meaning and understanding in
the areas of knowledge and existence on the basis of man
and history now being 'normal' and 'rational' thinking and
reasoning has ever taken place, so that man now 'is' as he
always 'has been'. Such an argument has clearly been
insufficient to legitimate either the 'early' or the 'new'
presuppositions of Heidegger's work.

Heidegger's linguistic proposition - the impersonal and
unknown point of reference 'Being', speaking through
existence ('being') to man ('Dasein'), who verbalises - is
equivalent to man's acquisition of meaning and
understanding about 'nothing'. In such a case, Heidegger's
earlier concept of 'angst' has yet to be removed. This
corresponds not only to man's dread of 'non-being' after
death, but equally to the purposelessness and
meaninglessness of both 'being' and of 'Dasein'. In its
socio-spatial context, it signifies man's total
alienation, anonymity and depersonalisation in every
sphere of existence, from his social relations to his
interaction with the spatial environment. For as long as
'Being' is denied the attributes of any intelligible and
communicative speech content, there can be no truth-claims
about knowledge and existence in any field of inquiry. Nor
is it conceivable that Heidegger (1972, 105-110) - by
appealing to Neitzsche's thinking - should encourage
'Dasein' to 'go beyond' itself through its inherent 'will
to power' to seek an encounter with 'Being' when, in fact,
'nothing-is-there'.

In sum Heidegger's 'Being' has no propositional content
with which 'to speak'. It would appear that Heidegger
would require something akin to the Judaeo-Christian

standpoint of 'Being', but without its moral content or
the need to recognise that knowledge is an expedient of
'being'. The possibility of the presupposition is anathema
for Heidegger since it implies that Being' ('Someone') has
spoken 'behind man', which is the antithesis of all
Heidegger's thinking and philosophy.

CRITICAL REMARKS ON BACKGROUND PRACTICES

The universality of language, as a source of possible
insight to human background practices, fails to uncover a
comprehensive reconstruction of meaning and understanding
in the areas of knowledge and existence. Both Chomsky's
and Levi-Strauss's works have been critically received on
account of their methodology, intricacy, the difficulty of
reconciling theory with practice, and the problem of
isolating and identifying a 'deep' structure, whose
conceptualisation has not generated either a wide appeal
or much agreement against scientific reasoning.

Nor does Piaget provide a convincing basis for his
methodology. He underscores the aesthetic qualities of
the human condition by outlawing any notion of 'essences'.
His transformational arguments are almost entirely
dependent upon the preassumptions of evolutionary theory,
but, as in the case of Quine's behaviouristic study of
language, there is no wide agreement that human behaviour
can be explained solely in physiological terms. Indeed, it
would be rash to assert that psychology, sociology and
human geography are all ultimately reducible to physical
and chemical equations.

Habermas wishes to depoliticize the ground for the
development of his 'ideal speech situation' so that his
study of propositional truth claims in language is
entirely theory-based. His immediate problem would be to
find a point of access in whch he could integrate his
theorizing in a practical social context. This in itself

is problematic. It is unlikely that people will develop new concerns about a utopian 'emancipatory' ideal whose concretion seeks liberation from all kinds of authority. Habermas gives no guarantee or assurance that the interests of an 'ideal speech situation' correspond to a criterion of responsibility and commitment.

Foucault's analysis of language collapses at the point where the ontological confrontation is encountered, about which, he claims, nothing can be discovered. He then grounds all discourse within the internal logic of contemporary politics and power struggles. Wittenstein's study of the propositional 'sense' in the content of language led him to the conclusion that either linguistic practices smacked of metaphysics, or that normal science had not yet grasped the 'logic of language', for which he could provide no directive. For those like Heidegger who seek to locate and identify the source of the initial linguistic blueprint in an historic space-time context, any propositional revelation of speech is contingent on the inclusion of metaphysical and mystical inferences. Koestler (1982, 684-685) also drew this analogy in his appeal to the historic Babel to explain, as he saw it, the inadequacies and shortcomings of man's theories and beliefs. If the contention is held that social philosophy is now engaged, as a final resort, in the hypothesis that 'rationality' is to be found in language, and that if this is rejected or collapses, then all disciplines of knowledge in the social sciences will ultimately be compelled to seek a 'higher principle' of rationality. This would conform more closely with the Kantian position of 'pure reason' as a condition which "is not an empirical given but a special mode of reason which ... imposes itself directly and unrestrictedly on the subject's self-understanding" (Bubner 1982, 49). 'Rationality' cannot, it seems, be revealed or contained within a 'normal' scientific paradigm. As for the potentiality of the truth claims in speech: "Belief in the reliability of language

or in perfect forms of communication ends in rhetorical
delusion" (Bubner 1982, 51). Rather, the linguistic
manifestation of dialogue is a secondary outcome of a
deeper underlying conception of what is social rationality
both in theory and in practice.

RATIONALITY, REASON AND REALITY

Human geography - as a social science which examines the
behaviour and thinking of social actors in a spatial
context - is compelled to legitimate its epistemological
and methodological underpinnings through the exposition of
rationality, reason and reality. This at once seemingly
raises a hermeneutical dilemma: these terms may assume
differences of interpretation and therefore of
definitional content according to the choice of
philosophical departure which will dictate the given
terms of reference. No social science discipline can
ignore questions about the human condition, and
therefore who the individual precisely 'is'. The
recognition of this prerequisite sharply differentiates
the social sciences from the physical sciences.

Many of the basic assumptions about human rationality,
reason and social reality have become increasingly
circumscribed by scientific procedure and the meaning(s)
which it subsequently attributes to these areas.
According to Horkheimer (1974), scientific reason is
concerned with means and ends. It possesses the
technical procedures to achieve an end, but these do not
necessarily generate the rationality of the end itself.
Scientific reason is concomitant with instrumentalism.
From this perspective, reason is no longer rational
insofar that social scientists are influenced by
philosophical presuppositions acceptable to their own
views about man's role in a societal and environmental
context. An instrumental reason is not synonymous with an
objective rationality; that is, all beliefs which are not

scientifically (positivistically) verifiable constitute an altogether different reality which is inaccessible to scientific reason is said to be irrational or mythical and is frequently equated with ideology and dogma. Much of the problem concerns the search for a common rationality in which there will be a consensus for both reason and reality. This requires the assumption of a universal human condition, which, as MacDonald and Pettit (1981, 31) suggest, is founded on a "belief in the unity of human nature - a belief that people in different cultures are essentially similar".

These notions are fraught with problems, but have largely been compounded by the predominance of 'normal' scientific inquiry as the paradigm of rationality. Empiricism and its logic do not always provide a wholesome and complete view of human socio-spatial relations. Inspired by Hume's (1965) work, empiricism rejects the existence of acausal or 'concealed' agencies in networks of apparent regularities. Its credence has been eroded from many quarters. Quine (1964, 22-29) - himself, an empiricist - has recognised that the very notion of a basic experience becomes exposed as an empiricist prejudice due to the inadequacies of both theory and data. Empiricism cannot call on experience to show how two events are causally related without invoking a theory which may explain the unobservable entities which provide the connectivity in the relationship. Kuhn's (1962) anti-empiricism has also attacked the rational foundations of 'normal' science insofar that much knowledge and belief - claims are the products of social forces of which many people have little or no understanding. Feyerabend (1981 a) is particularly critical of the paramouncy of Western science and its 'rationalism' over all other traditions. Rather, Feyerabend interprets it as one of many kinds of social practice and its reason as a tradition. Reality, for Feyerabend (1981, xiii) depends on man's ability to choose between competing alternatives: "We decide to

regard those things as real which play an important role
in the kind of life we prefer". His basis for the
scientific method becomes the principle of 'anything
goes'.

By Feyerabend's (1978) standards, reality and reason
have no universal meaning. Holistic knowledge has
collapsed into a fragmentary empiricism so that
reflexivity and praxis have been abandoned. Wilson
(1985) views this trend as a sign of pessimism:
contemporary social science is inadequate because it
reinforces the climate of social instrumentalism. For
Wilson, progress is an illusion, innovation is dead and
science is otherwise in crisis. Luckmann's (1983)
phenomenological approach to the meaning of social reality
attempts to treat the structures of the life - world as-
they-are-experienced by conscious actors. He suggests
there is a dualism in life-work structures: first, in
terms of a strict Husserlian phenomenology where
structures only become a part of an individual actor's
experience insofar that he encounters them in the world;
secondly, seen in terms of philosophical anthropology and
biology, structures must be understood as fixed
constituted realities which have always been a part of the
life of a species into which the individual actor is born.
Luckmann, however, wishes to restore the primacy of the
human mind by undermining historical objectivism so that
the possibilities of history are limited by structures of
human consciousness and existence. Man, in other words, is
responsible for the making and structuration of his
history and his social reality is, at any given point in
time, a reflection of his own conscious condition.

Luckmann's position raises a moral dilemma insofar that if
historicity is not an entity unto itself, it is a
structure projected and assembled by man. This calls for
an evaluation of what is 'good' or 'bad' for mankind, and
what is just, selfish or based on greed. In sum, this

demands a statement of the theoretical foundations which
seem to legitimate the validity of such a position. Berger
and Kellner (1982, 74) do not lend much support in this
area because social science "presents a spectrum of
meanings and values ... but ... cannot tell people whether
they should or should not adopt these meanings and values
as their own". If, as they believe, it is not possible to
discover laws about social reality, then the social
sciences reveal the different ways in which people can
construct social reality, but not the nature of social
reality itself (see Mehan and Wood 1975). As Trigg (1985,
97) has pointed out, "the basic question should be the
truth of beliefs rather than their rationality". The
treatment of individuals solely as agents within a social
process which they hardly understand tends to overlook any
rationality of their own. The beliefs of individual actors
cannot be dismissed irrespective of the social context in
which they are found. Nor can the identification of a
particular belief be made coexistent to its social
context. The explanation of the social context of a belief
differs from the assessment of the rationality of the
belief itself. It is dubious as to whether questions about
individual rationality can be accommodated within the
paradigm of 'normal' scientific explanation. If the
scientific rationality is the cultural product of only one
type of society (see Winch 1958), then a technocratic
rationality is not the only criterion relevant to an
assessment of human socio-spatial activity. This suggests
that if instrumentalism cannot achieve a paradigmatic
consensus, then all else is nihilism: "Once it is accepted
that science merely forms one set of practices alongside
others, social scientists are left without any standards
for judging a society" (Trigg 1985, 84).

The contemporary view of the scientific rationality as a
form of ethnocentricism is hinged on the work of Max Weber
and Durkheim. Weber's (1958) view of rationalisation
processes was centred on the culturally specific

limitations of rationality in Western capitalist
societies. The chief configuration, as he saw it, was an
analysis of economic, political, legal, administrative and
religious structures. Each sphere, he contended, was
unique and was not reducible to any other. Weber asserted
that no rational social order could be an expression of
justice and equality. Moreover, increasing knowledge in
itself creates various forms of domination, power
struggles, economic conflict and the dehumanisation of
social actors. The rationality of modern capitalist
societies - as Weber saw it - was always at a point of
tension as it attempted to resolve the perpetual conflict
between the substantive rationalities of particular groups
and individuals, whose ideal and material interests
conflict one with another. Scientific rationality is thus
equated with pragmatism insofar that there are no specific
terms of reference to which society as a whole can appeal,
nor by which any agreement might be possible (see Rorty
1980, 318). Recognising this dilemma, Weber argued that
the economic and political structures in the capitalist
world pursue definite forms of domination in an attempt to
contain potential disorder. Weber's view of scientific
rationality is therefore one of unfreedom and
meaninglessness.

Durkheim did not accept that ontology could be based on
nominalism and phenomenalism per se, nor that epistemology
was uniquely derived from observation or experience.
Moreover, he sought a holistic and trans-subjective method
to examine problems in social science, hoping to
circumscribe some parameters to the question of social
reality. For Durkheim (1976, 419) the main ideas of
scientific logic and its fundamental categories of thought
are of religious origin, but: "If religion has given birth
to all that is essential in society, it is because the
idea of society is the soul of religion". Durkheim
contended that if social scientists abandon the search for
first causes, then neither empirical associations nor

subjective meanings can be explained or understood. Such
work has no value or logical consistency. Social reality -
as Durkheim conceived it - is a sphere of dominance in
which individual actions are constrained.

The social scientist cannot disengage himself from social
reality because he is a part of it. Any standpoint of
philosophical reflection which may provide insights to the
existence, mechanisms and effects of social reality on
individual actors will be compounded by considerations
about the moral quality of collective social life on
individual thought and actions. Durkheim - akin to
Heidegger - decrees that the nature of reality is
concealed. Its identity is not manifest by our
participation in society, but may be exposed by
theoretical analysis.

Durkheim's theoretical analysis of scientific reason and
reality does not lend itself to empirical
verification/falsification on account of his insistence on
a dialectic between the forces of the material world and
those in a 'meta'-existence (social ethics). If moral
forces are a part of social reality and cannot be
adequately contained/explained in a material or abstract
sense, then, Durkheim argues, their ontological status is
ambiguous, if not illogical. In any case, there can be no
recourse to either experience or reason to explain
rationality. Scientific rationalism cannot uncover an
ontology which explains the basis of individual actions
because it is not an effective experiential taxonomy. Even
if crude empiricism is abandoned and an ontological 'leap'
is implemented, Durkheim recognised that an
epistemological encounter would then be imminent.
Simplistically, the relationship between cause and effect
(i.e. the unobservable entities/essences) must still be
demonstrated. Questions about rationality, reason and
reality are, in the first place, those of the individual
understanding himself.

If is frequently contested that the scientific rationality
has been evolved to counter the claims of political
ideologies and religious dogmatism. On the first account,
it is increasingly clear that science equates itself as a
working partner with political authority and its economic
systems. On the latter, there is more evidence to suggest
that the antimony between science and religion represents
a power struggle on the part of the former to coerce the
claims of the latter. If positivism is correct, then
religion is strictly meaningless, since only science
provides knowledge. If positivism is untenable, then
religion is part of social reality. In this respect,
religious belief may stake a claim about an objective
reality which is not overshadowed uniquely by practices or
rituals. Science cannot and does not explain every facet
of knowledge, existence and meanings and it does not
necessarily follow that to hold beliefs which are not
scientifically verifiable is irrational. Conversely, it
may be irrational to reject all the pontifications of
'normal' science, but it is not thereby rational to be
restricted by its shortcomings. By definition 'normal'
science cannot accommodate the 'extraordinary' claims of
'religious truth'. To assume that all religious claims
must be irrational is tantamount to a prejudice in favour
of science, and fundamentally, one of deep philosophical
disagreement. Religion may serve to integrate society, and
the decline of religion may have a disintegrating effect,
but this still does not eradicate the existence and
content of the religious standpoint. Jarvie (1984)
contends that religion provides a cognitive basis about
the world and of space, and is therefore open to rational
assessment. He rejects the rigorous 'normal' scientific
approach to the social sciences in general and condemns
the inflexibilty and restricted understanding gained from
a functionalist treatment of religion. Religion, he
contends, should not simply be reviewed in terms of
symbolism and metaphysics, but also in terms of its
practical outworkings in cultural systems, and therefore,

its contribution to social structure and to knowledge in a particular cultural context.

While religion and all metaphysics have been systematically eliminated from the area of 'normal' scientific rationality, the latter in itself is increasingly fraught with inconsistencies which defy the capacities of its categories of logic and its explanatory power. Kuhn, (1970, 2) claims that it is no longer possible to distinguish the 'scientific' component of past observations from 'error' and 'superstition': "If these out-of-date beliefs are to be called myths, then myths can be produced by the same sort of methods and held for the same sort of reasons that now lead to scientific knowledge". Kuhn contends that historical accidents and arbitrary elements always form part of 'normal' science. The criterion of validity is not the adequacy of theory to an objective reality, but rather, according to Kuhn, its adequacy in achieving a procedural consensus which is then accorded a paradigmatic status.

Positivists vehemently reject such allegations and are compelled to defend the scientific rationality through an outright condemnation of 'extraordinary' science. Carnap (1959, 79), for example, asserts that metaphysics originated from mythology "to give expression to a man's attitude in life, his emotional and volitional reaction to the environment", but that it "pretends to be something that it is not". Habermas (1972, 68), however, suggests that the fundamental difference between the positivist philosophy of science and other traditional epistemologies is that to the former, the knowing subject is no longer the system of reference. Under the 'normal' scientific rationality, personal values are subordinate to method.

RATIONALITY AND PSYCHOLOGY

Because the problems of rationality, reason and reality
are intrinsically related to the categories of the human
mind, some recourse to social psychology is necessary.
This may be briefly reviewed through the work of Freud and
Jung. Freud argued that there was a dialectical tension in
man between 'eros' (the basic sexual-erotic instinct,
which he equated with unity/communication with others) and
'thanatos' (the death instinct, which erases every
expression of existential awareness, transposing 'being'
into 'nothingness'). On a practical level, Freud
recognised that state corruption perverted the innate
'goodness' (reasonableness) in people. He was skeptical
towards the eradication of the aggressive instinct in
human relations and maintained that even if it was denied
an outlet in the political and economic forum, it would
resurge in other ways. Freud contended that individual
reason and rationality were constrained by stress,
necessity and escapism. Individuals often attempt to abate
their anxieties and guilt by actively becoming
participatory members of the human community. This implies
subservience and obedience to a political consensus and
the social norms which it prescribes (see Freud 1961). It
quickly becomes evident that scientific knowledge and
instrumentalism do not guarantee any incremental
enhancement in the quality of life, nor do they sharpen
the perspective of social and economic rationality. For
Freud, the problem of 'guilt' feelings (self-doubt, self-
hate and self-alientaion) is repressed by social and
political conformity until the individual internalises it.
Rather than providing some measure of rationality, the
state circumvents the problem towards the individual,
leading to all manner of neuroses.

Equally, Freud viewed religious affiliations as an
expression of irrational dogmas, which perpetuate the
unobtainable order and justice of the 'New Jerusalem'.

Moreover, it is a form of escapism from the finality of death and the realisation of nothingness: religion is an illusion which fulfils "the oldest, strongest and most insistent wishes of mankind" (Freud 1928, 52). Furthermore, Freud (1928, 24) maintained that religious ideas are "the most important part of the psychical inventory of a culture". Individuals moreover resort to religion not as a measure of rationality, but to desensitize their anxieties. Freud isolates yoga and mysticism as examples used to induce instinctual numbness, or some temporary alleviation of individual 'ills'. Religion otherwise idealises the helplessness of the human condition and provides a purpose for accepting suffering and misery. For Freud, religion therefore becomes "the keeper of civilised morality by rooting obedience to social norms in the mythical promise of an afterlife" (Smith 1980, 76).

The religious concept of transcendentalising death as a new mode of existence and rationality is unacceptable to Freud, who discards it as 'wish fulfillment'. Although Freud is critical of the content and objective of religion, he does not pass judgment on its reality value.

For Jung, all the most powerful ideas in history - and therefore those which correspond to rationality, reason and reality - are connected to 'archetypes'. These represent 'typical forms of behaviour'. They are not inborn ideas, nor are they conscious phenomena. Rather, they underpin consciousness, feeding it with primordial images and mythical notions which become manifest as ideas and images. Archetypes therefore exert an organising influence. Jung maintains that archetypes manifest their existence in the individual psyche but are beyond spatio-temporal, physical and mental laws, yet nevertheless constitute a part of reality. According to Jung (1983, 18), Western culture tends to generate "an overvaluation of thinking which could alienate a man from his emotional

roots". Jung suggests that many individuals refuse to
recognise and acknowledge the importance of unconscious
manifestations because these frequently appear to be
chaotic and irrational forms of behaviour and thinking.
Conversely, Jung argues they may be compensatory
expressions of the psyche in its efforts to assert a
better balance in individual rationality and reason.

Jung's concern for individual wholeness ('individuation')
provides the key to what he understood as rational and
reasonable categories of thought. Jung claims that
consciousness is evolved from the order of the unconscious
psyche. The bridge between the historical aspect of the
unconscious and conscious awareness is often lost and
distorted. This is not a dysfunction within the
unconscious, but rather an individual's or group's
struggle to coerce it with the primacy of consciousness.
For this reason, the unconscious imposes itself to redress
the disequilibrium. 'Wholeness' cannot come about when the
inter-related and co-determining facets of the unconscious
and conscious are suppressed or attacked one by the other.

The degree of rationality and reason achieved by the
individual depends on the realisation of the 'self' (the
centre of gravity situated between the unconscious and the
conscious, but which must not be equated with the 'ego'
which is the centre of the conscious). Jung refers to the
'self' as an 'integrating' factor (an archetype) which
coordinates information within the psyche. Although the
consciousness must discriminate over the information it
receives, some manifestations from the psychic sphere
appear to defy physical/physiological laws in the form of
mystical representations. These are frequently dismissed
as irrational (meaningless) occurrences. For Jung, the
search for rationality and reason - and therefore, the
fusion of 'insideness' and 'outsideness' - is related not
to the ideals and values carried by the political state,
but to the development of the individual personality (i.e.

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'self'). Self-knowledge cannot, claims Jung, be based on theoretical assumptions because the individual is both the subject and object of all knowledge. Scientific knowledge and rationality, however, claims to be the sole authority. The individual, albeit irrational and unpredictable from a scientific standpoint, is the "true and authentic carrier of reality" (Jung 1983, 354). When modern scientific man subordinates his (unconscious) psychic resources to empirical classification, he in effect deobjectivises himself and suppresses the psyche. Man increases the risk not only of greater inauthenticity (irrationality), but equally the likelihood of pathological disorder. Knowledge, rationality and reason are not uniquely a conscious, scientific question, but also a transcendental problem.

Jung does not openly discredit the objective rationality of religious values and ideas. Moreover, Jung (1983, 238) claims that man naturally possesses a 'religious attitude' which has increasingly degenerated into "egomania and (spiritual) sickness" with the growth of state power and an instrumentalist rationality. Much of the onus falls on the history of Judaeo-Christian civilisation – the social and economic injustices it has administered; the attrocities committed under its banner; its political prejudices; its worldly over-emphasis and spiritual shallowness.

Jung contends that the increasing disillusionment with the modern scientific rationality incenses a powerful reawakening of the human unconscious. Bryant (1983) suggests that this might assume negative or positive proportions. First, in a negative, destructive sense, the unconsious can manifest its 'rationalism' in the forms of hedonism, deviance, violence, fantasy, oblivion and nihilism. Both Jung and Freud equate these manifestations with occultism. Ultimately, the senselessness of 'unlimited (anarchic) freedom' becomes absurd and

irrational and is often a prerequisite for authoritarian governments. Secondly, the unconscious may promote a positive, constructive search for rationalism and understanding. Much seemingly depends on the 'spiritual' state of the unconscious.

Jung insists that once the individual has explored the unconscious and experienced contact and relationship with the 'self', the contradictions, paradoxes and ironies of human rationality, reason and reality become starkly apparent. Contemporary social, economic and political issues are then reducible to a struggle between 'good' and 'evil'.

Science is increasingly confronted with the need to provide an adequate explanation for the conflict between man's rational faculties (intellectual and technological achievements) and his irrational affect-bound beliefs (religion; ethics). This problem clearly cannot be solely reduced to physiological terms. The history of human rationality shows that man is not a reasonable being insofar that: "Intra-specific warfare in permanence is a central feature of the human condition" (Koestler 1978, 7). This charge is equally relevant for human geography where it cuts across all spheres of socio-spatial activity, creating imbalances, disharmony, misery and suffering from the local to the international scale. Man is largely unwilling to face reality for most of the time, but prefers to impose fictitious and illusory categories of thought upon his existence. Vaihinger's (1924) philosophical system – 'The Philosophy of As If' – suggests that man has cumulatively ensnared himself into fabricating 'meaning' in his world because he has shunned and rejected the fullness of his being. Scientific rationalism can hardly expect to subscribe unconditional remedies for human socio-spatial 'ills' if it continues to categorically reject the scope and diversity of the symptoms which constitute a complete diagnosis.

Laing (1972, 39-61) relates scientifically-defined
irrational thinking and behaviour to a basic existential
position of 'ontological insecurity'. If the human
condition is reduced purely to physiological terms, there
can be no place for his hopes, despair or fears, because
these are irrational and unreal. A scientific explanation
of man must be made in terms of an organic 'energy system'
If the scientific paradigm is to hold, then man must be
depersonalised. From the standpoint of 'normal' science or
some political ideology, the rejection or denial of human
autonomy implies that a person considers his existence is
intrinsically and reciprocally bound up with 'something
other'. This is a state of ontological dependency, where
the attachment to the 'other' is based on genuine
mutuality. From the standpoint of 'normal' science, this
position transcends the possibilities within the structure
of human relatedness: it is irrational and abnormal, and
in psychiatric jargon may be labelled as psychosis.
Correctly defined, however, it is a mysticism, yet one
which is distinctly and uniquely related to the human
condition.

Laing (1972, 66-67) outlines two fundamental aspects of
the human condition: first, the ordinary, everyday
physical sensation of real, substantial awareness of one's
bodily existence (embodied being); secondly, the awareness
in some individuals of the distinction between bodily and
spiritual existence (unembodied being). The latter
phenomenon has also been recognised and discussed by
Bultmann (1967) and Koestler (1967). Human rationality is
once again seemingly grounded in two existential
settings: 'insideness' and 'outsideness'.

Sartre (1950, 165-166) attempts to explain the dualism by
reference to the 'real self' (authentic, physicalistic
awareness) and the other 'imaginary self' (inauthentic,
self-delusion) which is a form of existential escapism.
The 'real' and the 'imaginary' cannot, Sartre claims,

coexist by their very nature. Sartre cannot, however, adequately account for the apparent shortcomings of 'rational content' in the 'real' sphere. At this juncture, Heidegger's (1962) discussion of (in)authenticity and dread provides a more profound insight into the reasons for man's disengagement from the rationality of the 'real self'.

'Normal' scientific rationalism otherwise imprisons man in a 'closed' system based on anthropocentricism, finitude and ultimately, complete self-extinction (nothingness). This prospect terrifies man, because it can only be understood as a total eclipse of his self. Because this threatens to undermine man's reasoning and existence, the self must remain undisclosed, then it is 'safe'. This may go some way to explaining the standpoints of deviationist geographers such as Kropotkin (see Breitbart 1981) and Reclus (see Dunbar 1981) whose 'anarcho-communism' ideals for the social and spatial reorganisation of society irreducibly seem to offer a last-resort alternative, however elusive. Yet even they too are caught in a circular discourse since their forms of idealism cannot rationally appeal to any ethical terms of reference which are otherwise required to provide an axiom for man's relationship with others and with nature.

The ethos and fundamental downfall of the 'normal' scientific rationality is found in its anthropocentric underpinnings. Foucault's (1973, 315-318) 'analytic of finitude' recognises the irrational leap of man into modernity by his positing the startling notion that the limits of knowledge provide a positive foundation for the possibility of knowing. Man, therefore, in his finitude establishes himself as his own point of reference. According to this rationale, finitude becomes both the source of all intelligibility (empirical fact) as well as that which is unclear and unthought (transcendental conditions). Man is the source and limitation of all

knowledge, yet in attempting to fully confirm his
finitude, he simultaneously wishes to completely deny it.
Any rational discourse sets up a space in which man's
reasoning aimlessly meanders through a series of futile
strategies, refusing to recognise the ultimate impasse in
which it is situated.

By the terms of his own rationality, man is a product of a
history he can never reach at the point of origin, yet he
is apparently the source of that history. Man therefore
becomes a dualism, a split personage which - in the most
lenient terms - may be scientifically defined as quasi-
schizophrenia. Any contemporary philosophical system based
on this analytic which attempts to combine an empirical
content with the transcendental will be contradictory and
ambiguous. It may question the reality and reasonableness
of man and his existence, but will not be able to accept
the inevitable hopelessness of such a standpoint. If,
however, the only sources of motivation are clear
(rational) objects of conscious reflection or obscure
(irrational) unconscious forces, then a dilemma arises.
Rather than attempting to grapple with the complexities
and elusiveness of the transcendental/empirical double,
man discovers that he is not the source of his own being,
and is severed "from the origin that would make him
contemporaneous with his own existence ..." (Foucault
1973, 332). The basic problem which inhibits any judgment
of what may be rational or irrational by the definitions
of 'normal' science is the failure to identify the
transcendental source of human origins whose beginning
escapes empirical enquiry.

'Normal' science and its rationalism has failed to uncover
any kind of unity, or any other hope of a rational
solution to human socio-spatial problems. Its intellectual
climate generates an impression of the immediate out-
datedness of all systems of thought without having
transcended them with any new truth: it is an era of

'post-everything'. For Foucault (1966), the logical end of
the dichotomy is the surrender of all rationality and
reason: the reality of existence and the ultimate
'freedom' of the human condition is madness.

CONCLUSION: TOWARDS A DEHUMANISATION OF HUMAN GEOGRAPHY

The emphasis of this study centres on the proposition that
every man is in tension until he finds an adequate
explanation and understanding for his place and inter-
relationship with the spatial environment, as well as for
his personal identity and individual existence. Put
otherwise, the dilemma of modern man and his dependence on
scientific reason is that he seemingly has no way of
understanding his loss of meaning with himself and with
others, nor of the meaning of his relationship with
nature. Nor is there any apparent likelihood that 'normal'
science will provide a vehicle for a recovery towards
unity. Equally, it challenges the notion that scientific
systems of thought may justify the basis of their analyses
anthropocentrically. Such pardigms lack the legitimate
authority necessary to endorse this line of inquiry (see
Kant 1929, 1966; Wojtyla 1982). On this basis, human
geography cannot be shown through experience to be either
arbitrary and ambiguous or meaningless and purposeless,
otherwise man and his existence are nonsensical. Any human
geography which seeks an\. agreement within the parameters
of 'normal' science must fit into a world which is open to
empirical observation and analysis, but cannot
subsequently reconcile itself with the correlation between
the categories of the human mind (subject) falling into
the categories of the external world (object). The
insensitivity of scientific epistemology renders any
attempts to identify the reality and essence of human
socio-spatial relations as largely sterile and abortive.
Modern social science has readily accepted the dilemma
posed by an intellectually untenable objectivism and an
epistemologically stifling relativism, but the fear - or

'Cartesian anxiety' - in the circularity of this debate is
that in the absence of an existentially unconditional
point of reference, any notion of 'truth' will vanish.

This problem fundamentally concerns the concepts of
dualism and parallelism between the 'real world'
(phenomenal) and the 'unreal sphere' (metaphysics). If any
dualistic tenets are held, there is no reason to make any
distinction between opposites unless they are governed by
some higher (external) concept to which arbitration can be
made. Otherwise, the words and arguments on both sides of
the dualism are purely subjective and meaningless, in
which case, there can no longer be a true dualism. Any
dualism generates an imbalance or tension where a 'unity'
can only be forthcoming either where one category consumes
the other, or where there is a movement towards a monism.
Even where a parallelism is sought, it ultimately tends to
impose the subordination for one side to the other, or for
one side to become an illusion or an absurdity relative to
the other. In its contemporary setting, whenever this
dichotomy is enforced to isolate the 'real' from the
'unreal', an autonomous agency (science and man) will
impose itself on the presupposed vacuum in the other. The
resultant schism between the scientifically-defined 'real'
and 'unreal' aspects of existence generates an illusion of
'autonomous freedom' for man. This is potentially
destructive, particularly in the area of socio-spatial
decision-making.

'Normal' scientific rationalism - based on the notion that
in the absence of any universals at the outset, finite man
with finite reason can sufficiently grasp knowledge with
total objectivity and construct social absolutes - and its
philosophcal tenets may at best contain part-truths, but
formal logic and nominalism do not foster the development
of unity and of epistemological concensus. Moreover, the
rigid cause-effect determinism used to explain the
relationship between social process and spatial structure

in human geography alienates man from his aesthetic and metaphysical attributes. The 'rational' scientific geographer believes he can offset conflict in his methodological procedures and explanations, but to achieve this goal must, by his own terms of reference, irrationally adopt some form of 'optimistic' humanism (i.e. a normative explanation or some futuristic utopian idealism) to validate his scientific propositions. The gap between the limitations of anthropocentric philosophies and scientific optimism can only be bridged by scientific 'faith'. Otherwise, 'normal' scientific theorising is externally one of 'hope', but logically one of despair. If, however, human geographers as social scientists renounce their 'rationalism', then they surrender all their terms of reference and effectively have no basis on which any proposition can be discussed. Medawar (1985) asserts that when the meaning, purpose and origin of human existence are questioned, science is confronted by an uncomfortable ultimatum concerning the autonomous status by which it prescribes limitations and sets parameters in the field of scientific inquiry. Either these questions are unanswerable enigmas, or they are answerable by something other than science, or they are unanswerable because they rest on false assumptions.

If human geography accepts the propositional basis of scientific rationalism, then it must also accept in all its presuppositions that man is the 'object' of science. The human agency is thus depersonalised in terms of its existence and is one of many impersonal categories in socio-spatial analysis. This provides the point of departure towards the dehumanisation of human geography. In the last resort, human geography must either be a 'science-for-man' or alternatively, it is a study of 'men-for-science'.

PART TWO: HUMAN GEOGRAPHY AS SOCIAL SCIENCE:

GEOGRAPHY, METHODOLOGY AND EPISTEMOLOGY

The social sciences have long functioned on the basis of
moral neutrality and detachment. This is seen to be a
necessary part of their 'objectivity'. Geographers have
largely studied man in a naturalistic manner, outlining
man as a social and physical being, investigating his
spatial environment and social habits. Brough (1983, 57)
acknowledged that man is different from all other animals
by his spirituality. The present standpoint of human
geography is oversimplified and constrained because it
ignores man's spiritual awareness. Human geography has
tended to avoid philosophical disputations in its syllabus
design and even more ethical and spiritual implications.
These considerations are likely to raise intangibles,
uncertainties and ambiguities (see Olsson 1978).

Geographical problems inevitably lead to an ethical
imperative. This necessitates some form of judgment and
values. The focus is clearly on man. If man's aesthetic
nature is oppressed, stifled, ignored or discounted, then
his spirituality is drained and his person dehumanised.
Relevance is therefore an important aspect of geographic
thought and inquiry. Ideally, an assessment of
geographical decision-making reflects the measure of man's
'goodness' or 'badness', his responsibility to himself and
towards others and whether or not he cares in any given
situation. This raises the question of accountability. If
man feels no obligation in this area, then he may well be
motivated by egotism, hedonism and utilitarian interests.
For those who hold power, such interests are generally the
manifestations of insensitivity and material gain and
greed. The social and economic outworking of such
decision-making - deprivation, misery, hunger, poverty,
fear, censorship, and so on - is meaningless to those who
initiate the action.

The preservation and intensification of sensory experience

is frequently attacked by the scientific community as an irrational transcendental idealism. This stance is equally a reflection of the rigidity of technocraticism and its tendency to dehumanise man as 'subject' and therefore to alienate him. The devaluation of man is seen in the work process which progressively leads to his alienation from society (i.e. unemployment; loss of material welfare) and within himself (i.e. loss of dignity and self-respect). To speak of a technological or economic crisis is imprecise: the real crisis concerns the nature of man (see Ley 1974). Scientific rationality, on which much syllabus design in geography continues to be based, clearly neglects human intuition. Its epistemology, according to Ley and Samuels (1978, 2), "is built around the mystical glorification of technique". The overriding concern for an epistemological framework in geography is to reassemble man in such a way that both his secular and transcendental feelings and thoughts are combined within his being. Without this unity, man is incomplete and desensitised. His perception and understanding of space and place - and his role in them - will become increasingly fragmented and impaired.

The dilemma of human geography is to produce a methodology where the schisms between understanding and widsom, objectivity and subjectivity, and materialism and idealism might be reconciled. Human geographers have generally been reluctant to examine the empicical and logical grounds by which they have established their criteria for investigating geographical phenomena and man's spatial context. Much methodological criteria is founded on precarious and diverse epistemological interpretations. The search for 'values' and 'truth' often becomes a pragmatic jungle conditioned by changes in individual or social attitudes through historical space and time. Graves (1980b, 4) notes that: "A discussion on the nature of modern geography is likely to run into difficulties unless certain semantic and epistemological problems are recognised in the first place". The absence of any solid

epistemological foundations in geography is the root of man's alienation from his environment and prevents his understanding of himself. An idea can fast become 'fact' or even 'truth' given the necessary 'consensus'. The epistemological structure, origin and logicality of any methodology are the foundations on which it will stand or fall.

Kant allied geography to the natural sciences because he believed it was subservient and accountable to physical and biological laws. Geographers, according to Kant, are concerned with the study of natural processes and the external (observable) aspects of human action (see May 1970, 114-115). The innate or 'internal' characteristics of man which make him distinctly and uniquely human were overlooked. No reference is made by Kant and his contemporaries of intention, freewill, ideas and symbolism.

Much of the epistemological structure of modern academic geography remains tied to the nineteenth century approach. The 'scientific method' has largely been demolished by Popper (1976) on the basis of the philosophical position of logical positivism. No 'scientific' knowledge, according to Popper, could truly be called 'objective', nor could any of its presuppositions be based upon its own unproved 'validity'. Epistemology has become 'critical'.

Claval (1981, 228) maintains that epistemology "already contains universal truth", and that all that is needed to reveal this truth "is to let its potential be developed". If all knowledge is potentially 'given', this challenging viewpoint must next raise the question of 'where to find it' (i.e. to evolve the necessary methodology). Claval calls into question man's 'reason' and the fundamental basis of 'rational' thinking. The geographer must critically review epistemological 'gaps' and 'mysticisms'

and therefore recognise and explore the shortcomings of his methodology.

The source of geographical thought can, according to Claval (ibid, 230-238), be viewed either historically or epistemologically. The historical case is hermeneutically inspired insofar that it tries to recreate the past, rethinking social attitudes and comparing them with the present position of geography.

Epistemologically, the method requires a review into the development of ideas and the 'logic' behind them. The inspiration and motivation becomes problematic. 'Knowledge' is examined beyond the factual particulars. It seeks to identify the 'authority' behind their crystallisation. Geography is therefore philosophically investigated from 'within'. If the 'core' and stimulus can be identified, then the logic and rationality of the external particulars became meaningful and can be understood in their proper context.

The modern 'episteme' should dig deeper into reality seeking the causalities which motivate and provide an identity for its expression. The epistemological search encomposses an integration, if not collaboration, between all forms and disciplines of knowledge. This is not without its problems. Many aspects of the human condition and of existence tend to raise paradoxes, anomalies and contradictions which do not appear to easily lend themselves to 'logical' harmonisation or rationalisation. All forms of knowledge, however, display one clear epistemological aspect: the finite nature of man and his foreknowledge of death. Without this certitude, claims Koestler (1964), none of the great literary works would ever have been written, not would man have ever found it necessary to explain or understand his predicament.

GEOGRAPHY AS A DISCIPLINE OF SOCIAL SCIENCE

If, as Carter (1979, 415) states: "The interpretation of
any spatial pattern leads to inferences about human
behaviour", then the geographer is compelled to consider
the basis upon which human frames of reference are
founded. It then becomes apparent that the human condition
encompasses not only those disciplines in the human or
social sciences, but equally those contained in the
natural sciences, literature, art, philosophy and
theology. Any notion of geography as a singular, self-
contained discipline disintegrates: "The division of
knowledge into disciplines is artificial and, to a certain
degree, arbitrary." (Johnston 1983, 1).

Knowledge cannot be evaluated in terms of unrelated,
disjointed or isolated parts. It is holistic. Much of
man's thinking and behaviour is ambiguous, unpredictable
and indeterminate and does not conform to the 'rational'
determinism demanded by the 'scientific' methodology. In
this respect, much of rational scientific thought is
dictated by institutional conditioning.

According to Mulkay (1975, 510-515), academic research
should be neutral, impartial, unprejudiced and undertaken
with 'humility', and that a scientist's work is assessed
against "an existing set of scientific assumptions and
expectations . . . to established preconceptions". Most
work seeks order, understanding and a quest for universal
laws.

For Guelke (1974, 202), although the geographer seeks "to
provide a true account and explanation", this is not
possible in practice because "different interpretations
can often survive quite happily because of the lack of
data". Equally, the geographer's precise intentions are
difficult to define. It is, however, becoming clear that
geographic enquiry has no precise definitional parameters.

The problem, as seen by Tuan (1978, 201) "is for social geographers to decide what to observe".

In its contemporary context, the development and perpetuation of philosophies and ideologies which separate the unity of knowledge into disciplines have, to a considerable extent, been influenced by governments and other power-seeking bodies (e.g. multi-national corporations). The relative academic inflexibility and rigidity of social science disciplines is mainly in response to their endearing conformity with those organisations either in the form of research sponsorship, or in an outright manner of hostility and threat if their 'credibility' or 'legitimacy' are challenged. Alternatively, social science disciplines have wrought much of their own methodological sterility in search and recognition for 'scientific respectability'. Whatever the case, the human content of human geography has hardly been entertained, but rather conceptually by-passed as an intangible philosophical ideal.

The pursuit of the ontogenesis of man and his relations with the spatial environment is tantamount to entering a labyrinth. These can be unknown frontiers which appear to transcend 'normal' academic boundaries passing into metaphysical territory for which experimental scientific methodology is rendered inadequate as a means of decodification. Paradoxically, geography's older and more 'respectable' cousin, physics has recognised the need to make a quantum 'leap' into the study of subatomic phenomena. Human geography as yet has been reluctant to thoroughly examine the deeper psychological and metaphysical elements of the human condition. Until geography confronts these issues, theoretical and paradigmatic congestion will be inevitable. Philosophically, it will remain trapped in a circular discourse. Such lines of enquiry are often resisted since

the cumulative intangibilities of the non-empirical method are considered by some to lead to an 'unscientific' dogma.

Social problems in geography appear in increasingly profuse numbers and complexity. Decision-making is typified by its growing incompetence and inability to identify and effectively deal with the real issues confronting society. If the philosophical and methodological outlooks are unrealistic, obscure or irrelevant to the essential problems, then geography's contribution runs the risk of becoming meaningless. It is unsatisfactory to evolve geographical systems of thought which devalue the status of the human being and which reduce and depersonalise man to an object of nonsensical finitude. If man wishes to assert his own autonomy, he must be able to justify and substantiate it by his own terms of reference. If, by these criteria, man lacks meaning, intent and purpose then he becomes an object of some form of ideological domination and is therefore exposed to all manner of political, economic and social manipulation. Ultimately, his cultural and spiritual values will be undermined, eradicating any notion of epistemological or ontological certitude pertaining to his existence.

Philosophical inertia and circularity, and methodological proliferation and confusion in human geography continues to attract much attention. There can be no real lasting accommodation or compromise of viewpoints between one philosophical standpoint and another, nor between conflicting methodologies. Much of academic geography is indebted to other disciplines for its conceptual development and status. The intensity of the present debate largely focuses on ideological precepts, with the pursuit of the scientific technocratic rationality at the forefront. The geography of political economy, whether capitalist or Marxist espouse their epistemologies on concepts of materialism, reductionism, social determinism and technocratic power structures. Man is

instrumentalised, exploited, dehumanised and inauthenticated. Both models conceal and coerce the pluralism and conflicting values in the superstructure of society. Geography's task is to expose the value-systems which govern man's intentions, decisions and movements in space.

Sayer (1979, 30) reminds us that while man is more or less reconciled to a sense of obedience in his dealings with nature's laws, he acts as if there were no social universals. Social laws are arbitrary. For 'autonomous-man', there can be no real code of social ethics because he has no terms of reference with which to ground and discuss them. Social determinants are moreover based on self-interest. Those who control the means of power and therefore the material well being of the masses devise laws to suit their own purpose.

The geography of political economy frequently reveals the rigidity, inflexibility and intolerance of those who govern socio-spatial systems. No political camp has the basis to claim 'rationality' or 'reason' in its methodologies and ideologies. Nor can they claim to have explained and understood the real purpose and essence of human existence. Their epistemologies say little about 'what is'. Instead, they revel in the historical past or adopt and 'optimistic humanism' from a normative standpoint, based on an untenable utopian idealism. Concerning the present time, their incomplete epistemological vision posits society at a juncture of uncertainty and fear. Socio-spatial relationships become senseless and directionless which increasingly terminate in pessimism.

Ideologies appear to gain acceptance if they attempt to present something near to a universal or 'world-view' which then gains a social consensus. This is not always the case. Many ideologies are imposed by a dominant power

elite in a totalitarian sense. For the most part, ideologies are relativities which assert themselves against the deficiencies in other doctrines over the course of history. As one ideology is transformed into another, the central issues persistently remain intact. These themes essentially concern man's enslavement, domination and alienation. Many ideologies are committed to the removal of these problems, but lack the methodological means to achieve it. This indicated the need for a reassessment of the ontological and epistemological premise. Geographers tend to manifest conflicting views and standpoints in their analyses of ideology. Some are emphatically committed to one particular position while others attempt to 'disengage' by a 'taking-of-distance' from the problem.

A positivist methodology which claims to make a realistic theoretical study of man through its 'scientific objectivity' negates the fundamental issues by its lack of reflexivity. Theory shifts the emphasis from the reality of the observable to the unreality of probabilities which do not strictly conform to human intentions and actions (see Hay 1979). This strips man of his ability to explore and rationalise his unconscious thoughts and emotions. A positivist methodology brackets the question of its grounding and perspective and therefore fails to examine its own credibility. This means it must assume a prohibitive position where it cannot be epistemologically challenged (see Habermas 1974).

The relationship between political economy and geography is now a recurrent theme, but often lacks any profound analysis. If one broadly accepts that the economic life is central to all social and geographical understanding, then the state has the responsibility for the maintenance of economic wellbeing and for the administration of social justice and fairness. In a democratic context, the political body has to legitimise its intentions and

decision-making, thus clarifying its ideology and put it before public acceptance, whose interests it is supposed to represent. This is rarely the case in reality, either in the capitalist or Marxist world.

Johnston (1983, 132) accredits a territorial definition to the state which makes it a geographical entity. The real problem concerns the need for methodology towards an understanding of state decision-making and the way in which individuals move and act under the political state. Much depends upon the linguistic competence of the perceiver and the perceived. The representation and interpretation of political statements and outcomes frequently raises contention, conflict and disunity. The state machinery comprises a range of arbitrators, all with different professional qualities and aptitudes. Any question of a general methodology is meaningless unless the state can clarify the epistemological basis of its ideology and the historical foundations of its society. The state can give no unconditironal guarantee about any future improvements in the quality of living standards, but often speaks as if this was given. The 'operative principle' of political action must therefore be the ideologization of the masses. The different patterns of spatial organisation which social and economic processes generate are also conditioned by their encounter with particular historical, cultural, religious and environmental situations.

This immediately raises the question of social relevance, a theme which has attracted the attention of geographers since the 1970s. Distributional issues assume a new urgency. Political divisions become more profoundly determined raising the need for an allegiance to an ideological path. With the relevance debate, regional and area studies in geography became tools of Smith's (1974, 1978) 'who gets what, where and how' definition. This could be applied to a specific territorial context under a

humanist banner. It is largely concerned with the material existence of the individual and to exposing the mechanics of economic disparities and imbalances and of social injustices. This has either taken the form of a liberalistic 'welfare' approach or from a radical Marxist standpoint.

Social processes are seen by many geographers as the means for understanding and explaining spatial patterns. This involves the consideration of actions, rules and meanings in their societal contexts. The root causes of spatial inequalities are to be found in the structure of society. In its political reading, this has generally meant some resort to Marxist or neo-Marxist methods (see Harvey 1973; Pickvance 1976; Peet 1977; Gregory 1978; Held 1980).

Eyles (1977) directs attention to the need for understanding and explaining 'social ills', the 'quality of life' and 'equitable distributional patterns' and argues (Eyles 1981, 1336) that "no geography . . . can be complete without Marxist". He then concedes that Marxist thought must somehow be integrated with humanistic methodology if "lived experience" is to be explained.

Eyles and Lee (1982) are, however, resigned to the practical impossibility of any accommodation between competing philosophical and methodological standpoints because, as they see it, the epistemological differences between the various approaches do not afford any compromise. Such a position would be untenable due to the difficulties involved in the articulation and clarification of the meaning of concepts. Gregory (1978) has emerged as one of the more recent pioneers for a 'new' epistemology in geography, but makes no mention of an ontological foundation from which such an epistemology could evolve.

Harvey (1973) discusses both issues, but restricts the

terms of epistemology to historical materialism linked to a Piagetan evolutionary-based ontology. The weaknesses of Harvey's arguments do little to clarify the motives and actions of either the state or the individuals in it. Both are exposed as impersonal entities which have little meaning apart from the ideological domination of the state over the masses.

Ley (1980, 19) condemns both the positivist and Marxist methods as negative ideologies because they are both reductionist, dehumanising, enslaving, irrational and amoral, where "men . . . assume the role of the uncomplimentary puppets that the state's theorists model and its social engineers plan for . . . ethical and moral issues are themselves appropriated into the domain of the technical".

Modern geography, according to Graves (1980b, 6-7) consists of a "focused curiosity" which strays in many directions. The investigative methodologies are a mix of the scientific (positivistic) and the 'non-scientific' (existentialist and phenomenological).

Positivism and behaviouralism both tend to collapse into some generalised form of 'social Darwinism', making wide-sweeping and unfounded claims concerning the nature of man. Their rationalism and logic are established on the basis of imperfect criteria which methodologically contain strong elements of elitism, coersion and domination.

The humanistic methodologies are equally dubious in many of their promulgations. Ley and Samuels (1978, 13) maintain that the exposure of any values through an existentialist or phenomenologically-based methodology does not "necessarily provide a calculus for decision-making, but it does assert the existential necessity for responsibility, choice and commitment".

This is not, however, the case for Sartre, where man's commitment to any political ideology or religious doctrine is a threat to his 'freedom'. Sartre's ontological structure is rooted in 'negation' - one objectifies oneself by saying what one 'is not'. The essence of any phenomenology, as in positivism, bases its standpoint on man's intentionality as a rational being and actor. The ultimate phenomenological and existential reduction for both Heidegger and Sartre is the discovery of 'nothingness'. To assert that 'freedom' is coextensive with man's disengagement from 'being' into 'non-being' renders all meaning and understanding of the human condition as an absurdity. There are no apparent terms of reference for man to speak and act responsibly in his social, economic and spatio-environmental realms.

Central to this problem is man's obsession to manipulate and intervene in process and design while failing to recognise that whatever new spatial structure he creates, there will always be irreconcilable differences, conflicting interests and a philosophical point of tension. There is little basis, as Kates (1962) would have it, to believe that men are rational when making decisions. When man sets up his own autonomy as the basic pre-assumption for his methodological designs, he can neither justify nor substantiate his case philosophically or ideologically by his own terms of reference. Decision-making becomes partial and prejudicial and does not necessarily represent the totality of (best) interest in society. Man is entwined by his own egocentricity. He seems to be dealing with a mass of unrelated particulars but lacks any fresh terms of reference by which he can evaluate and interpret his dilemma. His understanding of meaning, intention and purpose is at best fragmented and obscure.

In conscious choice, any system of knowledge must be based on some set of rules. If not, all decision-making becomes

a shambles. Decisions are hampered by the "conflict
between groups with different attitudes and motivations"
(Johnston 1979, 118).

Pred (1969, 139-144) shows that a scientific methodology
based on inductive positivist and behavioural models fails
to make a convincing case for the improvement of
geographical decision-making since it suggests that "any
model is better than none . . . even if the model is
literally untestable". The generalisations and statistical
aggregates generated by these approaches tend to be
culture-specific and ethnocentric as they are usually
group value-systems which are broadly aligned under
culture, language and ideological acceptance.

Lowenthal (1961, 248-251) attempts to give credence to all
views since: "We all live in personal worlds . . . rooted
in reality", but acknowledges the fact that people ". . .
elect to see certain aspects of the world and to avoid
others".

Spatial patterns will continue to be disorderly where
there is no consensus in methodology or in its
epistemological grounding. Jones (1980, 257-258) issues an
unconditional challenge if human geography is not to
stagnate: "What many are not prepared to accept are the
ideological implications which are that society - and by
implication, spatial inequalities - cannot be modified but
must be replaced by a different social order."

The problem increasingly concerns the ways in which man
has institutionally structured and ordered societies and
to identify the transformations which, in his view must be
undertaken to create a social utopia. Does this then
suggest that human geography merely reflects political
decision-making and is ultimately subordinate to political
ideologies seeking to legitimise their own interests? If
this is the case, then the quality and understanding of

human existence must largely be determined by economic materialism to the devolution and exclusion of any value-systems. Normative considerations are then exposed as statements leading to higher degrees of abstraction, detached from the reality, derisory and delusive.

Human geographers are divided on this issue. Harvey (1973) and Gregory (1978) contend that unless a theory or other standpoint can be read in a political context, then it is probably useless. Berry (1973), however, claims that no amount of 'political reshuffling', within the developmental structures of human geography can resolve man's dilemma.

For Ley (1978) and Wallace (1978), any 'new' geography motivated by overriding political considerations, especially those which integrate Marxist theory, will initiate a new dialectic setting opposition within its every synthesis.

Philosophically, man has in an historical spatio-temporal context subdued his own nature and his relationship to the spatial environment by using his 'reason'. He then becomes a prisoner of his own 'rationality', and consequently is the 'object' of scientific inquiry.

The human and social sciences, of which geography is a part, have increasingly isolated and reinterpreted many characteristics which are intrinsically unique to man.

Science attempts to provide an explanation which either claims to be complete, or some interpretation which is supposedly all-embracing. It generally utilises a purely empirical - theoretical standpoint or makes a phenomenological - existential assessment.

Whether or not the methodology is derived from a philosophical concept or an ideological presupposition,

scientific procedure tends to analytically mutilate man and render it impossible to understand him in the totality of his being.

Elaborate social-spatial models can be imposed on man as scientifically-tested types of behaviour so that man becomes the object of scientific manipulation. His desires and needs, behaviour and value-systems will to some extent become modified or radically altered. Each scientific discipline will be able, in its particular sphere, to grasp only a partially true, but incomplete interpretation of man and his problems. Even a 'critical social science' will encounter deeper complexities as it attempts to evolve an explanatory methodology. Man's dilemma may become more intensified but its understanding will be more obscure.

Much of contemporary social science has become increasingly schismatic because it has disengaged itself from the classical thesis - antithesis methodology. Hegelian dialectics have compelled social scientists to take sides. Tuan (1978, 204-205) notes that either they must pursue an 'objective' reality, where value judgments are discarded under a 'scientific' banner, or they follow a 'subjective' line where 'meaning' must be discerned from the investigation of "inner psychic phenomena".

No human geography can be complete unless the basis for man's code of social ethics is exposed. As a social actor, man does not conceptualise his thoughts and ideas nor relate to others and his surroundings in an impersonal and valueless manner. As Abler, Adams and Gould (1971, 21) point out: ". . . geography and the other social sciences have pressing social and moral responsibilities". Unless the socio-spatial 'welfare' of mankind is accorded ethical and spiritual considerations, then human geography cannot become scientific yet humane, analytical yet relevant and responsive to real problems because it will have an

incomplete knowledge of man. Failing this: "Even if all
agree to build a 'new society' at the service of man, it
is still essential to know what sort of man is in
question" (Pope Paul VI 1971, 28). This may raise many new
obstacles yet Smith and Ogden (1977, 55) entreat human
geographers to "look the world in the face, 'warts and
all'."

At this juncture, any primacy of the spatial prerogative
will exert an artificial constraint because the immediate
problem is one of discerning the nature of social order
and organisation. To this effect, Herbert (1979) indicates
that human geography becomes 'a-disciplinary'.

GEOGRAPHY AND RELEVANCE

The stress for 'relevance' in human geography has a long
historical past. It attempts to reflect on the development
of human awareness, experience and relationships between
man and his spatial environment. Modern geography
increasingly emphasises its involvement with social
concern and economic wellbeing. According to Stoddart
(1981, 1), this directive necessitates a "sharpening of
the historical method". An analysis of geography's
historical development and the cumulative stages through
which its present knowledge is based is thought to provide
a better understanding of its present predicament and an
insight into future research. Geographical relevance is
thus concerned with philosophical and epistemological
considerations set against a social, economic and
political backcloth.

Philosophical and ideological changes in geographic
thought have drawn their inspiration from diverse sources,
but the dilemma of real explanation and understanding
remains unresolved. The refinement of knowledge in the
social sciences had seemingly been concerned with sifting
'truth' from 'error' and 'good' from 'bad'. Much of this

work has provided a wealth of information but which has
not necessarily enhanced any understanding of the
fundamental problems and ambiguities of the human
condition.

There is no generally accepted social theory prescribing a
formula for human well-being in a material context, nor
does there seem any likelihood of evolving one under a
political ideology. Smith (1978) makes an important
distinction between 'needs' and 'wants'. He defines human
'needs' as those relating to physical survival, while
unnecessary 'wants' are symptomatically generated in
advanced capitalist societies which are unconcerned with
distributironal inequalities. The ethos of capitalism in
its fiercely competitive social and economic climate
relies on the dehumanisation of relationships and
feelings, responsibility and care, unity, cooperation and
solidarity, peace and harmony. Distributional inequalities
and disparities can be found at every level on a global
scale. These range from rapidly deteriorating urban-social
conditions in Western inner cities manifesting segregation
of minorities, racism, intolerance, discontent,
deprivation, fear, psychological stress, and so on, to the
shanty-town communities in the cities of the Developing
world nations and the urban/rural exploitation in many of
these countries by multi-national corporations. At a time
when the gap between rich and poor nations is forever
widening, rapid economic progress is not a solution to any
call for 'social justice' in geography.

Man cannot be scientifically rationalised on the pretext
of any historical materialism. Many of his intrinsic
characteristics such as greed and deceit can never be
completely eliminated by his own terms of reference. These
shortcomings impose constraints and limitations on man's
ability and desire to make distributional material
improvements in the world, even to the point of denying
basic 'needs' to others. While capitalism reinforces codes

of social differentiation, emphasising the 'quality of goods' over the 'quality of life' and 'efficiency' over 'equity', Marxist geographies too falsify the validity of their ideological preassumptions by claiming 'neutrality' (non-values), 'objectivity' and a denial of any metaphysical considerations in the historicity of man.

Although there appears to be an extending time-lag between reality and the value positions held by society at large, Smith (1978, 361) maintains that social welfare, both on an individual and collective basis "is a proper and necessary topic for geographical analysis". It poses problems of a descriptive and interpretative nature. Value judgments are frequently seen as an attack on the 'scientific objectivity' of positivism and its application to political ideologies, capitalist or Marxist. Spatial reforms must, as Lee (1976a, 47) points out, be allied to societal reform, but until human feelings towards others near and far becomes genuine and sincere, no change will come about. Culyer (1973, 87) adopts a pessimistic outlook, suggesting that human concern is perhaps subject to 'distance decay'.

Value-teaching is essential in any teaching-learning situation since all forms of instruction transmit human views of reality. Geography is particularly value-laden. Spatial patterns reflect a cultural landscape in which economic, social, political and religious values are found. Geography cannot authentically be value-free, nor can philosophical and ideological considerations and controversy be excluded from its content. Existing social and economic conditions must be critically reviewed to derive any sense and meaning in a spatial context. This increasingly suggests the need for a multi-disciplinary approach to human-social sciences where geography is an integral component with sociology, politics, economics and anthropology, philosophy and theology.

No value can be held as a matter of scientific convenience. Nor can values be asserted and contained within the circularity of philosophical discourse unless it can rationally legitimate his epistemological standpoint. He will in this case, by necessity, need to clarify his terms of reference through some form of historical space-time reductionism to substantiate his set of preassumptions on which his argument is based. To authenticate his proposition, the geographer needs to establish the criteria on which values may be explored and evaluated in terms of their likely beneficial, adverse or prejudicial impact. No epistemology can be fully expounded unless something is known about the onto-existential basis of man.

GEOGRAPHY, MAN AND AUTONOMY

Man throughout history has largely been concerned with asserting his own autonomy. His desire for control and domination includes not only power and authority over his fellow man but also over his environment. These objectives necessitate the notion of 'rational' thinking. The Greeks interpreted philosophy as a means of acquiring greater wisdom. The later Judaic and early Christian societies were more concerned with deciphering man's identity in his finite and temporal situation. The Judaeo-Christian standpoint accords God the absolute sovereignty over the universe. Man's domination of nature relates to a 'pre-Fall' consciousness, but man essentially remains accountable to God in his dealings with others and with nature. This suggests a form of stewardship (see Houston 1978). It rejected anthropocentricism in the context of a philosophical or ideological 'autonomous-man' premise.

The Renaissance period, with its introspective quest for understanding, is generally isolated as the historical watershed from which all contemporary forms of thought have subsequently developed. The Enlightenment era,

however, presents an intangible philosophical position. It cut across all forms of knowledge and initially activated a process of decay, eroding the unity and wholesomeness of epistemology into an unreal nominalism. This, in time became accommodated in scholasticism and academia. Its rationale provided the foundations for the nihilistic humanism of modern science.

Philosophically, all is despair and pessimism, while ideologies tend towards some form of 'optimistic' humanism which cannot rationally be discussed.

Descartes introduced a fundamental ontological doubt about existence by dehumanising the status of man's being. Spinoza's value-free investivation of 'scientific truth' contributed to the epistemological disarray and increasingly obscured man's onto-existential understanding of himself. Kant's scientific rationalism specifically isolated that knowledge derived from the 'objective' observations of empirically-measurable phenomena. This ultimately severed subject from object. Kantian logic removed any consideration of "ethics, morality and transcendent meanings" (Ley and Samuels, 1978, 7). Teleological methodology was reduced to an 'unscientific' metaphysics, concerning only theology and mysticism.

Nineteenth century Comptean social science initiated positivist philosophy and instrumental reason based on an 'autonomous-man' concept, where science became the new 'god'. Instrumentalism and its insistence on the technocratic became immanent and ideologically assumed an 'emancipatory' function for man's existence. Nietzsche (1968, 226-227) noted that scientific advancements (i.e. Darwinism) and technical progress appeared to have devastated traditional (i.e. theistic) world-views, especially religion and metaphysics.

Enlightenment philosophy signified man's efforts to

reconstitute his pre-Fall condition, but on his own terms.
Bacon had resisted the insistence on the scientific
domination of nature and called for respect and obedience
on the part of man's dealings with nature. He maintained
that religious faith coupled with scientific and artistic
explorations could restore in part man's loss of
innocence and his dominion over nature. Baconian ideals
were discarded and theistic promulgations subsequently
evaporated. Under an 'autonomous-scientific' banner
emerged a fully secular society with the aim of reuniting
its own purpose and 'rediscovering' its origins.

Man was not a product of the environment whose capacity
for understanding was only possible at the phenomenal
level. Any investigation or probing beyond symbolic
(mathematical) logic was scientifically 'irrational'.
Enlightenment philosophy is, however, based on a
conflicting structural dualism which, according to
Horkheimer and Adorno (1972, 83-84) is a dialectic between
Kantian 'pure' universal/utopian reason and freedom, and a
concept of reason as a function of domination akin to the
ideas of Nietzsche. Horkheimer and Adorno (ibid., xi)
emphasise the latter dimension and refer to mankind
"sinking into a new kind of barbarism". Koestler (1978)
too works along similar lines in his analysis of man's
cruelty and - as he sees it - his schizophrenic condition.
Marcuse (1970, 1-2) extends the argument, contending that
domination is internalised and used by the individual on
himself. The outcome is individual 'autonomy' from which
the various philosophical forms attached to this ideal
seek to legitimise social and economic inequalities and
the infliction of human misery, suffering and cruelty.

Held (1980, 151) interestingly presents the dialectic of
enlightenment in the form that "myth is already
enlightenment; and enlightenment reverts to mythology".
Held also endorses the conceptual potency of domination as
the basis for man's thinking and points out that all

ideologies and doctrines have the potential to become
barbaric, uncaring and irresponsible. In this category,
Held notes that even organised religion can become a
lethal historical force it if abandons its initial
precepts.

Man's contemporary decision-making slips easily into
utilitarian and hedonistic designs, which are
fundamentally symptoms of mis-management. His socio-
spatial domain is consequently abused and decimated.

'Autonomous-man' and his concept of domination can only
become assertive if belief systems are represented as
misplaced superstition, or if they are demythologised,
Yet, Enlightenment philosophies and mythology (religious
or otherwise) have similar concerns - survival, freedom,
fear, and dread, hope - albeit in a different contextual
framework. Man is basically fearful of the unknown and
particularly of his own encumbent death, which signifies
extinction and non-being. He presupposed that his
'emancipation' from the dread will become actualised once
human existence and knowledge are demythologised. He
preoccupies himself with the finite business of the world
while systematically rejecting its metaphysical
ramifications. All must be scientifically internalised.
'Outsideness' (see Relph 1976) is tantamount to man's
vulnerability and is a source of fear, anonymity,
alienation and loneliness.

The history of man points overwhelmingly to the fact that
the greater his measure of 'autonomy', his control and
domination over nature, then the greater is the measure of
oppression and injustices which he inflicts. There can be
no talk of universal values or 'truth'. Truth is
pragmatic, circumstantial and relative. Man modifies
ᶜ truth' according to his purposes and imposes it to
legitimate his own ends, essentially through his capacity
to exercise the 'will to power'. Truth has no definite

meaning because there are no terms of reference to discuss it.

If man lacks any universal 'truth' about himself and his relationship with nature, than all 'value' statements are meaningless. It then becomes increasingly difficult to evaluate human geography in terms of 'goods' and 'ills', 'truths' and 'errors' or to attach any meaning to the concepts of 'concern', 'welfare', 'injustice' and so on. The philosophical terms of reference raised by scientific rationalism seemingly generate ambiguities which in turn set-up a hermeneutic dilemma. 'Value statements' in geography in this context are non-explanatory because they cannot be adequately understood.

Enlightenment philosophy has problematised geographic inquiry and study. The separation of knowledge and experience has left man believing that he must act on experience to gain understanding and explanation. Empirical scientists pioneered the way to bring about a single 'objective' environment which might claim a universal acceptance. If normal science could strike this goal using a positivist philosophy, then 'science' in the form of technocratic instrumentalism was the answer to achieving sustained economic growth as this would be the sole criterion for 'wellbeing'. Popper (1970, 52-55), however, dismisses this possibility claiming that normal science is non-revolutionary, barely critical, unchallenging, supportive of the ruling dogma, and brittle and uncompromising to alternatives. Science, for Popper, must be bold and critical.

Keller (1985) suggests that modern Western science is more 'objectivist' than objective because it treats nature as a separate object to be known through domination. Her view is modelled on the masculine-feminine dichotomy and therefore asserts that 'genuine objectivity' can only be realised by a 'gender-free science', as distinct from

specifically male values. The essence of Keller's critique rightly points to the unreasonableness of human values in a scientific context.

Human geography's problem largely concerns its limited concept of man and his environment. Few compromises have been found between deterministic-possibilistic environmentalism with its stress on the 'real physical environment' and perceptual-behaviouristic geography which attempts to intertwine the observer and the observed environment, and therefore drawing on the interaction of social psychology (see Gold 1980). The humanistic and radical schools of geographic thought advocate a 'social humanism', developing a perceptual-cognitive approach where man as subject is identified with the object of his study. Its overriding objective is to devise and direct a social course of action towards "the future potential environment as expressed in values" (Grano 1981, 33).

This constitutes a philosophical and methodological clash of humane, analytical yet relevant and responsive to real problems? On the one hand, the empirical scientists maintain that the analysis of the 'perceived' environment as an inductive matrix will logically reveal (empirical) knowledge about the 'real' environment. A behaviouristic approach assumes that the environment functions with a logic understood by man and one which structurally conditions his behaviour and thinking (see Kirk 1951; 1963). Alternatively, the 'man-centred' approach adopted by the humanistic schools depends upon the cultivation of man's affective rationality. This may include his perceptiveness and response to his socio-cultural and mythico-religious landscapes (see Tuan 1974; 1977; 1979). The mind becomes the instrument which synthesises information from the 'perceived' environment, transforming it into 'real' knowledge and understanding.

Changes in geography's disciplinary structure reflect the

historical and cultural trends and attitudes of the
society in which they take place: "Geographers are
creatures of their time" (Smith and Ogden 1977, 50). The
promotion of a positivist scientific geography has been
accelerated in advanced capitalist nations partly in
response to the demand of post-1945 technological changes
and in an attempt to counter-balance the spread of the
Marxist ideology. There is generally an abhorrence of
value statements. The problematisation of man's emotions
and feelings is largely seen as a metaphysical aberration,
unde serving of any theoretical or experimental
consideration and therefore devoid of any scientific
credibility. Butterfield's (1977, 17-18) efforts to
justify the utility of a positivist geography with its
"new relevance concepts" and "problem perception" are not
reassuring. The empirically unverifiable qualitative
content of the human condition are an impediment to
scientific 'progress'.

Contemporary man strives to find meaning in his life
through the concept of 'progress'. In Western society,
'progress' is coextensive with the increasing consumption
of material goods and for gaining wider knowledge in
technological fields. 'Progress' has become the condition
for 'freedom' from the restrictions imposed by natural and
social phenomena. Its omnipresent ideology is
questionable: what is the meaning of a never-ending
pursuit for technical knowledge? Is there any time or room
to enjoy it in peace, or does it lead only to
dissatisfaction, hardship, misery and injustices?
Scientific 'progress' is unconcerned with the development
of moral consciousness, yet the neglected issue of ethics
is of primary importance as a factor of social change in
geography (see Berdoulay 1981, 131). Nor can 'progress'
come to terms with the eschatological mystery of death.

The phenomenon of social injustice - with which scientific
geography is seemingly unconcerned - is no new problem. It

constantly widens its horizons, encompassing new victims who are discriminated against, in law or in fact, on account of their origin, race, colour, culture, class, sex or religion. Contemporary human geography has the increasingly difficult task of examining the nature and origins of social injustice while a diminishing number of countries are able to reflect upon the notion and meaning of promoting their own development. Technocratic instrumentalism is having a repressive impact on geography. Political and economic ideological domination constrains any concept of freedom of thought or action in geographic thought. It is far easier to pass on the responsibility for injustices and distributional inequalities to the shortcomings of another's planning or policy-making, or to environmental limitations and constraints. The pattern of world trade and economic relations between rich and poor nations alike are such that every individual has a share in the responsibility for the just distribution of goods and profits.

The era of quantitative techniques and technological gymnastics has failed to assert any lasting impact in geographical study. The notion of 'rational and informed economic man' has equally been eroded. For the Marxist geographer, all is reduced to a deterministic economic base. Man is depersonalised solely in terms of his productive economic propensity while his aesthetic qualities are relegated to a subordinate social superstructure. Humanistic geography, grounded in phenomenology or existentialism, has drawn attention to the ways in which people subjectively perceive the world but has failed to provide any convincing practical guidelines for socio-economic and institutional change. Nor has it discovered a set of moral statements based on unreproachable values which have a universal validity and application.

Neither the various political ideologies nor the

humanistic philosophies can present a formula for universal human wellbeing. Problem-solving frequently overlooks the immediate dilemmas of the present-time. Social and economic change are situated in the long-term and can only be 'rationally' discussed in the context of some future 'optimistic humanism'. Short of some idyllic utopia, social humanism fast collapses into nihilism. Despair in the social sciences arises either when it is recognised that society cannot be organised or function smoothly in a moral vacuum, or when it is realised that there is a need to engage in a discussion concerning the place of ethics in human existence, for which there are no apparent terms of reference. Equally, the individual is free to accept or reject an ethics whose content is metaphysical and seemingly intangible to many. The will-to-act is one of individual choice, deliberation and responsibility. No ethics can be made accountable to human authority rendering the legal enforcement of any such values difficult, if not impossible. Anthropocentricism, moreover, degenerates into areas of power and domination. It is unconcerned with social wellbeing or with any ensuing spatial relations. The practical outworkings of its policy-making are likely to have a dehumanising influence on socio-spatial relations and patterns.

Any index of social and economic wellbeing is manifest in the spatial organisation of society but it is the social processes of welfare which dictate and condition spatial form. Effective policy-making necessitates an assault on both external and internal forces. The geographical analysis of local or regional problems cannot draw restrictive parameters at the expense of international political and economic decision-making. Equally, the institutional organisations which initiate policy-making and which prescribe social values need to be internalised and their epistemological predilections closely examined.

THE HISTORICITY OF GEOGRAPHIC THOUGHT

The history of geography depends on what is currently
defined as geography at any one stage of its development.
The content of human geography as a body of knowledge has
hardly had any fixed parameters throughout history.
Although every school of research has its own
historiography and compiled the history of geography
according to its own criteria, the enquiry for
geographical knowledge is grounded in basic thinking which
is independent of both historic space-time transformations
and the fragmentation of the field of knowledge. 'Pre-
scientific' thinking has always existed througout the
history of geography. It is a form of natural geographical
consciousness upon which contemporary geographical science
is dependent. 'Pre-scientific' thinking and reflection
does not readily conform to the 'rationalistic'
methodology of 'normal' science. Epistemology is its chief
concern and its insights are rather the result of
'creative intuition' or 'sleepwalking' (see Koestler 1964,
1979). That geography belongs to science must be taken in
its broadest sense: that science is a part of society and
that it constitutes as knowledge human action, behaviour
and culture as well as the social structure of society.
Science is not simply a reflection of the 'object' of
study. Knowledge is bound to the individual who in turn
belongs to some specific culture and social group.

Rather than projecting an 'objective' social determinism,
human geography's historical concern is to reinstate man
as subject. With his perception, experience, knowledge and
action, man forms a holistic unity with nature. The
environment and man's place and meaning in it can only
however, be realistically explained in terms of man. The
emergence of the 'humanistic' movement in geography during
the 1970s has attempted to overcome this problem by
attributing a phenomenological or existential philosophical
perspective to the discipline (see Buttimer 1974, 1976,

1981; Relph 1976, 1981; Samuels 1978, 1981; Tuan 1974, 1977, 1979). Drawing particularly upon the work of Husserl, Sartre, Dilthey and to a lesser extent, Heidegger, they have sought to establish old pre-disciplinary and pre-scientific traditions for geographical thought. They contend that no modern geographical science can exist without a pre-scientific and natural geographical consciousness. Geography, in its pre-scientific context, retained an inseparable unity between man and nature. When geography became institutionalised, an artificial schism between these two entities was created to provide a basis for logico-empirical study. The knowledge it provided has become increasingly derisive, fragmented and pragmatic. Moreover, modern scientific geography has politics and society, by whose yardstick it must justify its status as a science.

The historicity and epistemological development of human geography are generally discussed in terms of the changing emphases and cumulative body of knowledge which constitute its disciplinary content (see Graves 1980, 7-43). Its ontological backcloth is an opaque consideration. Only Darwin's contribution to an understanding of Man's origins gained a wide scientific consensus in the development of modern geography. Nonetheless: "Writing the history of geography was part of the search for identity" (Grano 1981, 21), not only within the discipline, but also for man and his place in the human sciences and as an individual. Its significance is unquestionably concerned with men and ideas throughout time. Yet even the history of pre-scientific thinking somewhere obscures the point at which knowledge became fragmented and where man's understanding lost its unity and wholesomeness.

The modern world is increasingly marked by political and moral nihilism. Modern man has abandoned divine intention, nature and reason. History is taken as the pre-eminent directive of practical life, as a means of resolving

social tensions and ills. It is treated as a normative
agent, as a part of human actuality. In terms of
historicist philosophies, however, man is at pains to
articulate a conception of history that can consistently
sustain human dignity. Paradoxically, the historicization
of Western life and thought is motivated not by the
success of history in explaining meaning in human
existence, but by its failure to convey anything of
substance and certitude. History is a useful instrument to
negate the human condition and to illuminate all that man
is-not. Rather than providing a positive prescriptive
incentive, it plunges mankind into deeper confusion and
despair.

Gillespie (1985) attempts to utilise Hegel and Heidegger
to transcend the limits of historicism to find an
underlying reality which can provide an intelligible
account of the meaning of man's historical existence. Both
accounts tend to be shrouded in philosophical mysticism,
whether it is the Hegelian dialectical reconciliation of
the tensions in being and consciousness, or in Heidegger's
obscurum per obscurius self-revelation of Being in an
otherwise meaningless nothingness. Gillespie's response is
metaphysical. He is 'irrationally' compelled to make an
optimistic 'leap', claiming that human experience contains
a source of insight and wonder which penetrates beyond
history, fixing itself to an understanding of man's place
in a somehow intelligible super-historical cosmos.

If, however, the concept of truth is to be contained
within the parameters of what is empirically verifiable,
then this necessitates a return to an historically-based
rationalism. This implies that man must somehow discover a
point of reference which is universally acceptable to
human existence and which is generally manifest in some
form of speech or action. The apparent failure of
historicist philosophies to provide man with a universal
frame of reference for social organisation renders the

likelihood of an emergent, coherent politics or ethics as a remote possibility. Neither history nor natural sciences seem capable of exercising the necessary judgment to achieve this objective.

The historicity of human thought and values has been marked by uncertainty, ambiguity and superficiality. The exposure of relational 'truth' between economy, society and space cannot be discovered or explained until the origins and essence of man's inhumanity are discussed. Social theory needs to generate propositional structures - as in quantum mechanics, particle physics and molecular biology - which might account for 'social reality'. The rationality of methodology in the contemporary social sciences has lacked circumspection. The fundamental dichotomy is between those whose basic presuppositions about knowledge and existence are empiricially grounded and others who wish to pursue the development of a 'meta-theoretical' level (see Sylvan and Glassner 1985). This opens the stage for fierce debate concerning the theory and praxis which may form a basis towards a clearer definition and understanding of rationality, reason, reality and truth. An important underpinning theme which provides a common point of reference for all social theorists is the relationship between cohesion and conflict in and between social groups. For the geographer, this includes the ways in which space is perceived and utilised by these various groups.

While Buttimer (1978, 74) asserts that: "The ultimate challenge . . . is to develop a truly personal type of knowledge, one that allows for emotion as well as thinking, passion as well as reason, and one that leads to an understanding of the self as well as to an understanding of the world", it is questionable as to whether this directive might be subsumed under geography as a discipline of knowledge, or indeed under any single paradigmatic banner. Much depends on whether human

geography can be paradigmatic, or if it is non-
paradigmatic.

GEOGRAPHY AND THE PARADIGM DEBATE

The definition of a philosophy is rooted in an
individual's beliefs and convictions. Harvey (1969, 5)
recognises that research cannot proceed without some
philosophical foundation. Its ensuing methodology is
concerned with the logical exposition of an exploration.
There is much controversy over the paradigm concept in
human geography. For Buttimer (1981, 81), the notion of a
pardigm "offers an illusion of clarity yet remains
sufficiently vague and analytically elusive to occupy our
imaginations for a long time".

Titus (1964) refers to the paradigm idea as a personal,
speculative, and reflexive attempt to formulate a
universal or to develop a viewpoint which must be
critical, analytical and concerned with linguistic
clarification. No body of knowledge can be equivalent to a
paradigm unless the numerical support is forthcoming to
endorse the viewpoint. This is a difficult proposition to
maintain since scientific consensus is rarely unanimous or
unified in any discipline. Harvey and Holly (1981, 11)
suggest that geographic thought is a manifestation of the
interaction between prevailing philosophical viewpoints
and the major methodological approaches in vogue. Any
reconstruction of the history of thought requires
assumptions and inferences concerning its aims. Knowledge
inevitably becomes more fragmented. Certain pieces are
retained, others discarded, distorted or reworked to make
it fit into a particular theory. Buttimer (1981, 87)
observes that "the mystery of how knowledge actually
develops is still a puzzle to most philosophers of
science" and goes on to suggest that documented knowledge
recorded in books and articles is but a shadow of the
thought behind the ideal.

Any branch of geographical study - regional, locational or
areal analysis - may claim a paradigmatic status because
it is supported by "widely held views" (Haggett 1965, 10-
13). All disciplines react to external influences for the
development and interpretation of knowledge. Much is
determined by the dominant political ideologies which hold
power and by technological changes and trends. Graves
(1981) challenges the notion that geography might be
accommodated under one paradigm and suggests the
possibility that the whole concept of the 'paradigm' is an
attempt to impose constraints and limitations on precisely
what constitutes 'geographical study'.

Whatever the case, the division of knowledge into rigid
disciplinary boundaries confuses an understanding of
reality and man's place in it. An inter-disciplinary
synthesis seems prospectively to be the most satisfactory
approach to provide explanatory wholesomeness. but an
accommodation of various philosophies based on different
standpoints and which generate diverse and conflicting
methodologies is an awesome task. To deny or ignore the
philosophical diversity which underpins geographic thought
is to remain unreceptive to innovation and change and
imposes limitations on man's shifting perception and
horizons of world problems. As far as geography is
concerned, Bird (1978) and Stoddart (1977, 1981) contend
that the paradigm idea provides little understanding when
methodologies and philosophical outlook change.

Pre-renaissance paradigms were concerned with natural
science and physical law-making. This primarily involved
the search for universals. Many such paradigms remained
unrivalled until it could be shown that some systems of
thought had methodological shortcomings. Changes were
largely manifest on account of shifts in the philosophical
climate. The paradigm dilemma became all the more
compounded in the case of the human or social sciences
because of the complexities of man as a being. Kuhn (1962,

37) understood that the social sciences were necessarily "pre-scientific" because none of the individual disciplines in their group had ever established a general body of concepts, categories and relationships. Nor was there any firm methodology which could endorse their validity and acceptance as a paradigm. It is not, therefore, surprising that contemporary social theory - in which human geography has its part - has avoided any attempt to reconstruct complete and all-embracing ideologies. Knowledge tends to remain a fragmented and privatised field of enquiry. Theory may be seen as a form of conceptual scaffolding which supports the further elevation of individual disciplines rather than a totalising form of ideology that seems to make inter-disciplinary inroads. In any case, the meaning of 'theory' had vague interpretations. Theory may not necessarily be deemed to be 'scientific' if it cannot be contained within the parameters of a positivist definition, yet many so-called (positivist) scientific theories may be completely devoid of any practical applications or therapeutic utility.

Bubner (1982, 52) transposes this problem into the terms of formulating an 'ideal': "Even if one concedes that an ideal does not always correspond to reality, the ideal must nevertheless be meaningful as an ideal. That is, it must be an appropriate criterion for testing whether a reality is inadequate, in so far as the reality must correspond to the ideal, at least in principle".

The paradigm debate in geography had generally been emphasised with particular reference to Kuhn (1962; 1970). Kuhn saw 'normal science' carried out under a paradigm within the context of a positivist philosophy, but which justified itself through its numerical acceptance by scholars. This definition was largely accepted by most quantitative geographers in the 1960s. Chorley and Haggett (1967) refer to paradigms as stable patterns of scientific

activity and as large-scale models. 'Normal science'
demands intellectual mastery over complexity and
analytical activity in its conceptualisation and
methodology. This is not, however, without problems. A
positivist science is concerned with the technical
manipulation of data. Its problem is relating its
theoretical findings into practical solutions which might
be simplistically explained in ordinary language. Harvey
(1969) recognised that the hypothico-deductive method of
inquiry was perhaps a more direct means of revealing
'truths' in scientific explanation, but resigned himself
to the probabilistic-inductive approach because of the
limitations to knowledge and understanding.

No paradigm can be formulated in a value-free context. In
advanced capitalist nations, the conception of scientific
activity has long corresponded to particular class
interests. Government and industry controls and funds
research in the interests of those who own the means of
production. Science, in this sense, is concerned with
manipulation and control and this is the driving force
behind paradigm formation. Unavoidably, the question
remains as to who is going to control whom. Even Marx's
new scientific rationality can only raise part-truths
which may be relevant at a given point in time. Marx takes
the concern for material reality as the genesis of
scientific inquiry, but this reality is historically
conceived and made by men and, therefore, susceptible to
be changed by their practice.

Larrain's (1979, 35) evaluation of Marxist ideology as: "A
system of thought which brings together idealism and
materialism, philosophy and economy, science and
revolution, is bound to present problems of
interpretation", does little to clarify an understanding
of a paradigm. Yet it remains that the paradigm has become
an instrument of scientific respectability and academic
convention and has assumed itself to be isolated from

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ideological and political scrutiny. The plurality of
geographical study seemingly creates an irreconcilable
conflict when assessed against Kuhn's requirements for
paradigmatic status.

Where two or more standpoints are competing with one
another, then a dual or multiple paradigmatic state
exists. This does not, however, imply that a single paradigm
will unconditionally emerge from the ensuing debate and
discordance. Some see this as an undesirable prospect.
Johnston (1979, 189), for example, fears that the work of
"iconoclasts" will direct human geography towards
"anarchy". Merton (1976), however, suggests that a
plurality of standpoints is academically and
scientifically healthy insofar that it seeks to emphasise
the merits and shortcomings in each paradigm. Graves
(1981, 90) too favours a plurality of coexisting paradigms
which may reduce the risk of a myopic and limited outlook
so that geography may be left to: "wander creatively where
it may to make it an open-ended intellectual quest rather
than an artifically restricted study stifled by the
unheeding blinkers of an epistemological concept".

Bartels (1973, 24) refers to paradigmatic coexistence as:
"situations of conflict between different statements of
truth". This, he claims, does not necessarily inhibit a
sharpening in the focus of the discipline.

The question remains, however, as to whether 'truth' can
be disjointed, dissected and contained in different
statements. Its fragmentation cannot provide an acceptable
practical image. No valid statement can be made to stand
if it fails to assert some epistemological foundations.
Man needs to know 'what is to be known' in theory and
praxis, plus a standpoint. Otherwise, 'truth' in
geographic thought will fail to assume any holistic
dimensions, leaving the discipline in an existential
wilderness charged by pragmatic incertitude. Paradigmatic

plurality within a discipline only examines the particulars, whereby "discussion on the fundamentals remains and long-term progress fails to occur" (Masterman 1970, 74).

Human geography has not escaped the dilemma of paradigmatic plurality. Moreover, it has increasingly encountered this problem with the growth and proliferation of competing philosophical, ideological and methodological standpoints. The positivist and behaviourist schools have been severely challenged and criticised by humanistic and radical thinkers, which have both subsequently claimed a paradigmatic status.

Many human geographers seek understanding and explanation from the phenomenological and hermeneutic philosophies. These approaches suggest a search for 'ideal' ways of thinking about the world and problematise the questions of 'being' and 'existence'. The phenomenological theme has attracted a diversity of methods and approaches to investigate human perception and relationships in space and with place. It has not, however, generated a sufficiently large consensus to warrant it a paradigmatic status, at least insofar that its promulgations have hardly made a convincing case to attract attention and favourable reactions from the scientific community or from government. This does not, however, necessarily invalidate the work or the value of the critical acumen of the humanistic approaches to human geography.

Relph's (1976) interpretation of 'insideness' and 'outsideness', 'placelessness' and 'alienation' provides a valuable insight to understanding human behaviour and individual decision-making. Equally, he illuminates the shortcomings between planner and place and the seemingly insurmountable problem of creating an 'ideal' and 'acceptable' environment suited to each individual. Relph has

drawn substantially on the constraining and indoctrinal
influences of technocracy.

Tuan (1974, 1977, 1979) discusses the inference of myth,
history and culture on the landscape, while Buttimer
(1974, 1978, 1981) and Rose (1981) are concerned with an
empathetic approach to understand the 'personal message'
of the lives of geographical pioneers through an
autobiographical study of a scholar's life. Guelke (1971,
1974, 1975, 1981) attempts to attribute an individualistic
view of experience in man-land relationships by drawing on
historical and cultural idealism. His standpoint is based
on 'normal' human rationality.

Ley (1974, 1978, 1980) and Wallace (1978) adopt a
humanistic approach as a critical tool to demolish the
mechanics of advanced capitalism and the ideological
shortcomings in Marxist theory. Samuels (1978, 1981)
employs an existentialist view of man's encounter with
himself in a spatial context. Olsson (1978) too defies and
challenges scientific rationalism by outlining the
ambiguity of language and man's existential uncertainty.
Olsson (ibid., 113) identifies this problem by trying to
understand: "... how one authority gives way to
another...how a paradigm is overthrown and superceded by
another".

Smith (1973, 1978) has been anxious to develop a 'human
paradigm', for which he has proposed a 'people geography'
and a 'welfare approach'. Smith emphasises the
difficulties in satisfying basic needs. He points to the
entrenched values and ideas of industry and those in
educational institutions, and their inflexibility and fear
of change. There is, he claims, an extending time-lag
between scientific reality and the value positions held by
society at large. Smith (1978, 370-373) wishes to
accommodate "non-geographical" considerations in his
analysis, so that the mechanisms which generate social and

economic inquality and distributional disparities can be
challenged, exposed and refuted. If, Smith contends, a
policy or paradigm is caring and responsive, then its
value should stand.

For Harvey (1973) and Peet (1977), the only acceptable
'paradigm' is a critique of political economy, which for
them is the application of a Marxist approach to human
geography. In this case, Marxist theory attempts to
combine a materialist base with an analytic method, where
the dialectic of materialism works as a sifting device to
resolve contradictions, paradoxes and opposites.

Gregory (1978) and Sayer (1984) contend that human
geographers as social scientists should develop an
'objectivised' knowledge about externalities and promote a
critical self-awareness of people as subjects of
geographical and social inquiry. Following the work of
other critical theorists such as Habermas and Bhaskar,
they support the notions of the 'emancipation' of the
social individual from all forms of political ideology by
seeking an 'ideal communicative competence'.

While those human geographers investigating the avenues of
critical theory tend to seek a 'new realism' which
frequently smacks of some expression of neo-Marxism,
Giddens (1984) has integrated human geography into his
theory of structuration. He repudiates holistic and
evolutionary thinking in both functionalism and Marxism in
human geography. Equally, he condemns both 'objectivist'
theories which assert the dominance of 'structural
constraint' over human action, and 'subjectivist' views
based on methodological individualism which tend to
generate extremes of idealism. Moreover, and following the
ideas of Goffman and Foucault, Giddens is persuaded that
the concept of 'power' is critical to the understanding of
how society is produced and reproduced, the geographical
context of which is inclusive.

In those respects, both the radical school of Marxist geographers and those who engage in critical encounters with major intellectual traditions in the development of geographic thought and methodology may feasibly make claims for a 'paradigmatic' status.

Kuhn's work has been criticised on account of his idealistic interpretation of science and progress, where the relationship between scientific knowledge and its materialistic foundations are divorced. Others maintain that science and technology are intrinsically linked to the materialistic expression of their theory and development. Nor does Kuhn's analysis explain how anomalies are set up in a paradigm and how this may precipitate a crisis. Kuhn's model of 'normal sciences' does not adequately explain the dynamics of paradigmatic change - certainly, it is less connected with any demonstration of scientific error. The genesis of a new paradigm and its related body of theory is a complex matter. There is no consensus as to how it comes about or as to what paradigm change precisely means. Some observers maintain that when an established scientific orthodoxy can no longer sufficiently explain a set of facts, actions or circumstances, then their methodology becomes inadequate and their paradigm outdated and acceptable.

Harvey (1973, 146) suggests that paradigm shift is only possible where: "... such a superior system of thought when judged against the realities which require explanation ... succeed in making all opposition ... look ludicrous". This position may be difficult to substantiate particularly where experimental methodology reaches its explanatory parameters and becomes compelled to recognise - in the terminology of 'normal science' - a sub-atomic (metaphysical) field of inquiry, where relationships are acasual, indeterminate and which generally defies any measurement of probability. At such a point, 'truth' is likely to become a highly subjective and personalised

concept which does not lend itself to 'normal scientific' verification.

The acceptance of a new paradigm does not necessarily conform to a 'logical' sequence of thought insofar that the emergence of new ideas and concepts is not always the product of a dialectic between 'normal scientific' inquiry and the prevailing attitudes in the socio-economic structure of society. According to Buttimer (1981), there is often a profound element of 'uniqueness' in paradigm revolution, where individual scholars have provided the dynamism and insight to extending knowledge and understanding. This requires critical reflective thought in terms of encounter and events which help to explain the cumulative shaping of these insights. Kuhn too recognised that where the parameters of 'normal science' could be legitimately challenged and shown to be insufficient, then 'extraordinary science' might be considered as an alternative. Moreover, Kuhn (1926, 34) believed that if a paradigm was completely abandoned, then the science it defined ceased to be practised.

Much remains unclear. Harvey (1973, 129) maintains that paradigm shift in geographic thought responds to the dynamics of changing social objectivity and conditions. Further, Harvey (1972, 3) claims "... a new paradigm should be intellectually challenging and appealing; contain enough substance to attack the fundamentals of other viewpoints; offer complexity in its structure, a new methodology and a basis upon which further research can take place." On the other hand, paradigms should not be problematised in such a complex theoretical framework that they bear little or no resemblance to social reality. No system can claim to be valid if it is value-free, neutral or uncommitted in the development of its policy.

King (1976, 306-308) argues that a paradigm must have an operational utility to enhance the quality of material and

social wellbeing. Smith (1978) interjects that the
transition from scientific theory to practical social
policy requires ethical statements and normative
assessments. Any 'normative theory', however, may arouse
suspicion due to its apparent inability to deal with
immediate problems. It cannot be empirically verified and
often collapses into the metaphysical implications of
human existence.

Although paradigms appear to come and go according to the
speed by which research can reveal anomalies and non-
explanation in existing paradigms, paradigm shift is more
a 'revolutionary' process than an accretive one.

Stoddart (1981, 74-77), using T.H. Huxley's 'Four Stages
of Public Opinion, shows that many generalisations about
the nature and progress of scientific change predate
Kuhn's ideas and are independent of his formulation.
Huxley claimed that over a one hundred year period a 'new'
way of thinking is first ridiculed, then becomes accepted
as an 'absolute truth'. Later, it is found to be lacking
in explanation and finally, it becomes an historical
mixture of 'truth' and 'error'.

More recently, Schafer et al (1984) extended the notion of
'finalization' as a possible explanation for the
development of scientific thought, in which three distinct
phases of paradigm formation are suggested: first, the
'pre-paradigmatic' or exploratory phase, where the
research may be strongly motivated by external social
interests, but where the results are fragmentary and of
little value; secondly, the 'paradigmatic' phase, where a
theory becomes recognised and is acknowledged within a
relatively closed technical community; thirdly, the 'post-
paradigmatic' phase, where theory assumes a practical
application and where research is geared to technological
uses.

A 'finalized' science, however, clearly threatens the
autonomy of a discipline and its practitioners insofar
that societal forces impinge directly on the structure and
process of the field of inquiry. These agencies undertake
the selection and definition of research inquiry, specify
and propagate the nature of explanatory ideals and dictate
the conditions of the research environment. In this
context, modern science excludes any critical reflection
of its objectives and encloses itself in a 'value-free'
vacuum. Technocratic dominance in research directives,
when in the hands of corporal societal interests (i.e.
governmental, industrial, commercial or military),
suggests a move towards 'strategic epistemologies'.

CRITICAL REMARKS ON THE PARADIGM ISSUE

Human geography can no longer be contained under a
positivist paradigm or any of its related offshoots,
namely behaviourism and functionalism. Although positivism
directed human geography toward a single-paradigm science
in the 1960s and much of the 1970s, its credibility had
largely been undermined by philosophers and social
theorists alike. Its rigid and inflexible methodology and
its refusal to explain social change exposed shortcomings
in its philosophical content. Its preoccupation with
socio-spatial generalisations, with economic efficiency
and rationalisation, theorems, mathematisation and value-
free analysis stultified and stifled geographic horizons.
If a paradigm is understood as a consensus of aims and
methods which defines, until replaced, the pursuit of
'normal science', then positivism threatened to accord
science and technology predominance over man,
subordinating the latter as a dehumanised social actor
whose thinking, behaviour and responses could be
technocratically conditioned and physiologically
explained.

Increasingly in human geography there is a need for more

epistemologically rigorous foundations for research and a more open discussion of values. Either it can conform with the 'scientific' (positivistic) yardstick - that is, the preoccupation with procedural and technical issues; particularity and narrowness of methodological inquiry and an uncritical reluctance towards its own ends - or redefine its understanding of value and meaning. This bi-polarisation of standpoints inevitably generates discordance over the interpretation of 'relevance', 'reason' and 'rationality' in geographical study. As the positivistic consensus has steadily become fragmented, human geography has entered a state of crisis: it has either become multi-paradigmatic, or it is non-paradigmatic.

There is no consensus for the paradigmatic status of human geography as a discipline of knowledge in the social sciences. Gould (1979, 145) considers that perhaps there has been no paradigm shift; instead, "We see ourselves in an enlarged paradigm ... We are not flip-flopping from one paradigm to another, but enlarging our perspective by reaching out".

Graves (1981, 90) suggests that the conceptual relevance of the paradigm is probably more suited to the physical and environmental sciences than to human geography, where, he contends, "the issue is more problematic". By implication, Graves poignantly infers that perhaps not all that is published in human geography is social science. It is therefore possible to question the paradigmatic substance of the social sciences as a composite whole.

Jones (1980, 259) remains unmoved in his opinion that: "Paradigm has replaced paradigm so rapidly that it is impossible to discern a concensus of opinion which will support one view of social processes".

If it is asserted that disciplinary limitations and

boundaries impose artificial constraints, then the fragmentation of knowledge can never be expected to reveal truth, reason, rationality and meaning in human existence. Contrastingly, disciplinary expertise, in its conventional sense, increasingly runs the risk of a wider epistemological distancing in both an academic and social context. 'Critical theory', for example, will also quickly lose its potentiality and usefulness as a means of review, assessment and adjustment.

The chief downfall of modernism has been its inability to establish a common culture. It has failed to combine the world of practical experience and individual sensitivity into a universal social theory and practice. Abstractions of philosophical idealism - particularly those with a phenomenological basis - are frequently condemned by positivist and radical geographers alike on account of their lack of content. A reflexive methodology tends, in any case, to collapse into some form of utopian idealism, or moves towards an association with positivist empiricism, or into a socially aware form of materialism. It is hard to accreditate it with a paradigmatic status.

Notwithstanding, it does not follow that all non-cognitive reference points such as custom, tradition, culture and religion can be eradicated from onto-existential and epistemological considerations in human geography. Positivism offers a technocratic mass consciousness with its supportive symbolism and stylistics. Substantive and affective values and ideas are discarded as 'irrational', 'irrelevant' and 'unscientific'. Contemporary society is increasingly squeezed by the power of dominant elites and their associated policies and ideologies so that scope for consensus has become restricted, and its sense and meaning obscured. The limitations and stereotypography of a technocratic rationality not only confuses human reason, but pushes any notion of the inclusion of justice, dignity and moral responsibility into paradigm formulation as a

nonsense. It is equally difficult to apply a rigid
materialistically-rooted paradigm to human geography, as
many Marxist commentators would have it. This is an
'atomic' and deterministic methodology where 'normal
science' circumscribes its paradigmatic territory.

The 'sub-atomic' aspects of human thought, behaviour and
existence are necessarily excluded. They do not easily
lend themselves to experimental methods of inquiry in the
normal way and are difficult, if not impossible to
quantify. This is perhaps the point where theories and
ideologies are reduced to their underpinning philosophical
foundation, where epistemological and ontological
structures are ultimately called into question.

Jones (1980, 260) makes an unprecedented appeal for
phenomenological relevance in human geography through a
proposed study of De Chardin's work. This suggestion
clearly indicates an integrated study of man's historico-
theological roots and his relationship and place in
cosmological theory. It is also a point of imminence where
the 'natural' collapses into the 'supernatural', the
'normal' into the 'paranormal', and philosophy into
metaphysics and mysticism. If this analogy is
coexistensive with Buttimer's (1974) insistence on an
interplay of both "inside" and "outside" views of man and
the universe, then any substantive paradigm for human
geography and all the social sciences is contingent on an
examination of origins and essences.

GEOGRAPHY, MAN AND SPACE

The notion and meaning of space is intrinsically bound in
the philosophy of science. In much of human geography,
spatial considerations are frequently devoid of and
dissociated from social and moral philosophy as if these
were not relevant constituents of the philosophy of
science. Facts become dismembered from values, objects as

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independent from subjects. Objectivity encompasses an identity divorced from human perception and action. A resultant system of thought based on fixed definitions and fixed categories and relationships are frequently seen as obstacles to understanding. When philosophy and methodology are separated, theory is evolved. Its verification is accomplished by scientific experimentalism so that theory becomes practice.

Alternatively, a positivistic approach may be abandoned for a materialist or reflexive interpretation of space. This may be set in an historical and/or individualistic context which may be thought to contain the wholesomeness of existence, and therefore, of spatial awareness. Ultimately, such standpoints will provide a more solid directive towards problem-identification in a socio-spatial context and for present and future decision-making.

Whatever the case, a universally acceptable definition of 'space' is difficult and complex in order to satisfy the various forms of geographical inquiry. Many of geography's problems are ontological where the interpretation of the meaning of 'space' is paramount. For this, there is no consensus of opinion. Space is not absolute, nor relative or relational in itself. Man can manipulate the concept of space depending on his purpose, pre-assumptions and the demonstration of his method. There are no philosophical answers to philosophical questions when the nature of space is scrutinized. Its various interpretative shapes and forms are manifested in human action.

The schism between fact and value which has pervaded post-Renaissance Western philosophy has established the need to reconcile dualisms where dogmatic moral precepts can somehow or other be removed. Kant resorted to an 'a priori' methodology, while Marx's dialectical materialism attempted to abolish all philosophical and metaphysical

dilemmas once and for all. Marx's eternal synthesis schemata, is compelled to accept the need for a man-centred ethical code. Concepts of 'social justice' and 'morality' in the use of space do not disappear, but rather Marx attempted to show that they are created within and from human action. Any notion of fixed truths which govern man's concepts, his modes of action, or which help to explain his successes and failures is rejected. A Marxist theory of space necessitates the recognition of concepts of 'good', 'bad', 'greed', 'envy', 'misery', 'responsibility', 'justice', and so on. All such terms of reference may be seen as metaphysical abstractions which must somehow be translated within the context of an ideological economic determinism.

As Harvey (1973, 15) points out, Marxism required: "a move from a predisposition to regard social justice as a matter of eternal justice and morality to regard it as something contingent upon the social processes operating in society as a whole."

Values, however, have always been a part of historical analysis, including its socio-spatial context. Although agnosticism and atheism remain a negation of values, they cannot eradicate the need for social values in itself. Rather, they attempt to redefine historical values under an autonomous-man frame of reference. Marxist theory, for example, must convincingly try to legitimate the choice and reasons for the values which it employs in the materialistic theorisation of space. How are such value systems reshaped, integrated and contained within the theory? Upon what moral prerogative are social abstractions founded? How may social actors be encouraged to react accordingly in a spatial setting?

A spatial awareness or 'spatial consciousness' is inseparable from social process if any real understanding is to be gained. According to Mills (1959, 5), the

"sociological imagination" enables man to understand the wider implications of his historical background, both in terms of its meaning for the "inner life" as well as for his "external actions". The suggestion is that the individual can understand his own experience. Popper (1970) and Polanyi (1962) amongst others, both imply no information-processing system can formulate an up-to-date representation of itself, that is, complete self-awareness is never achieved unless the peak of the hierarchy is attained. Man has largely sought to discover the social and historical meaning of the individual in society. This pursuit raises ontological and epistemological questions.

For Harvey (1973, 24), a 'spatial consciousness' involves the recognition of "how transactions between individuals and between organisations are affected by the space which separates them".

This suggests some evaluation of relevance between people and places over spatial boundaries. In this context, the inseparability of spatial structure and social process implies that tight disciplinary parameters are a hindrance to explanation and understanding.

Space is still misunderstood, misconceived and misused throughout the social sciences. Contemporary 'scientific' methodology relays its influence through the technological society which it has created. Positivism, for example, prescribes cultural homogeneity so that theories and hypotheses can be modelled and tested. This approach, according to Blanché (1968, 6) is unacceptable since: "Statistical laws say nothing whatsoever about the behaviour of the individual elements ... moreover, any prediction about average behaviour is not given as a certainty".

Relph's (1976) phenomenological investigation of space and his concept of 'placelessness' not only indites the

topographical landscape, but emphasises man as part of a depersonalisation process. The city is a place of anonymity, alienation and human anxiety (see Wirth 1938; Cox 1968; Roszak 1973). Values are removed by technocracy. Man is reduced to the terms of socio-economic definitions. Every aspect of his existence - his relations with others, his own thinking and with the environment - is eroded and is inauthenticated. Space (i.e. Land) mirrors the innermost emotive human expressions: need, meaning, greed, ambition, malevolence and fears. Much of man's endemic historical downfall is related to his insatiable appetite for unlimited material wealth and territorial gain (either by a 'visible' military invasion, or by 'invisible' economic coersion) and thus, the implementation of power. Societal and environmental imbalances are the inevitable spatial repercussions of his thinking and actions.

Irrespective of the individual's philosophical convictions, life is dictated by decision-making. This requires judgment and therefore a belief in personal responsibility. This in turn is coextensive to freedom of choice. In reality there exists an uneasy accommodation between geographical, sociological and political decision-making. They are rarely in practical agreement and conceptually and methodologically usually in conflict.

Harvey (1973, 27) asserts that: "Once a spatial form is created it tends to institutionalise and, in some respects, to determine the future development of social process". This suggests that many socio-spatial functions are increasingly carried out 'automatically' or 'semi-consciously' with a diminishing degree of awareness.

Koestler (1978, 240) maintains that "experience is constantly being eroded by the formation of habits and mechanical routines". Much of these tendencies can be attributed to the impact of scientific technocracy.

Man's spatial experiences cannot be confined to any one strict category. Cassirer (1944) suggests three basic forms of spatial experience: first, 'organic space', which is biologically determined and used in behavioural analysis by ethologists to explain migratory movements and instinctive territoriality; secondly, 'perceptual space', which is experienced by the senses and probably influenced by cultural conditioning; thirdly, 'symbolic space', where space is vicariously experienced by the interpretation of symbolism which has no spatial dimension.

The geographer has tended to experiment with mathematical and geometrical representations of space to produce workable ideas, but Euclidean three-dimensional design is probably more applicable to physical laws for the organisation of objects in physical space. Social space incorporates personal dimensions which transcend physical space. The structuration of space in an urban or rural context may symbolically be culture-specific, reflecting an existing social or political order of symbolising needs, fears or hopes. Social space is difficult to generalise. It is an assortment of complex individual emotions and personal images which reflect responses to spatial symbolism. Spatial relations are personalised and privatised, functioning primarily at the individual level. Group norms may be identified where people are seen to behave and evaluate space in a similar way, but there may be no common or universal image of perception. Conversely, there are strong discontinuities in socially-measured spatial structures. Some images are highly unpredictable and idiosyncratic. Even where distinctive group behaviours are identified, sociological criteria may be inadequate to explain them. This reinforces the 'unscientific' and 'irrational' aspects of man's personality. Moreover, the symbolic qualities contained in spatial form reflect the dynamics of man's conscious and unconscious manifestations, his belief and value systems.

Spatial structure mirrors man's state of being through time. Changing social norms and behaviour exert a considerable influence on spatial structure. This implies a strong acausal and a-deterministic relationship between society and space. Although space is sometimes accorded a mathematical meaning, it is still essentially an illusion because it embodies man's thinking. It otherwise has no real accountability or commitment. Space defines the limits of geographical and geo-political frontiers to which man relates in his 'private space'. Place, however, is the human transformation of space and contains an existential and ontological meaning. Contemporary man attempts to develop new forms of scientific, ideological or philosophical rationalism to represent the meaning of space. Taking anthropocentricism as the basis for all inquiry and discussion, man tries to reinterpret historical symbolism in such a way that his epistemological linkages become severed, fragmented and distorted. Equally, he often lacks the linguistic tools to provide an adequate explanation for his terms of reference. Even when man resorts to mathematical symbolism, mysticism abides in some shape or form.

The shifts in man's reasoning are seen in an historical space-time context. In his primeval setting, man's inter-relationship with the natural environment was based on fear, superstition, magic and demonology, "with no distinction between idea and actuality, word and thing" (Houston 1978, 229). Judaic and early Christian societies emancipated themselves from the ontological and epistemological dilemma by accepting the limitations of language and knowledge, and putting 'faith' into action. The 'irrationality' of scriptural mysticism and the problematic equations of man's relationship with nature and his economic transactions in their spatial context could then be identified and better understood. Judaic society was strictly governed by a sense of God's involvement and participation in the world. Man has been

endowed with responsibility, accountability and a moral and legal code of conduct. Man acted as a 'leaseholder' or 'steward' in his interactions with the land. The Judaeo-Christian ethic fostered a sense of social justice backed by moral values. It categorically outlawed and discredited those whose sole concern was economic gain by emphasizing the eschatological imperative.

Renaissance secularism, with its idealistic stress on anthropocentricism, breached the creationist position and any notion of the Genesis Fall. A schism was drawn between man and his spatial domain, so that any relationship was deprived of meaning or understanding. Theocentricism was finally abandoned. Science viewed the world and all the physical universe as a closed system of mechanical causation, devoid of any personal origins, design or purpose, and therefore by implication, without any value system. This new perception radically altered man's understanding of space and place.

Many existential and phenomenological philosophers have emphasised the importance of place. Heidegger (1962) understood 'place' as a confirmation of man's existence (being-in-the-world), providing man with the means for self-reflexion. Heidegger could not, however, along with his contemporaries, provide an ontological interpretation to explain man's purpose, meaning and origins.

Buber (1966) too recognised that scientific rationalism has increasingly eroded any code of ethics, displacing any ideal of justice by a return to philosophical naturalism, which Houston (1978, 223-234) refers to as: "a paganism and desecration of space".

If social and economic planning are to be decisive in a spatial context, then a policy is needed which harmonises all the relevant attributes, including the political and ethical considerations. Few legislators are prepared to

clarify the position concerning ethical standards. Any
discussion of ethical judgments overlaps into the
normative. The pursuit of 'what ought to be' immediately
highlights 'what is not' at the present time, and
following this, 'why it is not what it ought to be'. Man
is frequently loathe to recognise his shortcomings in the
social and political arenas. Any exposure of his ethical
shallowness threatens to demolish the foundations of all
his other precepts. Geographers and environmental planners
too have largely elected to avoid uncomfortable concepts,
tending to confine themselves to regressive or static
tendencies within the parameters of spatial determinism.

A scientifically-orientated technocratic society must
increasingly exercise totalitarian measures of control to
impose and maintain its ideological structuration. By
manipulating the spatial fabric of the environment, the
status quo is either perpetuated, or indeed some new
social order may be initiated and effectively controlled.
A 'placeless' geography is increasingly likely to emerge.
Where statistical significance is sought, then all
unquantifiable variables must necessarily be eliminated
and regarded as scientifically insignificant if they
threaten to make a hypothesis unworkable. This is often
compounded by disciplinary ridigity: sociologists may tend
to ignore the spatial imperative from their analysis,
while geographers omit any reference to the social
processes in theirs.

The existential-phenomenological insistence on 'mythical'
or 'personal' space has reverberated throughout the
humanistic schools of geographic inquiry. This can partly
be attributed to the growing disenchantment for scientific
and ideological inflexibility in socio-spatial matters and
moreover, the dehumanising treatment of man as the subject
of human geography. It helped to reinforce the contention
that there is no accepted definition of statistical
significance in spatial inference. Spatial distributions

have not been satisfactorily explained by hypotheses formulated in the human sciences.

While humanistic geographers have sought to unravel the 'deeper' personality characteristics which contribute to socio-spatial behaviour, their non-experimental research techniques - largely based on intersubjective criteria - have failed to gain scientific acceptance owing to the intangibilities of their empirico-hypothesis verification. The phenomenological assessment of spatial structures is, at the last resort, seen as a weak analytic tool for cumulative inquiry. Paradoxically, the predominance of the 'scientific' methodology as the most 'rational' technique for the analysis of spatial phenomena is progressively being challenged by work in particle physics. Its findings threaten to undermind the epistemological bases of 'normal' experimental science, to whose precepts and methods the social sciences had appealed to gain academic respectability and accreditation (see Bachelard 1971).

When a geography of space sets up a causal relationship where spatial form conditions social process, none of the human complexities are decoded. Nor can this method claim to explain the network of interaction between spatial and social constructs. Conversely, a rigid economic determinism as advocated by Marxist ideology may provide a close critique of the capitalism treatment of space, but does little to enhance its own case through the suppression of the superstructural content of human existence. In short, an orthodox Marxist view of space generates similar antagonisms and dualisms to its capitalist counterpart. The more man asserts himself as the autonomous and egocentric logos of socio-spatial activity, then nature and everything contained within it increasingly becomes a utilitarian composite, open to exploitation and without recourse to any code of substantive ethics appertaining to the interaction between man and his environment, and between man and man in a

distributional context. The outworkings of causality and determinism in the social sciences frequently culminate in an accentuation of human greed, disparate levels of wealth and poverty, misery and injustices and a craving for absolute power by dominant ruling elites. The ethos and wellbeing of spatial relations are directed under the banners of ideological and scientific progress.

From a spatial perspective, man has tended to blinker the scope of his access to knowledge: "... education has fashioned ... minds according to the norms of classical geometry, and has accustomed sensibilities to submit to these norms" (Blanché 1968, 37). Man surrenders a certain level of experience on account of this shortcoming. In reality, space manifests itself as multidimensional, non-homogeneous, personalised and inter-subjective in the way in which social activity takes place.

At the sub-atomic level, the regular concepts of space, time, matter and causality are no longer valid. The universe appears to oscillate between a quasi-undecided state to indeterminateness or 'freedom'. Movement in sub-atomic space operates beyond the scope of natural laws, against which it is unpredictable and conforms to no apparent 'logical' or 'rational' order. Quantum mechanics disputes not only the usual notions of space and time, but also mental categories – even logical principles such as those of identity and contradiction (see Blanché 1962). It becomes difficult to maintain that elementary phenomena are regulated by strict laws. Only probabilistic laws are possible and even these may be seen as an expression of imperfect knowledge. Quantum physics criticises the realist notion of a 'material substance' as the subject of any permanence. Elementary particles appear as pure configurations, where form replaces substance. If the concept of matter has thus been dematerialised, then 'materialism' can no longer provide an adequate basis as a scientific philosophy in the natural or social sciences.

The indeterminateness and vagueness of the content and movement in sub-atomic space suggests that reality may rest against a background of unreality. Many physicists, among them Einstein, were unwilling to accept this pre-supposition. They rejected the notions of randomness and chance and directed their research on the pre-assumption that a 'sub-stratum' existed as a mechanism which controlled indeterminate processes and acausal relationships in sub-atomic space. The new imperative in science is to pursue the theory of 'hidden variables and structures', which are a part of human existence. In terms of 'normal' scientific inquiry and understanding, physics collapses into metaphysical and para-psychological theorizings with a strong smack of mysticism.

Quantum research is not only concerned with an investigation into physical phenomena but is increasingly shifting towards establishing a relational linkage between sub-atomic particle movements and human behaviour and thinking. The transformation of physical events into mental events and vice-versa is pluralistic in function. Koestler (1978, 233-236) compares it to "a rapid series of quantum jumps". The classical view of the mind-body dichotomy is eroded. This is exemplified in language transmission and the contents of consciousness. Thoughts and images are somehow linked to the material brain by some medium of motion passing through invisible spatio-temporal channels. This parallel is consistent with the linkage and relationship between atomic and sub-atomic particles in physics. Quantum 'waves' are seemingly 'carriers' which support a communication network to the particles. Man too appears to have been biologically programmed in a similar way. His failure to tap and activate these complementary channels of thought is the subject of much contention and speculation. Psycholinguistics have attempted to uncover and sample human attitudes towards spatial perception, from which semantic barriers arise. Physicists, however, are

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suggesting that the human condition is also geared in some capacity to a 'quantum' sense of rationality. This is otherwise an invitation to make admissions of other aspects of reality which have been pushed aside. Philosophically, this relates to the ways in which man chooses or refuses to exercise 'freewill'. Quantum theorising has taken various standpoints in these areas. Moreover, modern physics has assumed an increasingly holistic outlook - the 'whole' is as necessary for the understanding of its 'parts' as the 'parts' are necessary for understanding the 'whole'.

The physiologist Eccles (1953, 276-277) proposed that the quantum indeterminateness of "critically poised" neurons in the brain made room for the exercise of freewill. He claimed that the will modified the spatio-temporal activity of the neuronal network by exerting spatio-temporal "fields of influence". Eccles interpreted this as evidence of spatio-physical linkages between mind and matter, and of direct communication channels between mind and mind.

Similarly, the astronomer Firscoff (1967, 102-103) suggests that there might be a transformation of physical energy into psychic energy and vice-versa, just as matter can be transformed into physical energy.

The mathematician Dobbs (1967) has attempted to explain the linkage and mechanics of conscious/sub-conscious exchanges by an elaborate theory of telepathy and precognition. He suggests that quantum particles, which he terms as 'psytrons', act as the carriers of ESP phenomena. These relay and transmit another dimension of information to neurons in the brain. Dobbs's theory is heavily indebted to cosmological observations made in astro-physics, but it is unable to comment on the origins of information access which must 'charge' these quantum particles.

The work of the physicists Wheeler (1962) at Princeton, and of Stephen Hawkin (1984) at Cambridge attempts to make similar inroads by developing a hypothesis of 'super' or 'hyper' space. Both observers have been concerned with the theoretical physics of 'black holes' in the universe. The basic (and oversimplified) assertion is that a 'black hole' in the universe might emerge as a 'white hole' elsewhere. This suggests that space is endowed with an infinite number of dimensions. The three-dimensional universe is littered with such 'holes' or 'tunnels' which implies that it is brought into direct contact with 'superspace'. In terms of its linkages, superspace has multiple connectivity. No theory has yet been forthcoming which might attempt to explain the impact of 'superspatial' information systems within man's three-dimensional metric.

The theoretical physicists Bohn and Hiley (1974) have reinforced the claim that the acausal connectivity or relatedness of quantum particles in sub-atomic space demonstrates a recognition of order in this domain. Drawing on experimental evidence, they refer to the intimate interconnection of different systems that are not in spatial contact. When two particles have interacted and subsequently disengaged and moved off in opposite directions, interference with one particle will instantly affect the other, irrespective of the distance between them. There appears to be some kind of socio-spatial telepathy working between them. Such 'complementarity couplings' suggest a mutual dependence coexistensive of unity and completeness, and which strengthens the notion of 'unbroken wholeness'. This rejects the classical idea of the scientific analysis of physical and human phenomena by taxonomic means.

These functions have also been observed in the physico-chemical relations of human biology, and have equally been recognised in psychology. Quantum socio-spatial networks

and relationships are difficult to transpose for the
purpose of explanation and understanding in human
geography, if only on account of the recentness and
intangibilities of quantum behaviour. Notwithstanding,
there are significant parallels in the irregularities
associated with human socio-spatial relations. Geographers
have frequently noted that 'distance' may effectively
weaken or destroy the linkages on which the reciprocation
of harmonious relationships are based. The conventional
geographical sense of distance generally implies a
physical spatio-temporal concept, particularly in a
distributional context, but there are also deep
existential implications where the metaphysical or 'sub-
atomic' attributes of the human condition exert potent
interactive tendencies.

'Normal' experimental scientific methodology is largely
inefficient in its attempts to decipher abstract
inferences which are manifest in socio-spatial relations.
Similar claims can be vested against political ideologies.
The emotive anomalies and ambiguities which pervade the
human character and which generate logical inconsistencies
and disparities in socio-spatial transactions and dialogue
are frequently dismissed as 'irrational' when they are
examined and challenged in a holistic setting. This
provides no insight as to the underpinning origins and
causes of human incompleteness in the spatio-temporal
sphere, except to indicate that the epistemological and
ontological foundations are obscure. This goes some way to
explain the human incapacity to manage his spatial
environment equitably and justly, and equally man's loss
of understanding with himself to comprehend the meaning
and purpose of his relationship with nature and others in
it.

When socio-spatial problems are investigated by
psychological methods of inquiry, the dissemination of
observations and theorising remains a dilemma. Human

subjectivity is bound within obscure mental constructs
such as emotion, mood and sensitivity. These involve
unconscious and involuntary processes which are not
understood and which frequently operate according to some
acausal principle.

Jung's (1960, 318) work on randomness and chance
concurrence in spatio-temporal human encounters and events
led him to conclude that: "the simultaneous occurrence of
two or more meaningfully but not causally connected
events" could not be adequately explained by
"coincidence". The degree of improbability expressing the
relationship between such phenomena would be
mathematically untenable. Instead, in his theory of
'synchronicity', Jung claimed that an acausal principle
acts selectively making 'like-and-like' converge in causal
space and time. Jung was unable to account for the means
by which this acausal agency interfered with the causal
order, except that in space it produces confluential
events related by affinities of form and function, while
in time it produces similarly related series. Nor was Jung
able to explain the relationship between phenomena in the
sub-atomic realm and the macro-world by the use of
physicalistic theories. In the last resort, Jung (1983,
341) was compelled to appeal to metaphysical theorising:
"... the psychologist is continually coming up against
cases where the emergence of symbolic parallels cannot be
explained without the hypothesis of the collective
unconscious".

The aggregate of all quantum theorising implied that all
branches of 'extraordinary science' are different
manifestations under different conditions of the same
universal principle. This integrative tendency operates in
both causal and acausal ways so that the 'micro' and
'macro' worlds are linked in a complementary relationship.
This is true not only in physics but seemingly in human
biology and psychology. This suggests that the human

condition expresses a 'connectivity' in man's thinking and actions between his finite spatio-temporal existence and infinite cosmological point of reference.

The geographer is accustomed to analysing socio-spatial phenomena according to physically deterministic theory and criteria. This procedure is seen to be both scientific and rational. The behaviour and thinking of social actors in space are, however, frequently acausal and indeterminate, and do not freely conform to the autonomous designs and precepts prescribed by others. The interplay of 'deeper', 'sub-atomic' symptoms cannot be overruled as being unscientific or irrational.

Conversely, much of the decision-making and policy implementation of economists, planners, multi-national corporations and politicians reveal the same propensity to pursue disorderly principles and designs. These may frequently be motivated by greed, gain and power. In its geographical context, the outcome is typified by spatial imbalances and disparities. The consequential impact of spatial abuse is reflected in the pattern of social relations. On the one hand, the ones suffer directly as the recipients of 'bad' policy design - social deprivation; material exploitation; psychological distress; nervous and pathological disorders. The initiatories, although perhaps achieving their objectives, will - regardless of any attempts to conceal, deny or shift their accountability - ultimately become exposed.

In the same way that the behaviour of sub-atomic and atomic particles conform to a given order in physics, man's socio-spatial transactions are somehow geared to a given universal value system, the transgression of which provokes all manner of instability. The fact that it is at all possible that man is able to override an otherwise universally operative principle of integration places him as a singular and unique entity. In the most simplistic

explanatory terms, human 'freewill' somehow becomes distorted, generating irrational and often malevolent terms of reference expressed in chaotic practical outworkings. The paradox consists of the fact that it is impossible to identify or isolate this disorganising agency while remaining consistent with scientific objectivism. Any emancipatory inroads from the limitations of modern science which might provide a point of access to a new epistemic strategy would require a parallelism which could make a comprehensible and valid contribution to an understanding of meta-inferences in 'normal' science (see Restivo 1984). This essentially remains tantamount to a Kierkegaardian 'leap' where scientific rationalism would conjoin with mysticism.

Quantum theorizing has challenged the meaninig of scientific rationalism, under which human geography, as a science of man's spatio-temporal activity and relationships, is bound. Geography, as a scientific discipline of knowledge, strives to 'know' if it is possible to extract the internal law which motivates a phenomenon. The isolation and understanding of such a law may be coextensive to a revelation of 'pure reason'. It would explain the past and possibly predict the direction of future transformations. This is the ultimate goal of all philosophical schools of thought in the social sciences, but one which generates a fundamental disagreement in method.

Basically, there is a bipolarised division of views. First, those who reject any notion of 'reason' unless a unity and order are established for man and his relations in the world, i.e. as a universal external. Secondly, those who claim that future knowledge is unconnected with historical space-time events, but is rather embedded in spontaneous 'creative freedom' which is activated by man's intuition alone. This group wishes to profoundly assert the automony of man in any epistemological discovery.

These problems have attracted diverse and conflicting
attention in human geography. A methodological consensus
which would adequately explain the spatial and
sociological aspects in human geography would, by
implication, be sufficient for all the social science
disciplines. At its outset, a clear ontological
explanation for man must be established before any
epistemological standpoint and understanding are acquired.

Toulmin (1983) emphasised parallels in quantum theory,
'depth' psychology and ecology which he cites as a pre-
requisite for a reconciliation of discipline with
discipline towards a reformulation for unity of knowledge.
Toulmin suggests that science has entered a 'postmodern'
phase, by which he means that science, philosophy and
theology have all simultaneously been drawn onto a common
ground.

Quantum science, irrespective of its acausal and
indeterminate inferences, not only displays an active and
significant connectivity with the causal world - including
man - but retains an observable holism. Although any
notion of an absolutely exact measure has no meaning in
physics, limitations have been assigned to man's spatio-
temporal physicalistic existence. Man's uni-directional
space-time metric is seemingly sufficient for his purpose,
yet the realisation and certitude of his existential
finitude locks him into an ontological dilemma. The
inadequacies and fragmentary nature of human knowledge are
reflected in his disjointed and mismanaged socio-spatial
relations. Yet human thinking and perception are not
necessarily restricted and contained in a three-
dimensional physicalistic metric_man frequently 'reasons'
in abstractive terms of reference which are largely
aspatial and atemporal in their psychological
constitution. The metaphysical content of epistemological
constructs significantly uncovers variety and conflict in

the formulation and expression of social theory and its philosophical underpinnings. The pervading problem is to establish a 'rational' inter-relationship between the sub-atomic (metaphysical) and atomic (empirical) components of man and the spatial environment.

Science and philosophy both encounter the same problematic categories in the interpretation and understanding of meaning, rationalism, reason, reality, values and truth. The contribution of quantum science has further compounded the issue but at the same time, clarified the existence of a unity-in-variety and a holism in all things. For the social sciences, where the human element is of primary importance, the dilemma is grounded in the fact that the reasonableness of any proposition depends on which presupposition is adopted at the outset. The practical shortcomings and theoretical non-explanation of much socio-spatial analysis in human geography can be fundamentally attributed to his consideration. The study of quantum phenomena presents social scientists with a fresh challenge concerning the bases of their propositional theorizing.

GEOGRAPHY, CONFLICT AND PESSIMISM

The understanding of the administration and management of geographical space and the social relations within it is a mix of conflicting philosophical and ideological standpoints. Some geographers express a constructive, optimistic materialism; others a quasi-undecided pessimism, or an outright destructive nihilistic tendency. There is equally an uneasy accommodation between social systems with utopian goals and those which generate economic and socio-spatial disparities. In the cases of the political economy of Marxism and advanced capitalism, both respectively exert a dehumanising effect on their spatial relations. In each case, society is subordinate to a combination of economic and ideological determinism. The

interests of scientific technocracy/bureaucracy largely
undermine historic and culturally defined norms and value
systems. Both systems are analogous insofar that they
ontologically appeal to a Darwinian evolution of
impersonal space-time origins. In their behaviouralistic
outworkings, man is subsequently reduced to something
'less-than-man': his metaphysical essences are denied and
rejected.

An 'optimistic humanism' is equally prevalent in the
phenomenological and existential schools of thought.
Philosophers and social theorists in this category imply
that the potential wholesomeness of man and, by
implication, the interaction of social relations with the
spatial environment, can only be realised either by the
uncovering of essences, or by a closer examination of
language. In the first category, the methodological
demonstration for a discovery of essences is frequently
obscure and unconvincing. Included here is Husserl's
'radical reductionism' where external concealment
(barriers to the discovery of truth) is 'bracketed' in
order to reach his 'transcendental consciousness'.
Jasper's insistence on a person's encounter with 'ultimate
situations' to gain a 'first-order experience' is equally
ambiguous. The same is true for Merleau-Ponty's quest for
a primordial or 'pre-intelligence', as is Scheler's
transcendence of intellectual insularity to a meta-
contemplative state of 'value' reflection.

Others who seek a linguistic path of enlightenment have
been stimulated by Gadamer's assertion that the mastery of
language is a precondition of understanding. Habermas's
meta-linguistic theorising also makes claims towards some
future emancipatory utopia.

Those who express pessimistic reservations for any
improvement in the quality of social relations, the
eradication of material imbalances, or any hope for new

epistemological insights, provide little or no room for change. In this context, a present and future understanding of space assumes fatalistic overtones. The developmental possibilities of socio-spatial wellbeing are, according to this standpoint, impeded by an irreconcilable philosophical dualism. Durkheim's impasse was the insurmountable barrier between the material world and abstract concepts such as social ethics. Max Weber also recognised a perpetual conflict situation in the scientific rationality between material needs and value systems. Social reality is therefore conceived as a sphere of dominance in which individual actions are constrained.

Foucault's socio-spatial reality is bound within an on-going trend of power relationships, where 'normal' science and technology increasingly assert an authoritarian political rationality. Socio-spatial interests are dominated by state power.

The philosophical underpinnings of pessimism have been endorsed by Kierkegaard and the later work of both Heidegger and Wittgenstein. The later work of Wittgenstein argued that the propositions of natural science were limited within the context of language and logic. The explanatory shortcomings of demonstrating scientific 'reason' in this context led to a transposition of these propositions by mathematical formulations. The language of symbolics equally collapse into a scientific mysticism. Concerning the areas of values, ethics and meanings, Wittgenstein found only 'silence'. Man realises that an explanation needs to be there, but he cannot even talk or think about it, least of all, act upon it.

The insufficiency of 'knowing' impairs human perception to such an extent that he has no certitude of 'knowing' the value and meaning of his spatial environment, nor of his social relations in it. The later work of Heidegger followed along similar lines. His search for the

ontological foundations of existence and meaning was also
focused on language, but the Heideggerian perspective
concerns the decodification of metaphysical and mystical
questions, for which he made no convincing case.

Finally, in the scientific domain of total non-
explanation, where neither spatial structure nor social
process have meaning, nor render any plausible access
towards understanding, Heidegger's (1962) work 'Being and
Time' remains one of the most outstanding contemporary
contributions to the current climate of philosophical
nihilism. Indeed, it can legitimately claim to have set
the direction of modern hermeneutics. In it, Heidegger
makes several claims which are relevant to spatial form
and social process in human geography. Heidegger's
subject, the 'Dasein' (being-in-the-world'; 'being-at-
home'; 'the being-there that we are') is at once
confusing, obscure and ambiguous in its meaning.
Heidegger's understanding of 'being' (existence) is
restricted to the empirical dimension. He does not seek an
exegesis. Human existence, he claimed, cannot be evaluated
in terms of a person's spatial relationship to other
people or things, since any existential meaning or
understanding is a private relationship which arises as a
phenomenological revelation about the world which the
individual 'cares' about.

Perception - with the stress on the sense of making
impartial judgments - is a rare, if not impossible
position to hold.

Heidegger's overriding consideration is 'mood', which
generates unfixed and wavering values. People encounter
the world always in a certain mood, so that paradoxical
and self-contradictory values are attached to particular
encounters and situations at different times. The danger
which Heidegger emphasises - yet one which is a typical
mode of behaviour - is when society ('others') conditions

thinking and actions. This impedes the individual's efforts to apprehend a primordial point of 'being' (what is-there to cause existence to-be). In abandonning this path, the individual inauthenticates the meaning of existence by failing to make the reality of self-dicovery (the 'uncanny' self) or to encounter the 'ultimate situation' - the realisation of death.

The reality and meaning of all social and spatial relations, according to Heidegger, are grounded in the discovery and realisation of the 'angst' (dread). This is where the individual no longer 'feels-at-home' in the world. Human existence is finite, and death and nothingness are sure. 'Dasein' seemingly projects itself 'towards something', but never encounters 'Being' (the pre-ontological essence of logos which would explain the origins and meaning of existence, and, by implication, the ultimate epistemological backcloth). 'Being', therefore, cannot be identified in spatio-temporal terms because it is impossible to define.

For Heidegger, to entrust one's conscience in social relations ('being-with-others') or in theistic philosophy is tantamount to self-deception and the inauthentication of 'being'. Where man's spatial existence interacts with worldly norms (social, political, economic, ethical), the confrontation with the inauthenticity of his 'being' can instigate 'covert' forms of psychosis and varying degrees of schizophrenia which are hardly ever questioned or examined. Heidegger understood the manifestation of these socially accepted aspects of 'rational'/'normal' behaviour as expressions in the form of greed, envy, pride, deceipt and violence.

Heidegger's analysis claimed that the meaning of spatial existence and of people in it could only be 'authentic' on a personal individual basis, where man ultimately faces the realisation of his 'nothingness'. His engagement and

participation in social relations (and any interpretations
he makes about spatial phenomena and socio-spatial
functions) are otherwise indicative of a deep-rooted
existential fear about what he might discover about
himself. The emptiness of public norms legitimate the
supposition that the individual is not bound by principle
to comply with any organising system. Because there is no
meaning of 'being', guilt too is meaningless. Guilt is
only valid when we consider 'what we have not done'; that
is, to seek 'authenticity' through the realisation that
the meaning of existence is 'nothing'.

Heidegger's 'phenomenological' investigation of existence
thus claims that in the absence of any encounter with
'Being', it is impossible to give either an ontological or
an epistemological meaning for human existence and man's
spatial encounters. While Heidegger never categorically
excludes the possibility of religious commitment in his
philosophy, he is loathe to equate 'being' with a
religious essence or entity. Moreover, 'Being' is not a
specific entity, but a 'light' in which things are
revealed. The inhibiting agent for the 'early Heidegger'
is metaphysics, which stands between man and 'Being'. The
resultant 'inauthenticity' of man is his personalisation
of 'Being' into a theistic entity or some other Absolute.

Although his use and structure of language is complex,
obscure and often flirtatious with quasi-mystical
connotations, Heidegger's remarks are nonetheless
pertinent. The spatio-temporal existential meaning of man
and nature is reduced to an extreme point of tension.

Sartre's existentialism is possibly the only other
contemporary example of philosophical nihilism comparable
to the starkness of Heidegger's all-encompassing
revelation of 'dread' and 'nothing'. Sartre's ontological
structure is rooted in 'negation'. His outright rejection
of metaphysics and mysticism strips knowledge of having

any possible teleological properties. In the spatial context of human encounters with situations, events and others, the objectification process of saying 'what (one) is not' detaches man from 'being' (existence). This logical negation of 'what is' provides an understanding of 'non-being'. The ultimate phenomenological reduction is the discovery of 'nothingness': human spatial relations and encounters are a valueless, empty absurdity.

CONCLUSION: HUMAN GEOGRAPHY AS SOCIAL SCIENCE - COMPLICITY OR DISSENT?

Geography as social science has failed to endorse the terms of scientific 'objectivity': its epistemology overlooks the question of origins and the significance of values and ethics in human existence, so that its methodological procedures tend to alienate and dehumanise man as a fragmented socio-spatial actor. Geographic inquiry has yet to establish any clear definitional parameters on the basis of the scientific method. Moreover, the holistic nature of knowledge demands that geography should seek a more intimate cross-exchange with other disciplines in the social sciences, as well as those in the natural science. The plurality of methodological approaches in human geography which cuts across positivism-behaviourism to political economy and humanism make it increasingly unlikely that any one isolated theme of socio-spatial organisation will adequately reflect social reality.

A scientific human geography cannot justify the primacy of spatial structure as the focus of its attention: its immediate priority concerns an understanding of human social process. If geography seeks 'relevance' than its content must incorporate a view toward the development of a social ethics with which it may gauge and internalise its objectives and policy implementation. Failing this, nothing can be known, verified or legitimated with any

certitude. The terms of an 'autonomous' scientific status
for human geography need to be examined against the
historical background of human thought and intentionality
to grasp the contemporary mode of scientific assertions
and assumptions. The question of autonomy is an area of
persistent philosophical disputation where the themes of
control, domination and power are recurrent and insipid.
Rather than clarifying the origins and purpose of
existence, scientific qua human autonomy confirms the
distorted terms of reference by which it constructs an
epistemological standpoint.

There is no apparent consensus for the paradigm itself.
The interrelationship between man and space is not
strictly confined to the atomistic dimension of the macro-
world. Quantum theorizing suggests that human spatial
perception is profoundly influenced by sub-atomic
phenomena and the interaction of 'extraordinary' reasoning
which elude the categories of 'normal' scientific
explanation. The all-encompassing banner of 'progress'
which is frequently used to validate the rationality of
the directives in both the natural and social sciences not
only represents an expression of an 'optimistic humanism'
which is largely orientated towards some unspecified
future time, but is a disproportionately meaningless
concept in the reality of the present.

If only from a materialistic standpoint, the increasing
magnitude of global problems - widening socio-spatial
differentials, distributional disparities; the tightening
grip of geo-political and ideological forces on manpower
and resources - indicate a flagrant disregard for
unsatisfied basic human need. If, however, these
manifestations are an inevitable product of the scientific
control of socio-spatial systems, then human geography
must choose between either a position of complicity with
scientific norms, or one of dissent. The present
predicament of human geography under 'normal' scientific

epistemology and its attendant philosophical underpinnings is marked by intertia and pessimism.

PART THREE: HUMAN GEOGRAPHY AND THE SCIENTIFIC METHOD

GEOGRAPHY AND SCIENTIFIC STATUS

The origins of the 'conceptual revolution' in human
geography of the 1950s and 1960s can be traced to Kant's
classification of knowledge to Compte's logical positivism
and then to Darwin's evolutionary postulations. This 'new
geography' emphasised the need to move towards a more
scientific geography where the explanation of phenomena
necessitated the development of a body of theory whose
mathematical representation could be justified by the use
of statistical techniques to test hypotheses and models
(Burton 1963; Haggett 1965; Chorley and Haggett 1965,
1967). Kant's crude determinism and its historical
idiographic standpoint was outlawed as a descriptive and
gazeteering geography. Darwinian theory and the
'environmental determinism' which it had generated had -
unlike the case of physical geography - been applied to
human geography with considerable difficulty and with
little success. Vidal de la Blache's efforts to define the
inter-relationships between the human and physical
features of a cultural landscape were hampered by their
insistence on historical situationalism and the restricted
scale of study areas. Vidal's work was more suited to pre-
industrial societies rather than with modern economies.
The failure of 'possibilism' cannot be attributed to
Vidal's fundamental concept of 'man-land' relationships,
nor to the fact that neither one or the other seemed to
predominate or dictate the human geography in a given
area, but rather the fact that possibilism was essentially
non-theoretical.

Human geography's allegiance to the scientific method and
its positivist epistemology sought a similar kind of
academic and intellectual respectability enjoyed by other
social science disciplines such as sociology, economics
and psychology. For many, the 'incompleteness' of
geography was the prime obstacle to its scientific
acceptance and recognition (Berry 1959, 1973; Harvey 1969;

Hagerstrand 1973). Part of the dilemma was an attempt to reconcile - or otherwise decide between - the definitional status of geography as an academic discipline: it is either an 'objective' nomothetic social science or a part of the 'subjective' humanities and arts.

Based on the presupposition that spatial patterns and regularities are empirical phenomena which repeat themselves on a global scale, scientific geographers devised their methodology along similar lines to that found in the natural sciences. It is therefore assumed that an understanding of generalisable spatial patterns will provide some insight and explanation for the processes that generate these patterns. A scientific geography will otherwise isolate the mechanics and gauge the contribution of the human input in relation to the spatial environment. In this way, a scientific geography might clarify the present shortcomings and future direction of decision-making (Morrill 1970; Abler et al 1971; Ambrose 1972; Needleman 1972; Haggett 1977).

Parallel to the positivist tradition, the emergence of behavioural geography has attempted to provide a fuller understanding of the processes which underpin human behaviour: "The aim of behaviouralism is to replace the simplistic and mechanistic conceptions that previously characterised much man-environment theory with new versions that explicitly recognise the complexities of behaviour" (Gold 1980, 3). The behaviouralist tradition in human geography contends that explanation of spatial patterns of behaviour can be derived from an examination of the cognitive processes which underpin that behaviour. Behaviouralism is a distinct part of sociobiology, which in turn is firmly rooted in biological theory. In this respect, it is an application of Darwinism to social behaviour which accommodates the insights of modern genetics. Behaviouralism is concerned with stimulus-response data so that any integration of psychological

analysis to explain human behaviour has a strong physiological bias. Behaviouralism contends that animal behaviour can be understood in sociobiological terms which may then be transposed to provide a bearing on human behaviour. It formulates the view that egoism constitutes the most intelligible and rational type of behaviour, but that ultimately all human action must relate to questions of biological fitness, survival and the advantages associated with a position of dominance (see Wilson 1975).

The development of behavioural geography is indebted to the school of environmental determinism in the geography of the late nineteenth and early twentieth centuries. Ratzel (1882, 1891; see Wanklyn 1961) argued that human communities struggle to survive against environmental constraints in the same way as other biological organisms. The resultant variety of forms in their adaptation are largely dictated by the prevailing physical conditions. A similar theme was advanced by the work of Semple (1911), Taylor (1937) and Huntington (1945). An ecological approach was also developed for urban-social geography (Park 1925; Burgess 1930; Hoyt 1939; Harris 1945) while another form of neo-environmentalism promoted the scientific method in economic geography (Losch 1954; Isard 1956, 1960: Christaller 1963). This approach initiated model-based theoretical constructs and quantitative techniques.

Although behavioural geography defies any easy definition, it closely adheres to the tenets of neo-Darwinism in its search for basis of rational human behaviour in man-land relationships (see Hurst 1974). Its acceptance as a branch of the scientific method in human geography has largely been pioneered by the work of Sauer (1925) and Kirk (1951, 1963) and has arguably, in some respects, been continued by Tuan (1974, 1976, 1977).

GEOGRAPHY AND POSITIVISM

The positivist epistemology as the only authentic and
legitimate basis for the scientific method in human
geography has evoked a growing reaction by those who
refute its dominance as a potential form of technocratic
instrumentalism or on philosophical grounds of
disputation . Based on Compte, positivism maintains that
natural (deterministic) laws can be transposed to explain
social phenomena. In this way, the structure and process
of society and its institutions can be made coextensive
with the physical environment. Socio-spatial predictions
can then be modified by manipulating causal variables.
Social problems and political decision-making are thus
subordinate to and transformed by the scientific
methodology. Positivism asserts that there are fixed and
generalisable social 'facts'. Social reality is uncovered
as a consequence of the cumulative interaction of the
'parts' which constitute the collective social 'whole',
that is, the anticipated product or outcome.

The scientific (positivist) methodology claims that by the
mathematical representation of symbolising variables and
relationships between variables, all ambiguities are
minimised, if not removed. The internal logical
consistency of its system of thought may well be
verifiable, but the integration of affective values must
be ruled out because they cannot be quantified. Comte was
also largely responsible for establishing a position of
philosophical 'neutralism' in science. The empirical
replaces the metaphysical. Value judgments can have no
place in a positivist science. Any knowledge which is
derived outside the parameters of its methodology is
meaningless and subjective. Kolakowski (1972, 18), for
example, defines positivism as "a collection of
prohibitions concerning human knowledge, intended to
confine the name 'knowledge' or 'science' to the results

of those operations that are observable in the evolution of the modern sciences of nature."

Positivism understands science as the antithesis of a mythical world. Any phenomena which have no empirical basis for testing the validity do not constitute scientific knowledge. This includes all judgments of value and normative statements as well as metaphysical essences. These are often interpreted as illusory shortcomings which characterise man's inability to appropriate nature, which otherwise reflect deficiencies in human reason. Conversely, scientific reason is concerned with means and ends and the technical procedures necessary to achieve an end, but not necessarily with the rationality of the end itself. The scientific method is therefore an instrumental reason. Instrumentalism dehumanises the subject of geographic inquiry insofar that man is made subordinate to technocracy. Without science, man is an unreasonable and non-rational social actor and thinker.

Metaphysical assertions cannot be integrated within the world of scientific reality because they contribute nothing to the ongoing process of hypothetical modelling and testing. Predictability and probability demand a factual content which is uncommitted to any political (ideological) or moral standpoint (see Ayer 1964; Lacey 1976). Positivism is therefore based on the naturalistic premise that all individuals conform to some general behavioural pattern of thinking. This is often termed 'realism': "Positivist science is a conservative process, with knowledge accumulating along predetermined lines" (Johnston 1983, 24-25). Because society is said to behave according to deterministic criteria, man can be scientifically manipulated, modified and redirected through 'social engineering'. Its political translation amounts to the rise of a dominant elite which enacts a process of societal dehumanisation against a background of 'scientific supremacy'. All forms of technocratic

instrumentalism are susceptible to becoming totalitarian forms of government - even contemporary Eastern European socialism appears to have swayed into the positivist scientific method.

Positivism creates contradictions and paradoxes insofar that it equates social facts with natural facts and historical laws with the natural order. People belong to nature, but nature is not made by them; rather, it is simply used and modified by man. This inter-relationship demands a sense of responsibility and moderation on the part of man. A positivist science has not tendered any universal understanding of laws. Moreover, laws relate to a particular kind of societal organisation at given points in time. Laws are amended, revised and changed depending on the development of social structures and according to the designs and strategies of any dominant ruling elite. There exists no formula or constant but instead, a climate of pragmatism and opportunism predominates.

Contemplative reason is 'no reason' because it is based on privatism. Lowenthal (1961) and Prince (1961), however, have both rejected the eclipse of human geography by a rigorous scientific methodology: a positivist science has failed to show that human knowledge can be reduced to some form of 'objective truth'. Graves (1980, 41) too has shown that individual world-views are shaped by all manner of personal experience, culture and language so that: "... we each have our 'private' geographies as well as the 'public' geography." In failing to recognise its inconsistencies and shortcomings, positivism identifies itself as 'total knowledge' rather than a form of knowledge.

The scientist contends that he is 'external' to what he studies and places himself 'outside' society. This is clearly an impossible position to hold, yet it is on this basis that positivist science attempts to exclude any

legitimate challenge to its presuppositions (Zelinsky 1975). A factual science requiring an empirical treatment of societal phenomena may either appeal to a deductive-nomological method or to inductive-statistical models. In the first case, theoretical propositions cannot easily be converted into laws. Different theories generating empirically consistent ends can be constructed but this does not remove the problem of propositional conflict if they are elevated to the status of laws (Guelke 1971). Questions of 'objective truth' remain beyond the finite range of empirical observations. In the second case, probability statements - themselves a doctrine of a priorism - are used to modify, develop and update theories. These models recognise that 'accepted' theories are not universal truths and must themselves be tested (Popper 1970, 1976).

Deductionism does not consider external meanings. Any hypotheses derived from its methodology can be 'verified' by tautological mathematical manipulation. All hypotheses which are formulated from 'logical reasoning' depend on a priori assumptions. Man has few established socio-behavioural laws so that in the social sciences it is highly unlikely that all forms of social behaviour and policy-making are based on reason and rationality. For the geographer, the resultant spatial product of social processes cannot be attributed to an accepted corpus of laws. Moveover, scientists speculate on untenable grounds so that their hypotheses too are no more than uncertain constructs: positivism is, according to Harvey (1969, 35) "controlled speculation". No law-like statement can be unequivocably proven because in its application for testing, no 'law' is omnipotent in time and space. Statistical regularities do not provide real explanation. Hypotheses test only the models from which they are derived. Much hypotheses formulation by empirical scientists are therefore based on first or second hand

personal experiences and are no more than subjective statements.

Similarly, the inductive procedure is equally unreliable and cannot be claimed to be a rational, uncommitted or neutral form of reasoning. Sampling can easily become prejudicial and is unlikely to provide generalisations and laws. As probability theory is developed, hypotheses-testing generates a number of sub-hypotheses as the model becomes increasingly complex. These cannot be incorporated or accounted for in the general framework of a problem. Nor can notions of 'randomness' and 'chance' be logically explained; moreover, they represent individual deviance from the generalisable 'reasoning' explicated by the scientific methodology. Any collection of 'social laws' is likely to be diverse and profuse because it represents a crude attempt to assemble an aggregate of individual human minds (see Keat 1981).

Laws which pertain to represent generalisable aspects of social behaviour are at best part-truths, but the theory behind experimental scientific inquiry cannot be confirmed in its totality since social constructs do not adhere to any universal constants as do phenomena in the natural sciences. Experimental data can therefore be interpreted in a variety of ways to 'make the theory fit'. This renders much of positivist theory as synthetic. Different theories thus perceive the world in different ways, each with different emphases: "... most empirical propositions are in some degree vague" (Ayer 1964, 12). In order to identify the shortcomings or potential collapse of a theory - and therefore, what might be done to modify and improve it - Popper's (1976) scepticism of the positivist methodology inclined him to refuting the 'verification principle' for one of 'falsification'. For Popper (1965, 256), a concept of falsifiability is a criterion not of meaning, but of demarcation.

Socio-spatial laws cannot be wholly deterministic since man inherently exercises his capacity of 'freewill' which, for positivists, is scientifically non-rational behaviour. Science, however, may argue that human 'degrees of freedom' are subject to physiological limitations so that all behaviour and beliefs are conditioned and determined by causal chains in thought processes. In this sense, man adopts unscientific 'beliefs' for what suits his purposes, or is perhaps motivated by the realisation and fear of his social and existential inauthenticity. He thus condemns himself to nonsensical and unreal metaphysical explanations for his social behaviour and his interaction with the spatial environment. If personal, religious and political beliefs are allowed to influence the interpretation of geographic data, then a positivist methodology becomes inadequate because it does not portray a comprehensive picture of human nature and personality. Hill (1981, 51) points out that although Ritter interpreted his geographical findings as evidence of God's handiwork, "... he was never able to present an objective rationalisation for his teleological interpretations".

This hardly removes the metaphysical dilemma for positivist scientists. Wittgenstein (1961) shows that metaphysics can never be philosophically legitimated, nor be generalised or therefore be scientifically proven. Conversely, the reality of metaphysics cannot be existentially disproven, but must rather be passed over in 'silence'. Similarly, Popper (1973) is loathe to conclude that metaphysics - as an example of non-testability - is equivalent to meaninglessness. A commitment to the positivist epistemology can be as charged with emotion as a religious or political credo, but in the absence of any recognition of metaphysics asserts its own autonomy as the basis for its rationale.

By equating social facts with natural facts, the positivist method disregards the historicity of social

reality. Moreover, it can only speak of "the consequences of its hypotheses" (Lukermann 1965, 194). From its standpoint of non-commitment and neutrality, science assumes an abstract and non-historical facade which is seemingly detached from economic and social reality so that: "The relationship between science and society is lost or distorted, and science acquired a self-supporting special status, immune to historical contingencies" (Larrain 1979, 193). Science primarily seeks to dispel any relationship with ideology. To achieve this aim, science establishes itself as a special sphere of knowledge whose methodology insulates it from ideological distortions. No work, however, can be entirely atheoretical and all scientific statements are based on some kind of a priori theoretical structures, whose practical application is therefore grounded in some ideological premise. 'Pure' empiricism being impossible directs a methodology to its philosophical underpinnings and once more demands an examination into the validity of epistemological claims.

Science has failed to evade the ideological trappings of its association with political economy and therefore, its contribution to the economic and social organisation of society. The unity of contemporary science is indeed based upon historical practice insofar that the technological rationality and technocratic consciousness of the modern nation-state demand the collaboration of science as an instrument of domination, indoctrination and manipulation. An instrumentalised science camouflages all manner of contradictions, disparities and injustices while its rationality generates a false consciousness which in itself attempts to conceal the very irrationality of its ideological position (see Marcuse 1964; Habermas 1976). Moreover, the historical intervention of science through industry has paradoxically on the one hand offered the conditions for human emancipation, while simultaneously contributing to an acceleration in the process of dehumanisation (see Marx 1974, 355).

Positivism, by its insistence on empiricism, attempts to make its hypotheses irrefutable. While the scientific approach has strived to force a common methodology between human and physical geography by taking the man-land formula as its prime concept, society does not always conform to any established rule of logic. The positivist methodology is largely inflexible insofar that its experimental procedures are fixed and do not acknowledge the dynamics of social change. Positivist theory is an unsatisfactory basis for human geography because it uses "stationary categories of thought with a shifting universe" (Harvey 1972, 327).

A 'value-free' scientific approach reduces any considerations of social ethics to technical decisionism, but fails to demarcate the conditions and limits of its method or its findings. Ethics, moreover, implies some standpoint independent of scientific inquiry, yet according to Harvey (1969, 40): "Decisions cannot be made in a moral or ethical vacuum". A positivist human geography whose methodology and terms of reference are held in a state of eternal equilibrium and which purports to be operating within the parameters of a universal spatial logic, obscures the mediations which make human geography a distinctive discipline of social science (see Pahl 1975, 249-250). Moreover, human geographers regulate the extent of their inquiries according to the individual and collective limitations which they choose to circumscribe. Much of this reflects the geographer's ability and willingness to internalise the totality of the socio-spatial relationships which he perceives (see Tuan 1971). In asserting 'value-freedom', a positivist science evolves another set of values in the ways in which it investigates human behaviour: "Treating people in a scientific and detached manner can result in not treating them as persons at all" (Trigg 1985, 117). Rather, anything distinctively human is ignored so that the subject of human geography is profoundly dehumanised.

A positivist geography claims that man can have no profound understanding of epistemological matters, nor therefore of truth because he has little or no control over the natural or social order. Nominalism and nomothetic methods have attempted to eradicate any room for the critical analysis of the philosophical presuppositions which underpin the standpoint of the scientific method. Moreover, it is manipulative, subversive and distortive in its outlook and design (see Olsson 1975; Lee 1977a), while its insistence on the primacy of spatial phenomena "diverted attention away from the underlying structural explanation of society and economy, as part of a general process of 'mystification' whereby surface manifestations are confused for root causes" (Smith and Ogden 1977, 54). Human values become meaningless against the background of a mechanistic scientific approach to geographic inquiry which takes no account of the acausal and indeterminate facets of the individual social actor. Rather, a scientific technocracy attempts to impose an unwavering and unconditional consensus which otherwise dictates the acceptability and credibility of all systems of thought. For science, instinctive behaviour provides a superior explanation to human thinking and actions rather than a reflexive, contemplative and intuitive stance.

Contemporary curriculum modifications in human geography have largely upheld the existing political status quo, leaving questions of ideological and moral awareness beyond the parameters of scientific concern. The degree of autonomy and flexibility enjoyed by geography departments and institutions of higher education may be rapidly eroded by government policy imbued with positivist principles. This means that its curriculum must reflect a subservience and commitment to instrumentalism. Beddis (1983, 18) warns that this could lead to a "colourless and morally sterile" conceptual geography, "without feeling or compassion".

Human geographers are reduced to technicians of the 'new' orthodoxy.

THE DEVELOPMENT OF BEHAVIOURAL GEOGRAPHY

Behavioural geography has no clear frontiers: it embraces many areas of investigation. It attempts to explain man's spatial behaviour in terms of the physiology and psychology of the individual, directly and/or indirectly observed. Behavioural geography is, moreover, a branch of neo-positivism, but also - as Gold (1980, 243) contends - "an area of geography in which researchers have experimented with phenomenology and related non-positivist approaches". Behavioural geographers have largely followed trends developed in the biological sciences which were subsequently applied by social science disciplines including sociology, anthropology, economics, planning and architecture. Behaviouralism seeks to make 'scientific' that which is essentially intuitive in man. It claims to give geography a scientific philo-methodological base with a human face, but it is dubious as to whether it restores the primacy of man as the subject of human geography. Rather, its Darwinian foundations and insistence on the technocratic control and domination of society and the environment reduces man to a position of less-than-man, or of a machine (see Schaeffer 1973; Koestler 1967).

Behavioural geography recognises that the inter-relationship between man and his environment is one of reciprocal stimulus and response, where human cognition is paramount as the instrument of mediation which provides an explanation for human decision-making and policy implementation in a spatial setting. The multiplicity of stimuli which generate observable behavioural patterns are diverse in origin insofar that they are both conscious and unconscious in form, as well as being the product of socio-cultural forces. Value judgments, perception and sensory experience are all reduced to the area of

psychological inquiry, whereupon orthodox scientific techniques eradicate any interplay with the transcendental and mystical attributes of the human condition. Cognitive processes will not necessarily precipitate a rational outcome for human behaviour and decision-making, not the means by which they might be legitimated and confirmed by philosophical or ideological premises. Behaviouralists contend that the interpretation of human behaviour is synonymous with an understanding of the origins and development of spatial cognition and behaviour.

Behaviouralism suggests a multi-disciplinary area of inquiry, but one which is increasingly at pains to empiricalise the content and representation of the human inferences which become manifest in the area of cognition. Much of the terminology and concepts used in behavioural geography are ill-defined and poorly integrated and in the last resort must appeal to psychological and sociological theorizing in order to evolve a body of knowledge. In this respect, cognitive-behavioural studies run the risk of psychologism (see Ley 1977). In its most lucid and extended form, behavioural geography offers a profusion of methodological approaches, none of which can claim to have a scientific consensus and even less, an operational paradigm.

Early behavioural science, under the auspices of structuralism and functionalism, attempted to probe human consciousness through philosophical introspection using laboratory conditions for the controlled scientific experimentation of its inquiry. It sought to identify and establish the linkages between the contents of the human mind. Psychology was thus concerned with both mind and behaviour so that its status as a natural or social science became increasingly uncertain. Darwinian functionalism focused its attention on the ways in which the individual strove to attain harmony with his environment. Sequential behavioural patterns were seen as

the product of ongoing stimulus-response chains between man and the environment. Behaviourists are concerned with the examination of chains of stimulus-response relationships in order to understand human behaviour, but dismiss the methodological primacy of psychology as the vehicle of enquiry into the human mind. Moreover, in geography, 'environmental determinism' was initially adopted as the yardstick which provoked human response against the dictates of stimuli in his external environment. Even the more recent advances of science in the fields of molecular biology and genetic engineering have not fundamentally abandoned the tenets of behaviourism: stimulus-response relationships are reducible to causal, physicalistic laws which govern inanimate matter. All those aspects which are specifically and exclusively related to human existence and which distinguish the uniqueness of its species are necessarily excluded. Considerations such as 'freewill', socio-cultural and religious influences in behavioural patterns are deemed to be unscientific and otherwise irrelevant. Scientific reductionism, as a philosophical belief, presupposes that all human activities can be simplified and explained by the behavioural responses of animals – Pavlov's dogs, Lorenz's geese, Skinner's rats and Morris's apes – so that any notion of an individual or collective social responsibility or of a social ethics find no place in behavioural social science.

Reductionism can, however, be challenged biologically and from a qualitative human standpoint. The hierarchic approach of scientific investigation attempts to build theoretical models and discover general principles which are universally acceptable and applicable to biological, social and symbolic systems of any kind. Contrary to philosophical schools of thought, 'parts' and 'wholes' do not exist in any absolute sense. From a physiological standpoint, cells, muscles, nerves and organs all have their intrinsic rhythms and bio-patterns. These are

frequently involuntary, spontaneous and free from external stimulation. Although they may appear to be subordinated as 'parts' to higher centres in the hierarchy, they simultaneously function as quasi-autonomous 'wholes'. Moreover, they are self-regulatory entities which manifest both the independent properties of 'wholes' as well as the dependent properties of 'parts'.

Cells in a growing embryo are all of identical origin and carry the same set of chromosomes. They develop, however, into many diverse products of widely differing functions. This would not be possible if they were governed by the same set of behavioural laws. Further, each specialised cell carries a unique structure in its nucleus. Yet each cell is dependent on the wellbeing of the embryo. If the spatial structure of the embryo is disturbed or disrupted in its early stages of development, the stability of the cell population could be in jeopardy (see Waddington 1957). The growing individual is predetermined in the chromosomes of the fertilised egg, but the transposition of this blueprint into the finished product requires the precise moulding of billions of specialised cells into an integrated structure (see Koestler 1978, 1982). Life, in all its developmental forms, from morphogenesis to symbolic thought, appears to be governed by rules which promote stability yet flexibility. These rules, whether innate or acquired, are represented in coded form throughout all levels of the hierarchy. Even language is increasingly seen as a form of rule-governed behaviour which is characterised by an unlimited flexibility and freedom of choice which cannot be reduced to a behavioural set of laws.

Qualitatively, man differs from the conditioned responses obtained from reductionist experimentation. The codes or ethics which govern human social behaviour are largely grounded in written and unwritten laws, traditions, beliefs and cultural indices. Human behaviour becomes a

subtle blend of fixed rules which define permissable
moves, but where the choice of moves is left to the
individual. His strategy may be influenced by the extent
and scope of the resources available to him, so that the
exercise of 'freewill' and choice in his final decision
may be motivated by utilitarian, egotistic and hedonistic
objectives, or alternatively, by responsible, caring and
just precepts.

The developments of Gestalt psychology (see Barber and
Legge 1976) directly opposed behaviourism and its
reductionist methodology. The Gestaltist position
entrenched its philosophical backcloth in German
phenomenological inquiry (Husserl and Scheler) and sought
to draw emphasis on a holistic vision of man where the
whole was greater than the sum of its parts, but where an
examination of the parts "would never produce an
understanding of the perceptual process as a whole" (Gold
1980, 11). Gestalt psychology, moreover, attempted to
introduce perception as a variable which intervened
between stimulus-response relationships, and therefore
revive the complexity of human psychology in behavioural
analysis. Gestalt theory broadly differentiated between
the world of perception and the world of actuality and
elevated the former over the latter. Environmental
geographers who were subsequently attracted to the Gestalt
school increasingly embraced phenomenology and
simultaneously digressed from the positivist standpoint
(see Kirk 1951, 1963; Tuan 1968, 1971, 1972, 1973). Their
approach either followed the line of mental-cognitive
perception (verbalised or graphicised) or of behavioural
observation, drawing on ethology, time-motion and
operational research.

The Gestalt thesis, in distinguishing between the
behavioural and phenomenal environment in geography,
becomes a hermeneutic project based on an epistemological
problem. In this respect, Tuan (1971, 182) speaks of "two

worlds, two geographies " - the 'existential' and the 'environmental'. Kirk's (19‹3) position for behavioural geography was based on five basic tenets: the historicity of meaning in societies and cultures; that geography must have an historical basis for its observations; that environmental experiences and beliefs dictate man's actions and perception; that culturally-defined structures of meaning can be represented in sets of 'typical' (social/community) responses to changes in the physical environment; that this 'psycho-physical' field precipitates 'rational' human action.

The incursion of phenomenological and existential philosophical thought in behavioural geography is, according to Rieser (1977, 208), unacceptable insofar that these approaches are uncritical and ultimately collapse into idealism and metaphysics, "in which the hard realities of the world tend to get swamped in wishful thinking". The Gestalt school has equally been exposed for its lack of political expression. If the individual has no means of applying phenomenal perception to an understanding of social processes, then he is rendered sterile in the area of political decision-making.

Freudian psychoanalytic theory portrays man as a non-rational decision-maker whose behaviour reflects the resolution of conflicts in his personality, that is, the dynamic interaction between three mental components: the 'id' (subconscious sexual-aggressive impulses); the 'superego' (the conscience); the 'ego' (the rational self, which attempts to provide a synthesis between the 'id' and 'superego'). Freud maintains that adult behaviour is conditioned by the formative years of human development and subconscious motivations, particularly those related to the libido. The 'integrative tendency' of most adults - their 'need to belong' - is therefore basically infantile in its expression. Freud's outline of 'integrative tendencies' were: submission to authority; identification

with a social group; uncritical acceptance of that group's beliefs. Any group - political, religious or whatever - needs, according to Freud, to constitute a credo on which a code of behaviour can be developed. It may be authoritative or bound in mystical symbolism.

Once a part of a social grouping, man relinquishes his 'wholeness' and accepts his identity in his 'partness'. Because most adult behaviour is emotionally immature, the pursuit of scientific truth and endeavour may exert a behaviourally pernicious influence on society which may pervert any sense of social ethics. Language, above all, is the instrument of this transformation. Connotation-words such as 'loyalty', 'discipline' and 'duty', when used in the context of ideological propagation, may motivate social groups to perform destructive and irrational actions. If an allegiance to a social group requires an emotional commitment, which is often made concomitant to an expression of 'faith', then the basis of group's expression when incorporated in an institutionalised framework may become degenerative if in fact it is grounded in its own non-rationality. The apparent need for a form of universal social behaviour mirrors the individual's 'integrative tendency' towards an idealistic yearning for a social utopia. A society where ideological propaganda has been irrevocably removed and where individuals are isolated from their own suggestability would provide an instant remedy for social ills, but would in any case necessitate the enforcement of a status quo by a dominant elite. Any such system runs the heavy risk of stereotyping and eroding the individual's critical faculties so that behaviourally, the dehumanisation process becomes increasingly potent. The fundamental problem, according to Koestler (1978, 104) is to find "a cure for the paranoid streak in what we call 'normal people', which is revealed when they become victims of group mentality".

The ramifications of Freudian 'psychoanalytic man' for human geography suggest that the dynamics and content of personality structure provide a greater measure of accountability for human behaviour than external environmental conditions.

The contribution of environmental psychology to behaviouralism has, like that of behavioural geography, been multi-disciplinary in its structure and content (see Proshansky 1976). It attempts to study behavioural processes in the actual world rather than those which are synthetically staged under laboratory conditions. There is no accepted scientific definition of its concepts and methods: it is concerned with the relations between human behaviour and the physical environment (Heimstra and McFarling 1974); it is the scientific study of man's relationship to his environment (Lee 1976b); it examines the interrelationships between environmental and psychological variables (Leff 1981).

Environmental psychologists maintain that man and the environment are in a state of dynamic interaction, but where the latter contains both physical and socio-cultural attributes. The individual is seen as a goal-directed being who acts on, and who is influenced by the environment. The environment is seen to dictate much human behaviour insofar that it imposes limitations in choices of action and demands necessary adaptation of its conditions (see Ittleson 1976). Environmental psychology asserts that man-environment transactions are bridged by perception and cognition, i.e. internal mental processes by which individuals make decisions about their environment, but can make no clear distinction between the two - perception becomes in itself a cognitive process where sensory stimulation is converted into organised and coherent experience. In this respect, environmental psychology has retained linkages with naturalistic science.

The behavioural motivations of individuals have largely
been explained in physiological terms and instinctive
impulses, but says little or nothing about the nature of
abstract drives and desires. Most of its theorizing
centres on the 'survival needs' of the species. Motivation
is primarily accredited to learning processes rather than
intuitive critical reflection, while 'emotions' - which
often accompany motivation - are also reduced to physico-
chemical mental conditions which apparently intensify the
urge and desire to achieve a goal. Again, any discussion
about the moral desirability and justification for any
particular form of behaviour is omitted. The ability to
reproduce learning processes does not necessarily
legitimate the validity of a set of behavioural laws.
Moreover, it can expose the fact that instrumentalist
systems of social organisation may be successfully
operative in terms of the degree of manipulation and
coersion which it exerts in a specific socio-cultural
context. The crux of the matter is in knowing whether
social attitudes can be changed, when to establish the
correct timing and circumstances for initiating change,
and for predicting the modified patterns of behaviour
which will result from a reorientation of ideological
propaganda.

THE TENETS OF BEHAVIOURAL SCIENCE

Behavioural geography is philosophically and
methodologically entrenched in a naturalistic science
where man has been made the object of a behaviouristic
psychology. According to Orme (1969), behaviourism and
psychoanalysis are different aspects of the same field of
inquiry where both schools express a greater degree of
common agreement than irreconcilable intangibilities.
Modern psychology, like behaviourism, is philosophically
grounded in positivism. Behaviouristic psychology is
presupposed to be lacking in purposiveness, freewill or
any independent conscious awareness. Moreover, any form of

behavioural inquiry is made coextensive with a nomothetic search for causal laws, experimental analysis, and reductionist study of phenomena at the molecular (atomistic) level. A behavioural science is concerned with specialisation and the development of narrowly defined avenues of theoretical and empirical research. Behaviourism places man in a synthetic and controlled environmental setting where, as a biological organism, the individual is presupposed to have no pre-existing knowledge or any significant level of influence in his dealings with nature. For Gold (1980, 14), a behavioural science "that isolates man in an artificial environment runs the risk of sterility and irrelevance, and the phenomena studied may never occur outside that milieu".

For human geography, behaviourism asserts that every aspect of an individuals's behaviour is the result of environmental conditioning, whether the conditioning occurred prior to birth and resides in the genes or subsequent to birth and resides in the external environment. An individual's actions are therefore either predetermined by his heredity or immediately determined by his spatial surroundings: "Personal exemption from a complete determinism is revoked as scientific analysis progresses, particularly in accounting for the behaviour of the individual" (Skinner 1971, 21). Behaviourism abolishes any notion of 'ego' as the focal point of personality. All behaviour is determined not from within, but from without so that man 'is not there'. All is linked to a predetermined causal chain of events. It therefore follows that if the environment can be controlled, then man too is made subservient to technological manipulation. In its political context, instrumentalism attempts to indoctrinate society with the idea that natural forces take the future out of man's hands.

The nub of all contemporary thought in behavioural science is entrenched in neo-Darwinian theory. Evolutionary

thought has set up a new point of tension both within and between the sciences and the humanities. Scientific judgments about how society ought to be organised are increasingly accepted in an uncritical light. Science has been credited with its own rules, standards and procedures which are increasingly seen to dominate all other modes of thinking. To this extent, science has become artificially divorced from other forms of knowledge. The philosophical breach in the unity of knowledge during the Enlightenment denoted the dominant position of theology in natural philosophy and progressively rendered the Creator as a spectator in his own universe. The doctrine of catastrophism collapsed into one of uniformitarianism and gradualism. Freud too adapted Darwin's phylogenetic determinism to his own view of human behaviour to which he drew attention to the evolutionary shaping of early influences on the psyche. Mind was made coextensive with biology.

Twentieth century molecular biology and genetics have challenged the conventional concepts of what it is to be human and have questioned the definition of individuality, freedom, responsibility, rationality and ultimately, truth. The most recent trends suggest that the biological and genetic structures of human existence are assuming a paramouncy over social ethics to the point where the biological sciences themselves redefine social behaviour and societal values, which are then legitimated by governmental and corporate policy implementation. Although sociobiology and behaviouralism are instrumental in both the advanced capitalist and Marxist systems of organisation, it does not necessarily follow that society at large is in agreement with all scientific thought and theorizing, nor of its apparent societal credibility. Behaviouralism would have it that all scientifically irregular/non-rational social behaviour can be explained in bio-genetic jargon. This is essentially devoid of any ethical commitment and moreover, is designed to avert any

notion of personal, collective guilt from human existence.
As with all the social science disciplines, this dilemma
is equally applicable for human geography.

The transformation of geography from a pre-scientific
ideographic subject into a scientific discipline of
knowledge has largely been attributed to its embracing the
tenets of Darwin's theory of evolution and moreover, the
postulation that Stochastic (chance) processes are central
to its understanding (see Stoddart 1966). Similarly,
Graves (1980, 23-24) suggests that chance factors
frequently dictate the course and outcome of events in
human geography, remarking that according to Darwin: "...
the organisms which survived in a changed environment did
so not because they somehow adapted to these new
conditions, but because chance mutations in the physical
make up of some organisms made these capable of
surviving".

These principles are central to behavioural geography and
have attracted much recent attention from both supporters
and critics alike of behavioural science. Monod's work in
molecular biology led him to the view that all life
results from interaction of pure chance (unpredictable
mutations) and necessity (Darwinian natural selection):
"... chance alone is at the source of every innovation of
all creation in the biosphere ... the central concept of
modern biology is no longer one among other possible or
even conceivable hypotheses. It is today the sole
conceivable hypothesis ..." (Monod 1971, 112-113). Monod
maintains that the only valid scientific position which
accounts for human behaviour is that man is the result of
the 'impersonal plus time plus chance' equation. If this
thesis is correct, then all values are open to
manipulation - anything can feasibly become a value: "If
he [man] accepts this message...then man must at last...
wake to his total solitude, his fundamental isolation... A
world that is deaf to his music, just as indifferent to

his hope as it is to his suffering or his crimes" (Monod 1971, 172-173).

Monod attempts to construct an ethic of knowledge based on scientific objectivity. To achieve this necessary unity between knowledge and value, man must accept the objective consideration of the facts as presented by Monod together with the 'value' which resides in Monod's understanding of 'objective knowledge' - anthropocentricism. From the choice and acceptance of this "primary value", knowledge begins (Monod 1971, 176). Monod developed his private system of values from the existential ethics of Camus so that it is essentially a solipsistic standpoint.

Skinner's (1953, 1971, 1974) contribution to behaviouralism has profoundly influenced both the natural and social sciences. He bases his assertions about behaviouristic psychology on the observation of rats under experimental conditions. The ethos of Skinner's work is that all values derive from the survival value, that is, the biological continuity of the human race: "Survival is the only value according to which a culture is eventually to be judged, and any practice that furthers survival has survival value by definition" (Skinner 1971, 136). He establishes this naturalistic presuppositiron as a universal and presents the continuity of the race as the one value generated by chance. For Skinner, the qualitative attributes of the human condition (art, music, literture) and existential concerns (freedom, dignity and happiness) "have only a minor bearing on the survival of a culture" (ibid., 180). Yet, throughout all his discussion on the predominance of the 'survival value' above all other, Skinner is unable to extrapolate why the survival of the race is desirable.
Skinner (1953) maintains that concepts such as 'mind' and 'ideas' do not exist. Other concepts such as 'attitudes', 'responsibility' and 'pride' are the result of social conditioning so that feelings are merely the outworking of

actions. Any form of scientific inquiry based on this principle must at the outset presuppose a mindless universe inhabited with mindless beings. The ultimate logical dilemma in Skinner's thinking is to identify the sources of the standard of 'good' and 'ill' in his ideal society while simultaneously by-passing an ethics which is dependent upon the conscious reflection of the 'inner person'. In attempting to explain cultural progress and develop a code of scientific ethics, Skinner claims that random tries, if successful, are preserved by a collection of 'reinforcers': "Things are good (positively reinforcing) or bad (negatively reinforcing) presumably because of the contingencies of survival under which the species evolved" (Skinner 1971, 103-104). Chomsky (1965), however, has shown that the concept of 'reinforcement' is based on a tautology and has no explanatory value: a person persists in his efforts because of the reinforcement he received, but reinforcement otherwise means that which makes him persist in his efforts. This introduces a philosophical circularity and raises the question as to 'what makes evolution evolve'. Equally, as for Skinner, the valuelessness of his behaviouristic values becomes obvious.

Skinner, notwithstanding, recognises that within behavioural terms, a democracy controlled by the concepts of mindful beings is essentially impossible. Effectively, environmental conditioning genetically selects and shapes human behaviour so that modifications in human behaviour can be initiated by controlling the environment: "It is the environment which is 'responsible' for the objectionable behaviour, and it is the environment, not some attribute of the individual, which must be changed" (Skinner 1971, 74).

On the basis of Monod and Skinner as examples of behavioural science, a behavioural geography founded on the primacy of stochastic processes suggests not only a

strong tendency towards a potentially destructive
existential system of social reorganisation, but equally a
total scepticism in the area of epistemology. Who is going
to control the controllers? Where are the boundary
conditions that ascribe limitations of 'right' or 'wrong'
on man's technological abilities? Other behaviourists such
as Crick (1981) concede that there is no experimental
evidence which might be used to verify stochastic
theories, yet most retain an unspoken assumption that
"chance occurrences enabled a mechanism to assemble
itself" (Montefiore 1985, 62).

Behavioural science postulates that human behaviour is
totally mechanistic and can therefore in principle be
explained in terms of physics. According to Sheldrake
(1981, 25), this assumption is problematical for at least
two fundamental reasons:

> "First, the mechanistic theory could only be valid if
> the physical world were causally closed. In relation
> to human behaviour, this would only be the case if
> mental states had no reality at all or were in some
> sense identical to physical states of the body or ran
> parallel to them or were epiphenomena of them. But if
> on the other hand the mind were non-physical and yet
> causally efficacious, capable of interacting with the
> body, then human behaviour could not be fully
> explained in physical terms... Second, the attempt to
> account for mental activity in terms of physical
> science involves a seemingly inevitable circularity
> because science itself depends on mental activity...
> Since physics presupposes the minds of observers,
> these minds and their properties cannot be explained
> in terms of physics".

Although many of the principles of scientific explanation accept that evolution came about through a series of coincidental changes, no genetics of behaviour has ever been proposed. Koestler (1978, 77) remarks that: "If the forces behind the emergence of new structures are obscure, those behind the evolution of innate skills are shrouded in total darkness". The aberrations and antilogies of a neo-Darwinian behavioural geography are clearly related to the dehumanisation of the individual as the subject of its inquiry. Schaeffer (1973, 33) would go further and refers to the dispossession of man qua man: "Only then can we turn from the inferred to the observed, from the miraculous to the natural, from the inaccessible to the manipulable".

Objectively, man is a dependent part of his natural and social environment, yet he remains significant and affects the environment. Subjectively, man perceives himself as unique, self-contained and independently 'whole'. Moreover the most frequent aberrations of human thought and behaviour in disequilibrium are due to the obsessional pursuit of some part-truth, treated as if it were the whole truth. Behavioural science takes no account of man's sense of finitude and the ultimate realisation of his physicalistic death and non-existence, nor as to what bearing and explanation this may have on his socio-spatial transience. On a behavioural basis, man fails to logically internalise or rationalise the impending finality of this inevitability. The timing of an individual's death may appear to be an unpredictable and 'chance' event, but its certitude is a universal. The unwinding of man's biological clock provokes a 'death instinct' so that in behaviouristic terms, life has no integrative value and man has no true sense of 'belonging' with his spatial environment. A behavioural geography which elucidates 'chance' as its central criterion has no terms of reference with which it might explain this paradox. Moreover, under the tenets of a behavioural geography,

human socio-spatial relations and encounters are typified
by man's preoccupation with opportunism whose expression
is frequently marked by the maximisation of material
accumulation and territorial gain, and the 'value' which
he attaches to these forms of behaviour. Much of this is
an attempt to offset the reality of his dilemma as a
private creature who - according to the behaviouristic
rationale - contains no intrinsic metaphysical qualities
or awareness.

The credibility of a behavioural science for man collapses
insofar that it fails to represent the complexity and
sensitivity of the individual being and cannot, therefore,
provide a convincing case of 'making sense' of the
'rationally' unthinkable. For Von Bertalanffy (1969, 66),
behaviourism and its neo-Darwinian backcloth suggest

> "that a theory so vague, so insufficiently verifiable
> and so far from the criteria otherwise applied in
> 'hard' science, has become a dogma, can only be
> explained on sociological grounds. Society and
> science have been so steeped in the ideas of
> mechanism, utilitarianism and the economic concept of
> free competition, that instead of God, Selection was
> enthroned as ultimate reality".

HUMAN GEOGRAPHY AND EVOLUTIONARY THOUGHT

Much of contemporary human geography which adheres to the
scientific methodology - that is, to logical positivism
and behaviourism - is hinged upon the tenets of neo-
Darwinian evolutionary theory. Its presuppositions are
largely seen to constitute the sole legitimate backcloth
for epistemological inquiry in all scientific disciplines
of knowledge and for human geography in particular, to
provide insights and explanations for the spatial
organisation of society. The innovations which appeared in

human geography during the 'conceptual revolution' from the early 1960s onwards were primarily borrowed and applied from the physical and biological sciences. These not only included a methodology based on quantitative and statistical techniques, but also a general obedience and subservience to neo-Darwinian explanation for the ontogenesis of man as a physico-chemical product of the environment. The 'impersonal-time-chance' equation has subsequently been developed and extended in geography as a social science is an attempt to identify and tackle the problems of human socio-spatial behaviour and relationships. In the case of human geography, the theoretical preassumptions forwarded by stochastic principles - 'chance', 'selection', 'necessity', 'survival' and so forth - have been widely integrated throughout the entire spectrum of its field of inquiry: regional analysis and area studies; urban-social and economic geography; rural and environmental geography; population geography and demography.

The precepts advanced by neo-evolutionary theory are so firmly entrenched in the social sciences that the apparent unequivocal acceptance of the former by the latter has elevated the status of the scientific method to one of 'recognised truth' and universal validity. Subsequently, the formidable position enjoyed by neo-Darwinism in scientific and academic forums has largely remained unchallenged. Moreover, in the UK the only significant modifications in syllabus design and curriculum innovation in secondary level geography during the 1970s broadly consolidated the scientific concepts expounded by the positivist-behaviourist methodology and thought. Similarly in higher education, the ongoing enhancement of neo-Darwinisn as the basis for research in the social sciences and in education remains predominant: "Thus, evolution is not merely a biological theory, but is rather a full-blowm cosmology. The whole structure of modern public education from kindergarden through the postgraduate schools, both

in content and methodology, is built around the evolutionary framework" (Morris 1966, 136). In the USA, however, the State of Arkansas (December 1981) called for a balanced treatment of evolution science and creation science in the school curriculum. Montague (1984) points out that although the legal battle tends to favour the evolution case, the theory is rapidly disappearing from school text books and curricula.

Such changes are unwelcome in many quarters, not least among those who maintain that modern evolutionary theory is an internally consistent science. Kitcher (1983), for example, concedes that creation can be taught as religion, but not as a science since the acceptance of creation science would require the abandonment of large parts of the physical and biological sciences. He emphasises that 'flood geology' would need to be taught (see Morris and Whitcomb 1969) and that radiocarbon dating methods would need to be revised (see Enoch 1972; Morris 1973). The immediate ramifications are clearly significant for physical geography but are equally ominous for human geography when man's existence, knowledge and relationships with the phenomenal world are called into question.

The ethos of neo-Darwinism as the cornerstone of the scientific method claims to provide an explanation and directive for human existence and development in an historical space-time context – past, present and future – so that the naturalistic and nominalist approaches are reinforced as the criteria for understanding the human condition. Molecular biology and genetics have intensified the social and moral acceptability of modern evolutionary thinking in its wider societal context insofar that socio-spatial problems and apparent impasses in decision-making can be attributed to human physico-chemical dysfunctions rather than to moral and spiritual shortcomings. Moreover, neo-Darwinism maintains that it provides not only a

rational basis to explain human and environmental
phenomena, but equally implies that its theoretical
assertions are exempt from any form of critical analysis.
The scope and complexity of modern evolutionary theory are
such that it embraces many aspects of the scientific field
of knowledge and presents the social scientist with a
daunting task if he is to unravel all its postulations.
Notwithstanding, failure to undertake some measure of the
historical development of evolutionary thought or of an
examination of the truth-claims of neo-Darwinism will
neither endorse its validity as the pivot of the
scientific method nor conform its position as a legitimate
basis of enquiry for human geography in education.

HUMAN EXISTENCE AND BIOLOGICAL EVOLUTIONARY THEORY

The idea of evolution long pre-dates the publication of
Darwin's 'Origin of Species'. Moreover, the doctrine of
spontaneous generation was universal among scientists and
philosophers in ancient civilisations (see Moody 1962, 3).
According to ancient cosmoganic myths - including those
from Babylon, Egypt, Indian and Greece - it was widely
thought that all forms of life, including man, were
generated directly from mud or slime or some other
inorganic medium (see Morris 1973, 75-76). Among the early
Greeks, Anaximander claimed that men had evolved from fish
and Empedocles that animals had been derived from plants.
The world was interpreted as a system of primeval chaos
upon which the 'gods' or the forces of nature instated
order and knowledge. Almost all early civilisations
thought exclusively in evolutionary terms, where the
doctrine of 'special creation' was either unknown or if
known, rejected (see Ley 1978). In the case of early
Hebrew society, many contemporary commentators have
suggested that the Genesis account of creation was written
as an 'accommodation' to their simple culture because they
were fundamentally incapable of understanding an
evolutionary system of origins. While many ancient

astronomers and philosophers dated the universe almost infinitely old, the Biblical revelation of origins remained unique and was largely universally rejected and resisted until the spread of the Judaeo-Christian doctrine in Europe. The primacy of the Biblical view of origins was relatively short-lived and was ultimately undermined by the naturalistic promulgations of Lamarck and Darwin. A naturalistic science - and Darwinism in particular - implied that any notion of a 'God creator' could now be eliminated from rational discussion about origins. Metaphysical and religious issues were no longer considerations in the ontogenesis of man.

That Darwinian evolutionary thought became immediately popular in the public consciousness of Victorian England was no accident. Darwinism became a credo for all 'progressive' and 'enlightened' people, so that as a theory it was raised to the status of a dogma. Everyday life was indeed seen as a struggle where the margin between success and failure was hinged on opportunism, ruthlessness and utility value. The Darwinian notion of 'pure chance' was made coextensive with the idea of 'progress' and material wellbeing. Temple (1934, 288) notes that: "It is obvious that for some students at least the impulse towards acceptance of 'natural selection' as the one and only mode of evolution came from a mechanistic habit of mind and a desire at all costs to dispense with providential 'design'." The question of meaning is inextricably interrelated with origin and destiny, yet as soon as the question of origins and ends becomes a consideration, scientific and religious views clash uncompromisingly. The church, however, had hardly made a convincing case for its standpoint but moreover had dogmatically resisted any criticism of its social power and influence or of its political dabblings: "For centuries the doctrine of the special creation of species was seen as a moral justification for the Church's support for powerful autocrats throughout Europe. Not only were

species held to be immutable, but men were thought to be fixed in their position in life by divine ordinance" (Hoyle 1983, 26).

Darwinism as such was relatively shortlived in terms of the theoretical consistence which it purported to show. Koestler (1978, 179-181) refers to the unveiling of the basic logical fallacy of chance variation (random mutation) in the human species by Jenkin (Professor of Engineering at Edinburgh University, 1867), who showed by logical mathematical deduction that no new species could ever arise from chance variations by the mechanisms of heredity accepted at the time. Natural selection became inoperable so that Darwin himself was subsequently compelled to resuscitate the Lamarckian view of the inheritance of acquired characteristics - an anathema to Darwinists. Lamarck's study of animal behaviour suggested that individuals experienced improvements in physique, skills and ways of life according to the degree to which they adjusted to the environment. The resultant series of progressive changes which took place correspond to the vital needs of the species, which are genetically transmitted from one generation to another heriditarily. Evolution from the Lamarckian standpoint is a cumulative process directed by the purposeful efforts and experiential encounters of living organisms with the environment. For the (neo-)Darwinist, however, it is an accidental process, ruled by pure chance and one which rejects any notion of purpose or design.

The rediscovery of Mendel's paper - dealing with experiments in plant hybridisation - in 1900 showed that 'units of heredity' (genes) combined in a variety of mosaic patterns, but more importantly, were transmitted unchanged and intact to subsequent generations. These observations suggested that chance mutations survived long enough for natural selection to become operative. The legitimation of this contention is both complex and

problematic. To hold an unequivocal standpoint, a
scientific evolutionary-based methodology would need to
show that some permanent and heriditable change has
occurred of an entirely different type than those
potentially present already. Bonner (1962) shows that
mutational changes are concomitant to the reshuffling of
genetic material that is already given. Morris (1973) adds
that this corresponds analogically to energy
transformations in a physical system - nothing is actually
gained or added, but rather the form becomes modified.
Much of evolution is justified on nothing more than
'artificial selection', i.e. cross-mutation within a
species: "... mutations do not provide an explanation for
the nature or temporal order of the phenomena of
evolution; they do not create evolutionary novelties; they
cannot account for the precise fitting together of the
parts of an organ, and the mutual coordination of
organs... Mutations provide chance, but not progress ..."
(Grassé 1973, 351).

Experiments with fruit-fly have shown no evolutionary
advantage but rather that mutations display a prominent
degree of susceptibility towards physical and biological
decay. Mutation is essentially brought about by
penetration of the cell by radiation, a mutagenic chemical
or by introducing some other disorganising agent, so that
the chromosomatic structure is disturbed. The agent which
functions as the catalyst is not beneficial, but rather
detrimental to the carrier: "Mutations and mutation rates
have been studied in a wide variety of experimental plants
and animals, and in man. There is one general result that
clearly emerges: almost all mutations are harmful. The
degree of harm ranges from mutant genes that kill their
carrier, to those that cause only minor impairment ... a
mutation is a random change of a highly organised,
reasonably smoothly functioning living body. A random
change in the highly integrated system of chemical
processes which constitute life is almost certain to

impair it" (Crow, 1958, 19-20). Occasional but rare
'beneficial' bacterial mutations occurring in artificial
(laboratory) environments have been observed (e.g.
bacterial resistance to pencillin), but to use such
evidence as a basis for the entire development of all
living organisms is highly improbable.

Molecular genetics suggest that a 'genetic micro-
hierarchy' in a growing embryo protects a species against
the evolutionary hazards of phylogeny. This refers to
random mutations taking place in the chromosomal genes of
an organism. Biologists opposed to the 'synthetic theory'
of evolution have postulated a concept of 'internal
selection' in which there is a hierarchy of 'correctors'
and 'proof-readers' which eliminate misprints and co-
ordinate acceptable changes. According to the orthodox
neo-Darwinian standpoint, natural selection is governed by
the pressures of the external environment. The concept of
'internal selection', however, insists that any
chromosomal change must first conform to the rules of
internal selection which govern the physical, chemical and
biological wellbeing of an organism before any
evolutionary process is allowed to harness it. Koestler
(1967, 133) demonstrates the concept of 'internal
selection' for Drosophila: "If a pure stock of eyeless
flies is made to inbreed, then the whole stock will have
only the 'eyeless' mutant gene ... Nevertheless, within a
few generations, flies appear in the inbred 'eyeless'
stock with eyes that are perfectly normal". If then it is
asserted that the gene-complex has somehow reshuffled and
re-combined in such a way as to compensate for the missing
(eye-forming) gene, natural selection can provide no
explanation. Nor, as evolutionary theory would have it, is it
a 'pure chance' process requiring millions of years to
achieve its end. Rather, any genetic deficiency is
seemingly rectified and recoordinated by a design matrix
which governs the structure of the entire gene complex
according to a set of rules.

Many biologists have acknowledged this discrepancy in
evolutionary theory and have subsequently^{been} compelled to
review their theorizings. Monod, for example, on the one
hand refers to evolution as 'nature's roulette' to
illustrate the transition by 'blind chance' from cold-
blooded to warm-blooded mammals: "The universe was not
pregnant with life nor the biosphere with man. Our number
came up in the Monte Carlo game" (Monod 1971, 145-146).
Conversely, Monod (1971, 9) postulates a second basic
principle of evolution besides chance, which he terms
'teleonomy': "One of the fundamental characteristics
common to all living beings without exception [is] that
of being objects endowed with a purpose or project, which
at the same time they exhibit in their structure and carry
out through their performances ..." Monod (1971, 22),
seemingly aware of the dilemma implicit in this remark,
continues: "The cornerstone of the scientific method is...
the systematic denial that 'true' knowledge can be got at
by interpreting phenomena in terms of final causes - that
is to say, of 'purpose' ... objectivity nevertheless
obliges us to recognise the teleonomic character of living
organisms, to admit that in their structure and
performance they act projectively - realise and pursue a
purpose ..." Inferentially, the Lamarckian explanation
appears to provide a clearer view of nature for Monod -
despite it being unable to offer a mechanism for the
inheritance of acquired characteristics - than that of
neo-Darwinism.

Similarly, the ethologist, Thorpe (1978, 21) remarks that:
"Biologists have long hoped to find a really 'primitive
cell' illustrative of the stages between the supposed
primitive acellular life and life as we know it ... there
are no primitive cells living on earth. All the cells that
we know are of fantastic complexity. I believe that no
biologist or physicist has yet been able to propose even
the outlines of a theory as to how such a cell might have

been 'evolved'. Monod himself sees that the evolution of even the simplest cell 'presents herculean problems.'."

Science itself recognises that 'purpose' is increasingly implicit in the fact of biological organisation, yet to succumb to the real sense of this term in evolution would essentially destroy the basis of the theory. Although the variety of life-forms is profuse, the uniformity of basic chemical and organic matter imposes limitations on existing and possible life-forms. It is unlikely, therefore, that the suggested passivity of behavioural 'adaptation-response' processes renders man as an object determined by environmental contingencies. In reality, man does not passively adapt and respond to the environment but adapts it to his own specific needs by critically questioning and exploring it (see Coghill 1929). Man's intuition and initiative appear to carry a greater influence than any impact of selectivity and environmental constraints. Human skills may be chromosomatically acquired 'because they are useful', but even in a Lamarckian sense the mechanism by which this occurs remains obscure.

Evolution, by its own terms of reference is a wasteful process where those lines which have survived have become inert, bringing the theory to an abrupt halt: Huxley (1964, 13) notes that most species reach "blind alleys" in their evolutionary transformation so that extinction and stagnation indicate over-specialisation and failure to adapt to environmental changes. If evolutionary theory is to explain this dilemma, then it must attempt to 'retrace its steps' in the sense of 'reculer pour mieux sauter' to eliminate developmental cul-de-sacs. This is known as paedomorphosis - temporary regression followed by an 'adaptive' leap forward. Such a methodological twist raises the questions of time and of the reliability of taxonomic techniques used in evolutionary theory. Orthodox evolutionists regard all life-forms as only temporary and

fluctuating so that their classification must be cast in an evolutionary mould. The unique and discrete character of different kinds of organisms - both past and present - is overlooked; "one could fill a library with illustrations of staggeringly complex patterns of instinctual activities of various species of animals which defy any explanation in terms of the Darwinian mantra" (Koestler 1978, 178; see also Tinbergen 1951, Macbeth 1971, Meldau 1972). Equally, the absence of any evidence in the biology of present processes for any significant biological change - except very small and generally debilitative mutations - suggests there is no evidence for evolution in present genetic processes.

The phylogenetic taxonomic method (building the evolutionary histories of particular organisms) must not only attempt to resolve lines of stagnation but also account for 'gaps' and 'saltations' between species, genera and families. Much of the fossil evidence on which evolutionary taxonomy is based is either incomplete or missing. Alternatively, the available fossil evidence does not always fit conveniently into the theoretical grid. The construction of phylogenetic 'trees' are compiled from taxonomic systems in the absence of fossil records. This is an inductive method based on normative thinking. The 'trees', however, are subsequently used to modify the taxonomic systems on which they are founded. Philosophically, the circularity of the phylogenetic approach does not justify its scientific validation, not least because the 'modern evolutionary synthesis' cannot account for the known facts of biology with which it deals: "... the influence of the Darwinian mythology has impeded the advance of biology" (Thompson 1962, 567). The eminent palaeontologist, Simpson (1944; 1953) - recognising that palaeontology has failed to produce evidence to support the theory of organic continuity of descent by gradual, completely continuous transitional sequences - continues to maintain that homology is

determined by ancestry and that homology is evidence of ancestry. Yet, according to the biologist, Arnold (1947, 7): "as yet we have not been able to trace the phylogenetic history of a single group of modern plants from its beginning to the present."

Much of the taxonomic debate in evolutionary theory is intrinsically entwined with the problem of time. Evolutionary thought is governed by the principle of uniformity by which it is hoped that present-day processes can be extrapolated into the distant past/future to explain all that ever has, or will happen. True (methodological) uniformity concerns the inviolability of natural law (i.e. of thermodynamics), but not the uniformity of process rates (i.e. substantive uniformity). All of the various processes of the universe - whether physical, biological, geological, chemical, or any other field of science - must operate within the framework of the first and second laws of thermodynamics, that is the laws of energy conservation and deterioration. These laws define the state of the measurable universe as a physicalistically closed system as one of quantitative stability and qualitative decay. The First Law states that although energy can be transformed in various ways, it can neither be created nor destroyed. The Second Law states that in all energy transformations there is a tendency for some of the energy to be converted into non-reversible heat energy, i.e. to be lost in a 'heat-death' (see Ubbelohde 1955). This means that left to itself any isolated system or process ultimately runs down and wears out. Thus in a closed system, entropy can never decrease, but conversely increases (see Lindsay 1959; Potter 1964).

With the rejection of 'vitalism' in evolutionary biology, it follows that all physico-chemical processes in biological systems must conform to the two laws of thermodynamics. These must have a universal application in the case of man. Man and his spatial environment are both

part of an isolated system which moves towards greater randomisation and a higher probability function, i.e. a tendency to become disorganised, disordered and decayed (see Blum 1955). Locally and temporarily, there may be an excess inflow of ordering energy into a particular system – that is, the recovery and recycling of some energy from entropy – so that there appears to be growth and development for a while, but this is shortlived and the decay principle ultimately predominates.

The principle of evolution is precisely the converse of the laws of thermodynamics, postulating that present processes are the same as those by which the universe came into existence and is thus still coming into existence. Evolutionists assert that it is a uni-directional, irreversible historical space-time process which leads to higher degrees of organiation and integration, greater differentiation and increasing complexity. This could only conceivably be the case in an open system where the laws of thermodynamics – and particularly that of entropy – could be discounted: "The system will be an open one and must have a supply of raw material and, in some way or another, a supply of free energy" (Crick 1981, 56).

In attempting to defend the evolutionist standpoint, Schrödinger (1944, 72) challenged the Second Law of Thermodynamics when he asserted that: "What an organism feeds on is negative entropy." By this, he implied that instead of running down and dissipating into chaos, living organisms build themselves up toward higher levels of complexity and functional coordination so that environmental constraints were mastered and eliminated. Schrödinger's notion of 'negentropy' was later extended by the biologist Szent-Györgyi in 1974 (cited by Koestler 1978, 223-224) in what he termed 'syntropy'. This refers to an innate drive in living organisms towards growth, synthesis and self-perfection. These are both fundamentally forms of neo-vitalism where the 'non-living'

becomes life through some quasi-mystical entelechy. Although the exact physiological mechanism which is responsible for the aging and death of a biological organism has never been fully determined, Curtis (1963, 686-694) attributes it to sudden changes in the structure of the somatic cells incurred by radiation or other mutagens affecting the organs and general body cell structure of an individual. While germ cells appear to be better protected from factors causing mutation than are the somatic cells, the general trend is deleterious so that organs ultimately function less efficiently, decay and die: "It is suggested that the mutation rates for somatic cells are very much higher than the rates for gametic cells, and that this circumstance ensures the death of the individual and the survival of the species" (Curtis 1963, 694). Equally, some species may eventually experience accelerated decay and even extinction with the accumulated effects of generations of mutations, and disturbances in the ecosystem which are frequently instigated by man.

Contrary to the evolutionary position, any attempt to explain the biological and cultural progress of the human race by the concept of paedomorphosis strongly suggests that these phenomena cannot be explained solely by the atomistic laws of physics and chemistry. It is, however, clear that physicalistically, the individual bioligical organism conforms to the two Laws of thermodynamics. Science, in a holistic sense, becomes a study of energy and its transformations from one state to another. Yet science deals with present processes which are not, by definition, processes of origination and integration but rather of conservation and disintegration. Evolution cannot be said to be an empirical fact of nature at the present time, nor a fact of scientific certitude in the prehistoric past:

"the history of the earth and its inhabitants cannot
be subject to scientific experimentation; the events
are non-reproducible and, therefore, not legitimately
subject to analysis by means of the so-called
'scientific method'. (Morris 1973, 29).

Many evolutionists such as Waddington (1961) have
recognised that causality and finality are complementary
principles in the sciences of life; if finality and
purpose are rejected, then biology and psychology are
rendered as nonsensical. If such concepts are retained,
then the scientific method is still confronted with the
presence of a (neo-)vitalist principle: "The joint efforts
of palaeontology and of a molecular biology purged of
dogmatism, ought to lead eventually to the discovery of
the precise mechanism of evolution - but possibly without
revealing to us the causes which determine the direction
of evolutionary lineages, and the purposefulness of
structures, functions and vital cycles. It seems possible
that confronted with these problems, biology is reduced to
helplessness and must hand over to metaphysics" (Grassé
1973, 401).

HUMAN GEOGRAPHY AS EVOLUTIONARY SCIENCE

There is sufficient evidence to suggest that a scientific
geography which attempts to explain socio-spatial
phenomena on the basis of neo-Darwinian postulations
cannot provide an adequate ontogenesis for man, nor any
convincing foundations for the epistemological and
methodological assertions of the 'scientific method'. The
theory of natural selection cannot be proved by empirical
prediction and control and even less can be said about
future evolutionary trends. Both Lamarckism and (neo-)
Darwinism lack the experimental evidence to explain life
or the role of the environment in the behavioural
conditioning of life forms. Neither has shown how the
adaptive evolution of any single organism or any single

organ might be explained nor how an 'acquired' bodily or mental feature could alter the 'genetic blueprint'. Denton (1985) believes that the scientific method moreover demonstrates the inadequacy and shortcomings of neo-Darwinian evolutionary theory and along with Hoyle (1983), claims that evolution could not have taken place because there has not been time or opportunity, and that so complex an organism as life could not have evolved by chance on earth (i.e. that the earth in itself is not sufficient to have provided the conditions for the evolutionary development of life forms).

Such a challenge has important ramifications for the teaching and study of human geography for as long as it continues to draw on neo-Darwinian principles: "It is quite clear that for the general public educated in Western society, scientific accounts of the origin and destiny of the world and of the status of human beings within it, have replaced the traditional mythical accounts given in various forms in all religions, including in particular biblical religion ... Scientific theory has the status of cosmological myth in our society as can be seen in the way 'origins' are taught in schools, and in the popularity of media presentations of fundamental science, both of physics and biology" (Hesse 1983, 51).

While many evolutionists have become increasingly concerned with overcoming the shortcomings of theoretical presuppositions and methodological difficulties - Reid (1985), for example, advocates a move away from reductionism in evolutionary thought towards one of holism - Popper (1976) considers that it is important to show that Darwinism is not a testable scientific theory, but a metaphysical research programme which may be criticised and improved upon. Although there is a considerable divergence of opinion among scientists concerning not only the causes of evolution but also about the actual process, it is unlikely that the scientific method will easily

relinquish the present academic and social status of
evolutionary theory as a credible explanation for social
and territorial behaviour, as well as for the existence of
all life-forms. Popper's invitation to introduce an
element of 'falsifiability' in evolutionary thought is
indeed likely to fall on barren ground: "This situation,
where men rally to the defense of a doctrine they are
unable to define scientifically, much less demonstrate
with scientific rigor, attempting to maintain its credit
with the public by the suppression of criticism and the
elimination of difficulties, is abnormal and undesirable
in science" (Thompson 1960, 2).

The insistence of the scientific method on the impersonal
origins and character of man and his environment does not
provide an adequate basis for socio-spatial inquiry, nor
for the explanation and understanding of geographical
phenomena. Moreover, a scientific human geography whose
epistemological underpinnings are entrenched in the tenets
and rationale of evolutionary theory fails to convincingly
authenticate both the status of and interrelationship
between man and land.

A behavioural geography cannot scientifically legitimate
the contention that human socio-spatial activity is
contingent to the primacy of the environment by the
subordination of the role of man as a 'mindless' being.
Equally, attempts to integrate a phenomenological bias in
a behavioural – positivist matrix generates methodological
inconsistencies and intangible philosophical discrepancies.
Evolution emphasises the instinctive drive in human
behaviour and largely fails to recognise the presence of
any intuitive content which motivates the intentionality
of social actors. Evolutionary theory easily lends itself
to the rationale of technocratic instrumentalism, so that
rather than providing new horizons for those disciplines
of knowledge which espouse its tenets, the result is a

dehumanised society mortified in the grips of politico-scientific authoritarianism.

While evolutionary theory is increasingly at pains to justify its claims through the biological premise, this does little to clarify the validity and authenticity of a human geography based on the 'scientific method'. Because human geography deals with human social problems in a spatial context, it needs to establish clear parameters about the ethos of the world in which man lives. This may provide insights into the respective roles of and relationships between man and land as well as fresh perspectives for the direction and substance of geographical inquiry. The natural sciences - particularly the contribution of physics - offer a possible route for a re-evaluation of the fundamental questions about knowledge and existence which are also implicit in the social sciences. Science purports to achieve this goal through the inroads made in contemporary cosmological investigations.

While it is clearly beyond the scope of this study to make a detailed and exhaustive examination of scientific progress in this field of knowledge, a simplified overview of cosmological inferences - insofar that they are relevant to an understanding of man and the earth - have a significant bearing on the backcloth of human geography as a scientific discipline of knowledge.

COSMOLOGICAL SCIENCE, MAN AND THE EARTH

A human geography based on the scientific method is largely preoccupied with the task of ascribing meaning and significance derived from its empirical observations of man and his interaction with the spatial environment. Much of this work is hampered by the nature of the presuppositions which govern the direction of contemporary scientific inquiry both in the natural and

social sciences, that is fundamentally the notions of randomness, chance, and the impersonal which have resulted in the creation of everything out of nothing.

Subsequently, a scientific human geography must somehow purposefully strive towards making sense of man and the socio-spatial world. It undertakes this prerogative by identifying and attributing form, structure, order and reason to the processes within and between man and his spatial environment, but against a theoretical background of value-freedom, neutrality, detachment and non-commitment. A substantial part of scientific human geography has emulated the methodology of the natural sciences insofar that it has appealed to the primacy of mathematical and statistical techniques to investigate the socio-spatial field of inquiry. Man and land are little more than quantitative expressions but in order to understand their significance and meaning at any given point in historic space and time requires an explanation of origins.

Contemporary research in theoretical physics and modern astronomy suggests that science must increasingly harness a reductive methodology not only to explain the origin of the universe, but equally to acquire a deeper understanding of the earth and its life-forms in a present-day context. The potentiality of fresh insights into the questions of existence and knowledge by cosmological theorists not only challenges many of the presuppositions on which the 'normal' scientific method is based, but also bears a direct relevance for human geography as a social science inasmuch that the dynamics of socio-spatial phenomena may be investigated from other perspectives.

Although the cosmological problem presents much divergence and conflict among scientists, the profusion of the various standpoints and views about the origin of the

universe points unequivocably to the 'big bang' theory as the predominant mode of explanation. The theory broadly postulates that the observable universe exploded from a point of 'singularity' from the boundary of time and from the beginning of space beyond which there is neither space nor time. The fact that an initial explosion ever took place in a situation beyond space and time is clearly beyond the parameters of scientific investigation, but Hubble's Constant provides the theoretical basis for the initiation of the universe by the 'big bang'. Hubble's observation of the 'red shift' distortion in the colour of galactic light suggested that galaxies were distancing themselves from one another, so that the space between them is expanding. Further, he postulated that the residual heat which bathes the universe is confirmatory evidence of the initial explosion of the concentrated 'primeval nucleus' of matter and radiant energy into the space-time continuum.

The 'scientific method' demands that the validation of the 'big bang' theory is necessarily subject to its quantitative verification so that the point of 'singularity' and the events which preceded it might possibly be explained: "We shall only have achieved the goal ... when this possibility has been expressed quantitatively" (Atkins 1981, 110). The Second Law of Thermodynamics, when projected forwards, suggests the ultimate 'heat death' of the universe when maximum disorder or dynamic equilibrium is reached. In its restrospective projective, the universe appears to have had a point of origin, since the state of thermodynamic equilibrium has not been reached. Because the total entropy in an infinitely large isolated system never decreases, the process is irreversible. The quantification of the very earliest moment of the universe and the period of exponential expansion and 'supercooling' which took place can only be described by mathematical symbols (see Weinberg 1977; Atkins 1981).

To illustrate this point, scientific calculations estimate the 'big bang' explosion to 15 billion years ago, yet in the world in which we live where matter is composed of atoms, only during the first five minutes after the 'big bang' would conditions have been sufficiently hot for nuclear reactions to have taken place (see Gribben 1983). Further, between the first three minutes and the first half million years, matter could exist only in the form of nuclei and free unbanded electrons prior to showing how a featureless universe developed recognisable complex structures. The earlier the stages in the 'big bang', the more matter seemingly splits into even smaller components: between 10^{-4} seconds and the first three minutes, matter consisted of particles and electrons; between 10^{-12} and 10^{-4} seconds, it could only exist as quantum material; and between 10^{-43} and 10^{-35} seconds, energies and temperatures were so high that it is reckoned that only one single unified force could have been present in the universe.

The 'big bang' theory is, however, itself the subject of contention in terms of various interpretations which the experimental problem raises. Theoretically, the aim is to try and reconstruct the sort of energy required at the genesis of known cosmic processes. The presumption is that the explosion and subsequent 'supercooling' and expansion period would have destroyed the initial symmetry of matter and anti-matter, so that this breach would account for the existence of a universe which contains a preponderance of matter (see Tryon 1984). If all distinctions between particles and the different forces which control them would vanish in a space-time context, then it would be possible to identify the elementary particles of the universe and to account for the way in which the properties of the macroscopic world emerge from their aggregation and combination. This would presumably shed light on the 'organising principles' which not only govern particle physics, but also those which determine intelligent life-forms.

Barrow and Silk (1984) claim that prior to the 'big bang' up to the point of 'singularity' a state of ultimate and perfect symmetry existed which otherwise comprises a unity and revelation of complete understanding. All physical laws were in perfect harmony and all natural elementary constituents interacted freely and democratically. They apply a paraody of 'Paradise Lost' to the general theme of their study so that 'paradise' is made synonymous with perfect symmetry, while the key to 'paradise's' collapse will be found when it is possible to explain the breakdown of cosmological symmetry. According to this view, all scientific speculations which seek explanations from Planck time (i.e. 10^{-35} second and beyond) require a theory of 'quantum gravity'. Until recently, gravity and theories of 'supergravity' have resisted the 'renormalisation methods' which permit the eradication of divergences with other related phenomena such as electromagnetism and quantum mechanics. Meaningful mathematical calculations have not therefore been possible. In 1985, Green and Schwarz devised a mathematical model for a four-dimensional super-symmetric theory of quantum gravity known as the theory of 'superstrings'. It remains to be seen whether this theory will provide a holistic explanation for forces, particles and space not only in the quantum sphere, but equally in the macroscopic world of everyday experience.

If human geography intends to draw upon contemporary advances in the natural sciences in order to gain possible insights about man and his inter-relationship with space, then cosmological theory via particle physics and modern astronomy continues to generate many uncompromising postulations. Essentially, scientific theory has yet to unify the fundamental forces of the cosmos which have enabled life and structural form to emerge on the Earth. Moreover, it presently lacks the ability to explain the remarkable array of 'constants' which have ensured the development and relative stability of galaxies. In the

case of the Earth, very slight changes in the value of any one of many constants - the distribution of gases; the heat of the universe; the weight mass of neutrinos, the universe and of electro-magnetic particles; the force and strength of gravity and of nuclear reactions in the universe; the structure of carbon forms - would precipitate the catastrophic termination of the entire observable universe in the form which it currently understood (see Weinberg 1977; Davies 1982, 1983).

According to the concept of the 'big bang', the existence of the universe does not necessarily imply creation out of nothing but that the energy/matter which evolved from the explosion of the 'singularity' is perhaps a "disconnected fragment of spacetime" (Davies 1983, 40-42), as if space and time are synthetic components/parts. Beyond the 'big bang', the components which comprise the space-time continuum had a pre-existence within a primordial state of being which preceded space and time. Science can only speculate about the origin and creation of the universe from a 'singularity', or of the mechanism which determined the conditions of the 'big bang' and the constants of nature which provide the laws under which the universe must operate.

The dilemma is further compounded by questions which are related to the specific conditions which are necessary for the development of intelligent life, and primarily that of human existence. If an impersonal-time-chance presupposition is adopted, then it would seem logically inconceivable that intelligent life-forms would appear in the hypothetical structure of 'symmetry breakdown' if this process was indeed initiated from a point of 'singularity'. Moreover, it would be extremely unlikely to find any evidence of distinct and unique life-forms had they not at some time pre-existed in a state of 'perfect' (primordial) symmetry. Equally, the presumption that the forces which shaped the physical world and intelligent

life-forms which began to 'freeze' out as temperatures cooled could hardly have enacted a gradualism towards 'more complex systems' if the Second Law of Thermodynamics holds good. If the point of 'singularity' is made coextensive with symmetry collapse, then a scientific explanation based on randomness must account for those forces responsible for gas and filament condensation into precise structural forms, as well as those forces which gave the impetus to the modelling of intelligent life in the cooling process.

The basis of the normal scientific method is grounded in an epistemology which presupposes the existence of an uncaused universe which has subsequently assumed its present structural appearance by chance. Although this view is widely held in both the natural and social sciences and used unconditionally for theory development and the construction and testing of models, it is clear that even by scientific criteria, specific conditions are necessary for the development of intelligent life. Human existence has required the universe to evolve an infinitesimal series of complex, finite and particular conditions which defy the notions of probability and coincidence by the random assembly of points and patterns in space and time (see Ward 1982). Scientific inquiry continues to seek theoretical avenues which may possibly provide an adequate explanation for physico-chemical and biological 'coincidences' in the evolutionary history of the observable universe.

The work of Bondi, Gold and Hoyle on the 'steady-state' universe/'continuous-creation' theory has largely been rejected by scientists in this field of study. In this case, contemporary scientific evidence refuted the claim for the 'continual evolution' of matter of 'negative energy' once cosmic background heat radiation had been positively verified. Although the 'big bang'/expanding universe theory predominates as the modus operandi for the

development of the universe, there is a wealth of
conflicting theory and method which is primarily focused
on the problem of accounting for the 'coincidences' and
constants which make life possible on the earth. The
various theories which have been tendered to explain the
natural order in the universe are all fundamentally
impaired by the absence of observational or experimental
data which might support their theoretical presuppositions
(see Montefiore 1985, 33-38). Many of these scientific
postulations are not only highly speculative, but
frequently appeal to meta-theoretical concepts in an
attempt to gain explanatory power. Moreover, they do not
explain why these 'coincidences' and constants contain
empirically recognised values.

When no convincing case for the origin and development of
man and the natural environment can be elucidated by
empirical evidence drawn from physicalistic phenomena,
then the focus of scientific inquiry falls squarely on the
existence of man. Carter's (1974, 293) postulation of a
'weak anthropic principle' in cosmology is based on the
fact that: "... our location in the universe is
necessarily priviledged to the extent of being compatible
as observers". That man observes at this given place and
time in cosmological history, where there is a definite
limit to the possibility of life as the sun cools, seems
to impose a biological constraint on the features of the
physical world. Further, a 'strong anthropic principle'
lays claim to the fact that as observers, human existence
is the primary cause of the development of the universe:
"The Universe must be such as to admit the creation of
observers within it at some stage" (Carter 1974, 294).
Hawking (1974) has also shown that human existence is only
possible because the universe is expanding at just above
the critical rate which, in turn, also sustains the
isotropy of the universe itself. If this were not so, then
the universe would either recollapse if it were expanding
too slowly, or would not form bound systems if it were

expanding too fast: "Since we could not observe the
Universe to be different if we were not here, one can say,
in a sense, that the isotrop of the Universe is a
consequence of our existence" (Hawking 1974, 285). That a
joint state between the isotropy of the universe and
observers in it should be the actual case is equally
improbable and is one which eludes normal scientific
explanation.

The 'anthropic principle' does not explain the origin or
the presence of the constants and 'coincidences' which
comprise the fundamental forces of the cosmos, but as
Weinberg (1977, 154-160) notes, it is inconsistent with
the preassumption that the universe arose by chance and
that man is the product of biological evolution. Although
the 'anthropic principle' may have presently brought
questions about the existence and purpose of the universe
and man to the boundaries of scientific investigation and
theoretical knowledge, it emphasises the significance of
man in the history and development of the cosmos, as well
as the shortcomings of 'normal' science to provide an
adequate explanation for these phenomena (see Barrow and
Tipler 1985).

Rees (1981, 273) while asserting that: "... the anthropic
principle cannot provide a scientific explanation of the
universe in the proper sense", reverts to meta-theoretical
assumptions in an attempt to explain the physico-chemical
process which operated in the 'primordial' universe prior
to the 'singularity', and which ultimately made life
possible on earth. Similarly, Crick (1981, 15-20) suggests
that life may have been despatched to Earth by intelligent
beings elsewhere in the universe: this, he called the
theory of "directed panspermia". Hoyle (1979, 1981, 1983)
too makes equally ambiguous scientific assumptions
claiming that life arrived on earth from comets,
meteorites and new stars. Elsewhere, he claims that the
present biochemical structure of human beings was

inherited: "from ... a previous era, from a previously
existing creature ... that was not carbon-based, one that
was permitted by an environment that existed long ago"
(Hoyle and Wickramasinghe 1981, 25).

The parameters of scientific knowledge clearly suggest
that 'normal' channels of explanation for the existence of
man and the earth collapse either into metaphysical
speculation and mysticism or into a meaningless
'nothingness'. This is broadly in agreement with the
limits of philosophical systems of thought. It is,
however, possible that questions of knowledge and
existence demand a personal rather than an impersonal-
time-chance explanation: "... all explanation is reducible
to personal explanation, in the sense that the operation
and causal efficacy of the factors cited in the scientific
explanation is always explicable by the action of a
person" (Swinburne 1979, 201). Similarly, Schaeffer (1972,
94-95) argues that : "... it does not matter how
theoretically unrelated a man in his philosophy is, in
reality ... all men act as though there is a correlation
between the external and the internal world, even if they
have no basis for that correlation".

If the methodological guidelines and epistemological
underpinnings of the cosmological theory are taken to be
representative of some of the most recent and dynamic
ideas in the field of scientific 'inquiry', then a human
geography which adheres to the 'scientific method' should
recognise the conceptual constraints and limitations posed
by the pre-assumptions of this branch of 'normal' science.
Although an 'anthropic principle' has been formulated as
one of several explanations for the existence of man and
the earth (i.e. the spatial environment), this standpoint
is treated with caution and scepticism, if not discredited
by must of the scientific community. A human geography
which moulds itself on the 'scientific method' must
therefore innovate a similar platform where man is removed

from a position of primacy to one among many others
indisciminate entities. Following the impersonal basis of
the scientific method, geographic socio-spatial analyses
are devoid of any ontological formulations for which the
terms of social reality and the scientific epistemology
whose central theme is one of 'chance' variations and
occurrences cannot explain how 'something' evolves from
'nothing', nor why the search for order-in-chaos should be
at all necessary, desirable or possible, nor does it show
how its methodological impasses can be logically
consistent within the philosophical basis of its belief
systems. Man can never know the origins, place or purpose
of his existence, so that in a geographical sense, socio-
spatial relations are at best ambiguous and synthetic, and
more generally, incomprehensible and meaningless.

CONCLUSION: THE INADEQUACY OF THE SCIENTIFIC METHOD

No study of human geography which is based on the
'scientific method' is able to legitimate the authenticity
of its philosophical premises on the bases of social
reality. Any methodology which appeals to logical
positivism for its preassumptions and propositional truth-
claims concerning the inter-action and relationships
between society, space and place, cannot justify a
position of 'value-freedom' where neutrality and
impartiality are necessarily the case of the scientist-as-
observer, and therefore, as a criterion for scientific
'objectivity'. Moreover, the dualism between the notions
of 'subject' and 'object', 'insideness' and 'outsideness'
is reinforced as long as the analyst is unwilling to
surrender the untenable standpoint of having an
'autonomous' scientific status. The geographer, as a
social scientist, is as much dependent upon the same
socio-spatial systems as those which are the focus of his
attention and must therefore consider himself to be an
integral part of that situation. No geographer can truly
claim to occupy an independent horizon from which he might

assert a 'disengaged' scientific view of man and space: he is compelled to adhere to some philosophical, ideological or doctrinal tenet either directly or indirectly.

In a contemporary socio-spatial context, positivism increasingly manifests itself as an instrumentalist philosophy associated with technocratic domination and control. Behaviouralism reinforces this theme insofar that its ontology of socio-spatial reality is one of a 'mindless' universe inhabited by 'mindless' beings. A comprehensive and representative human geography which restricts its epistemological formulations to systems of knowledge in the social sciences alone is likely to inhibit its field of vision and impede the geographer's depth of understanding of social processes and spatial structure. The biological and cosmological considerations of human existence which precede history provide an indispensable backcloth to human self-understanding, the possibilities of human action and the socio-spatial organisation of society. This cannot, however, be adequately explained by the evolutionarly schemata nor by any other scientific approach which bases its methodological inquiry on the impersonal and random treatment of social and environmental phenomena. If holism and purpose are excluded from or rejected by the scientific method, then human geography likewise condemns itself to incertitude through the fragmentary nature and general inadequacy of its terms of reference. The scientific manipulation of society and the spatial environment prescribes a cumulative process of dehumanisation and a disregard for the fundamental inter-relationship between man and land – insofar that care, responsibility, moderation and equitable distributional policies take primacy over repression, power and greed. Ultimately, a human geography which operates on the bases of the 'scientific method' has little prospect of uncovering any profound sense of meaning or of knowing.

PART FOUR: HUMAN GEOGRAPHY AS POLITICAL ECONOMY

GEOGRAPHY, THE STATUS QUO AND RADICALISM

The significance of political economy has largely been
ignored and excluded in geographical education. The
geography curriculum has perpetuated an uncritical
standpoint toward any explanation for the basis of work,
or the way in which the development of capitalism has
structured man and his socio-environment. The geography
curriculum is designed to reflect an unequivocal support
for the political status quo and is itself increasingly
manipulated by consensual bodies in terms of financial
provision and therefore of policy design in what may or
may not be taught. The curriculum does not prescribe a
critical basis for evaluating the merits and shortcomings
of different political philosophies - even in the most
simplistic terms - insofar that this has a bearing on the
geographical distribution of material wealth. The relative
inertia of the geography curriculum for the incorporation
of political literacy in its teaching programme means that
most students are denied any access to any genuine,
unprejudiced political understanding or awareness which
might clarify the attendant ideologies and mechanics that
govern the bases of political and economic systems.

Syllabus design and content in the present geography
curriculum are, in the main, rigid and inflexible and do
not provide scope for any profound, radical interpretation
of the economic, social and political tensions which are
prevalent in the study of human geography. Radicalism in
geographical education is, moreover, unfavourably
interpreted as an outright assault and critique of
advanced capitalist societies which seeks to undermine and
replace them with a form of state socialism akin to the
communist regimes of the Eastern bloc. This is not,
however, necessarily always the case. Although much
radical geography has been equated with Marxism or forms
of anarcho-communism, its exposé can equally be applied to
a critique of a Marxist-based socialism.

While much radical geography has been charged with being
pure ideology posing as science, all systems of social
control may similarly be said to fall into the same
category. If radicalism is made coextensive with the
dynamics of epistemological thought, then its exclusion
from human geography means that change and improvement
become sterile and meaningless concepts unless people
understand how and why revisions need to be implemented.
The failure to accommodate radicalism/revisionism in
geographic inquiry may on the one hand achieve some
measure of passive acceptance for the consensus view of
the ruling order for some, but alternatively invites forms
of social extremism and cultural nihilism for others.
Without radicalism, it is difficult to show how the class
divisions of society are reflected in geography, and the
ways in which these are represented in government
decision-making, or the contradictions and problems which
are contained therein and those which may subsequently
arise therafter.

Notwithstanding, many geographers continue to advocate the
inclusion of basic political concepts such as welfare,
justice and power, even in the secondary curriculum.
Huckle (1983b, 86) remarks that these concepts may reflect
widely different meanings and generate a diversity of
interpretation depending on their context but emphasises
their importance in an attempt to de-ideologize the real
causes of socio-spatial imbalances. A critical review of
the institutional forces which structure society and space
in urban-social studies, development education and
environmental studies appears both essential and
beneficial in geographical education: "It is more
important to develop an understanding of the forces and
mechanisms at work in the world than to describe the great
static configurations ..." (Claval 1978, 165-166).

NEOCLASSICISM AND THE WELFARE APPROACH IN GEOGRAPHY

Human geography as political economy must examine the nature and meaning of work within its full social and historical context (see Cook 1983). There is considerable variation in the social basis for coordinating individual activity in production. The social relationships which constitute a socio-spatial structure may take the form of tribal kinship, a status system based on ownership, a price system with a stratified class society or a socialist system which attempts to remove competition and class division through a centralised or decentralised planning system. Most systems are dominant in one form or another and in such a way that it is difficult for individuals to be socially collectivised so that all things are held in common. Like other disciplines of social science, human geography is also concerned with seeking a method where it may be possible to integrate and equate social, political and economic activity to establish a stable society and equitable distributional networks.

Polonyi (1968, 148-149) provides a useful conceptual framework for the historical background and development of social and economic activity. He essentially distinguishes between systems of 'reciprocity', 'redistribution' and 'market exchange'.

Reciprocity is based on mutual exchange between individuals or groups where the goods in kind are seen to have some quality of value. Fried (1967) terms such societies 'egalitarian', where voluntary cooperation is sustained by social custom as in primitive tribal groups. The measure of reciprocity is not, however, necessarily constant, but may deviate into 'unbalanced' movements (discrimination by those who have certain goods against those who are without) or 'negative' movements (material embezzlement or stealing). Levi-Strauss (1963) defined

'egalitarian' societies as those groups where there is a potent relationship between the individual and nature (the 'sensuous' environment). It encompasses those who are able to evolve systems which are divorced from the social and economic complexities of urban life. The ethos of reciprocity depends on some degree of social homogeneity.

Redistributive economic systems are established on some measure of group centricity. A small ruling elite holds economic authority and dictates the scope of choices made available to society. This elite controls both the means of production and determines social practice by forming political institutions. These societies correspond to forms of feudalism, some of which were suffused with religious beliefs and superstitions. In the case of European feudalism in the Middle Ages, rights to the means of production were either based on property ownership or by some 'moral' condition. Alternatively, the perpetuation of the system could be guaranteed by force. In the case of Tibet, peasant populations unconditionally sustained the ruling monastic elite through fear, magic and mysticism. Where the social structure becomes hierarchically ordered and forms some kind of stratification based on status, prestige, power or restricted knowledge, the geographical network tends also to become increasingly rigid and tightly contained by political controls.

Market exchange systems, as in capitalist societies, attempt to achieve stability and integration by price-fixing markets. It is a highly technocratic mechanism which depends on the division of labour and the geographic specialisation of production to retain control of profits. The market is geared to the concepts of competition and scarcity. This too results in social stratification and generates social and geographical differentials to the material access and accumulation of goods.

According to the Protestant 'work ethic' adopted by

seventeenth century European capitalism, man was supposed
to authenticate the purpose of his existence through the
accumulation of material wealth as a result of his work
and efforts. Much of the justification for the Calvinist
standpoint was selectively derived from the Old Testament
- God rewarded the just and faithful with wealth. The
secularisation of this ideal created an ethical dilemma
insofar that self-interest, the indefinite accumulation of
wealth and the manipulative social power invested in it
could no longer be adequately defined or related to any
scriptural context. Adam Smith's economic
conceptualisation of man served only to reinforce the
Protestant 'work ethic'. Nor did it provide any predictive
insight to the oncoming crisis which would later emerge
from the technocratic organisation of society under
advanced capitalism. Smith did, however, attempt to
establish a theory of value based on the labour cost of
production whereby all economic activity would be
determined by human need based on the concept of a 'just
price'. This must be understood in the context of a pre-
industrial economy when the scarcity of goods retained a
more definite and real meaning. Notwithstanding, Smith's
idealism attempted to uphold a moral prerogative which
might maintain a sense of social justice and
distributional fairness.

The rapid growth in productive output and the level of
technological maturity in industrial societies soon
displaced the notion of an ethical commitment attached to
the value and acquisition of goods. Neoclassical economic
theory shifted the emphasis on value away from labour onto
the 'marginal utility' of goods in relation to supply and
demand. The transition from production to the marketing of
goods introduced a subjective element into economic theory
and practice inasmuch that some measure of 'consumer
preference' (i.e. the ability/willingness to pay for an
item) needed to be gauged by industrialists. The concept
of 'rational economic man' supposedly resolves this

requirement, but is itself a normative index of human economic behaviour to which positive (real) rationalisation is attributed by reference to the 'long-term' (some unspecified future time). The pricing mechanism was accordingly structured to reflect the presupposed long-term costs of production. An increase in production cannot be automatically related to accruements in the general welfare of society since these supposed material benefits are not immediately reflected at the spatial distributive level. A 'welfare' economics not only attempts to identify the general trends of consumer practice from the aggregate of individual preferences, but uses value-empty terms to legitimate an otherwise undefined and illusory subjective measure of 'utility' for goods. There can be no clear indication as to what constitutes individual wellbeing or if resources are allocated in such a way that every individual has access to particular goods or services. The crucial element of subjectivism which is apparent in neoclassical theory is tantamount to economic irrationalism from which the source of distributional and spatial imbalances can be traced.

The positivist paradigm which has dictated the form and style of work in human and economic geography under advanced capitalism is indebted to liberal economic location theory and the behavioural postulates of neoclassical 'rational economic man'. The analytical models devised by positivist methods of geographic inquiry in the sphere of political economy have tended to gain their appeal and scientific endorsement largely because they initially appear to present an empirically relevant case for understanding the structural issues at hand. The positivist pursuit has failed to critically review the imputation of the conceptual basis of its economic theorizing (see Harvey 1973, 153-189). Moreover, it tends to raise nothing more than superficial generalisations about economic activity and human behaviour and provides little scope for tracing the origins and historical

development of social spatial organisation. Its deficient epistemological dictums suggest that "... much current formal theoretical work in economic and urban geography appears to be heading in the wrong direction" (King 1976, 308).

The incredibility of the neoclassical 'rational economic man' concept has also been challenged by Pred (1967) who demonstrated that locational analysis did not conform to economic reality because the machinery which formulates policies and implements decision-making is not sufficiently scrutinized. If the ambiguities of the behavioural economic model are exposed, the economic geographer is either compelled to accept the non-rationality of the theory per se, or substitute its conceptual status by introducing a normative stance. This does little to clarify the epistemological position of a 'rational personality' and continues to suggest that a 'normal' scientific approach provides man with a complete understanding of economic problems, even if he is unable to presently act upon them. Hollis and Nell (1975), however, assert that any concept of 'economic man' is neither a normative model of what ought to happen and nor is it a positive indicator of what actually does happen.

Normative judgments tend to imply that a greater measure of social justice becomes apparent in distributional networks. This postulate demands some consideration of economic 'needs' and 'wants' as social concepts and to what extent these are derived and directed by an artifically created materialism. Harvey (1973, 103) suggests that if market demand is adopted as a socially just measure of need, then it is widely assumed to be socially just, but in practice, this is rarely the case. Public services, for example, are not fairly allocated throughout the class structure (see Smith 1978, 1979). Their provision is largely determined by their cost-benefit advantage and not according to need. Nor have

local and regional governmental reforms and administrative
changes succeeded in creating spatial equality in the
distribution of goods and services. The decentralisation
of economic decision-making is not therefore indicative of
a greater measure of democracy or socio-economic
responsiveness. Rather, political influences create
resource constraints so that the needs and preferences of
poorer working class areas, such as those in the inner
city, are overlooked and become irrelevant. Resources are
accordingly directed away from the inner city poor areas
and attributed to the more affluent peripheral areas.

The geographical mobility of the working class in the
inner city is increasingly constrained by economic
measures which restrict the spatial choice of residence:
they have little hope of improving their social status or
of moving into environmentally superior areas. The
phenomenon of the inner city poor is contained and
perpetuated where political decision-making eclipses
economic concern in such a way that privileges are
maintained only in those areas which are spatially
distinct by their class exclusiveness (see Harvey 1974).
The political and economic status quo of neoclassical
geography reinforces the material quality of life to
control their poverty (see Smith 1971, 156-157).

The situation is further compounded by the diminishing
role of the sovereign state in the contemporary
international geopolitical arena. Efficiency of scale in a
spatial context increasingly implies the loss of political
power at the national level where the emergence of super-
national structures and inter-continental alliances
centralise political and economic activity (see Johnston
1977; Lee 1977a; Harvey 1981). Under this arrangement, the
provision and distribution of public goods and services do
not easily achieve a consensus unless it is presupposed
that individuals are unselfish and participate equally in
their concern for the acquisition of essential resources

(see Miller 1984). In effect, the responsibility for this role is left to quasi-independent corporations and multi-national concerns which frequently pursue their own private interests without accountability to government. These enterprises may dictate wide areas of economic policy so that any expression of welfare or social justice is precluded by the overriding interest of profit margins. Rational choice and distributional equity become ever-elusive so that socio-economic disparities and geographical imbalances are aggravated and become the norm. Economic decision-making of this type remains committed to the concept of sustained economic growth. This serves only to advance the long-term ideal that disparities are gradually being recognised and remedied. The normative is harnessed as the nub of neoclassical economic systems. Hirsch (1976, 190) adds emphasis to the dilemma, remarking that: "Society is in turmoil because the only legitimacy it has is social justice ... The central fact of the modern situation is the need to justify."

All the various social groups in advanced capitalist societies attempt to legitimise their different 'needs' through behavioural attitudes and group preferences. The intervention of political forces may generate wide social economic differentials through class discrimination which are reflected on a variety of geographical levels - local, regional, national and global. History confirms that policies which are supposedly intended to create full employment, sustain market competitiveness and efficient taxation programmes which would prevent disparities and injustices in the accumulation of material wealth, have failed to come to fruition in post-war Western Europe and North America. The problem fundamentally concerns the rigidity of the theoretical underpinnings in neoclassical economics and to what extent any genuine shift in government policy towards a socially 'just' distribution of resources would contradict the ethos of advanced

capitalism. Locational analysis serves as little other than a tool to measure economic profitability rather than a means to redress geographical disparities. The market system in capitalist societies is exploitative and its ends are inconsistent with any notion of social care or distributional equity.

The values embodied in the 'perfect market' situation raise a number of ambiguities. Economic utility (use values) may assume a clear and definite meaning if, for example, it refers to the physical wellbeing and biological survival of individuals. Conversely, the market exchange economy may create superficial use values for goods and services which are not, by definition, essential needs but which are moreover designed to condition tastes and fashions. When individual social actors respond to these use values, consumer lifestyles and the nature of human social relations have a vague and unspecified identity which are manifested at the socio-spatial level, i.e. the identification of affluent and under-privileged areas and regions. Harvey (1973, 160) refers to these use-values as: "... a mix of social needs and requirements, personal idiosyncracies, cultural habits, life-style habits ..." where each individual strives to improve his lot. If 'value' determines use, the commodity allocation may become susceptible to artificial scarcities and speculative pricing systems and ultimately, to deprivation for some. When scarcity is used to generate profit, it has no real validity as an economic concept, but has an immediate impact on geographical distribution patterns and resource controls. The capitalist market economy generates an overwhelming concentration of surplus product. This challenges the concept of scarcity on which the system depends for some of its profit-making. Much of this surplus must be consumed in anti-social ways (e.g. dumping, storage, defence spending) because there is no other alternative.

A revisionist outlook in neoclassical economic theory which raises the concepts of 'welfare' and 'social justice' suggests some measure of social responsibility, care and goodwill. These terms are charged with social ethics, i.e. some adherence to the lawful base of inquiry. Such an ultimatum at once appears practically elusive and idealist: how is it to be conceived, interpreted and applied? Any evaluation of social justice and welfare in terms of the 'common good' or 'merit' may remain dubious criteria for practical assessment and may easily be confused with the terms of neoclassical 'efficiency'. The ethos of the 'welfare approach' in economics and human geography (see Smith 1978) is that limitations on the accumulation of material wealth should be imposed where the interests of one or more individuals significantly outweigh those of another. This formula presumably functions at all societal levels and on every geographical scale.

The welfare concept is preoccupied with the initiation of changes in the redistributive market economy. According to Rawls's (1971) theory of distributive justice, the 'more advantaged' may be persuaded (presumably on humanitarian grounds) to channel a part of their earnings towards improving the lot of the 'least advantaged'. This proposition seems, at best, an untenable form of liberal idealism as it is highly improbable that the rich will relinquish their wealth in sufficient quantities or for any sustained length of time to be of any substantial value to the world's poor.

Welfare geography is not, by definition, a radical alternative to geographical problems. Moreover, its political liberalism provides little or no impetus for any sweeping changes in the exercise of political and economic power in social processes. Nor does it fundamentally abandon the classical aggregate economic growth model of Western capitalism. Smith (1973, 117-118) has attempted to

resolve the uncertainty of the welfare approach by
emphasising its humanitarian content. He refers to "... a
'people geography' ... for the people ..." which upholds
the "... freedom and dignity of the individual ...".
Welfare thinking does not entirely refute the positivist
position in economics and geography, but attempts to
somehow cut across it by fusing it with "... a passionate
concern for the condition of mankind" (Smith 1974, 297).
While welfare policy is committed to the eradication of
injustices and the 'equalisation' of prevailing economic
disparities, it tends also to suggest that ideological
precepts are obstacles to individual freedom, human self-
fulfilment and wellbeing. This standpoint suggests that
any understanding of government policy becomes fragmented,
peripheral and barely meaningful and questions how this
programme can be achieved, controlled, checked and
regulated, and by whom.

The emphasis of the welfare approach is strictly on the
normative and idealistically appeals to the formation of
interpersonal equality, yet has no real terms of reference
with which to discuss the ethical considerations which are
central to its argument. The welfare position is unlikely
to avoid the ideological encounter. Folke (1972, 15),
bas ing his evidence in Scandinavia, maintains that a
liberal-social democrat order does not endorse a welfare
approach: "... they are not interested in equality or
justice, but in profit".

Similarly, O'Riordan's (1976, 1980) environmental-
ecological approach which draws upon liberal humanitarian
traditions does not appear to have made any significant
impact towards policy reorientation and change in
capitalist societies. Bale (1983, 68) adds that unless the
economic and political power structure of multinational
corporations, and the spatial discrimination and social
inequality which their investment policies generate are
discussed, then a welfare geography cannot adequately

explain the problems or advocate changes in developing countries. From a quantitative standpoint, Wallace (1978, 94) highlights the limitations of the Lorenz criteron and expresses strong reservations as to the success of a "... just ordering of economic opportunities over space", owing to the complexities contained in a regional redistribution of factors of production and scale economies. The concept of the 'public welfare optimum' - like that of the 'perfectly competitive market' - is both abstract and fictitious. A 'social welfare' model is strictly a planners' view of society, but is hardly recognised or accepted at the individual societal level (see Chisholm 1971, 123-130).

The dilemma of the liberal 'welfare' approach is in its insistence on the quantitative reshuffling of resources on the spatial level alone, so that the prescription for social ills is hinged on locational adjustments where: "... the geographical problem is to design a form of spatial organisation which maximises the prospects of the least fortunate region" (Harvey 1973, 110). Capitalism, however, is exclusively concerned with the accumulation of material wealth, the maintenance of (class) inequalities and economic competition, so that spatial disparities reflect the organisation of work, and in particular the division of labour which is clearly a social process which in turn generates spatial ramifications: "Inequalities are products of social and economic structures of which capitalism in its many guises is the predominant example... the solution of inequalities must be sought in the restructuring of societies" (Coates, Johnston and Knox 1977, 256-257).

MARXIST THEORY AND ECONOMIC GEOGRAPHY

Marx fundamentally asserted that the capitalist mode of production could not resolve the contradiction between production for need and production for profit. Capitalists

broadly seek to multiply their gain over and over again.
There are seemingly no limits to the accumulation of
material wealth so that any notion of 'equality of
distribution' or 'social justice' are quickly dismissed.
Man becomes a part of the commodity market and the product
of his labour is reduced to monetary equations. His work
and effort are stripped of any personal hallmark so that
under capitalism, work becomes an expolitative and
dehumanising activity. Man is not only alienated from the
product of his labour and from the control over the means
of production, but through the division/specialisation of
labour under capitalism, workers are progressively
socially alienated from each other in the process of
individual cooperation. This effectively fragments and
alienates the individual himself expressed in terms of
loss of purpose, meaning and self-identity.

In his critique of capitalism, Marx shows that capitalism
is not particularly concerned with what it produces nor
with the distributional aspects of its production and
marketing, but rather with the maximisation of profit
which is derived from the sale of goods. Although Marx
equated this universal phenomenon only in its economic
context, he sought to enlighten the proletariat by
emphasising the social and historical significance of
every individual in a manner which he could understand
(see Kolakowski 1978, Vol. 1, 131). For Marx, inequality
and poverty are cumulative ills of the capitalist wage
system which are identifiable in both a social and
geographic context and which are subsequently passed on
from one generation to the next: "... the directing
motive, the end and aim of capitalist production, is to
extract the greatest possible amount of surplus-value, and
consequently to exploit labour-power to the greatest
possible extent" (Marx 1967, Vol. 1, 331). Capitalism pays
labour a sum less than the value of goods produced by the
workers. It attempts to explain its position by asserting
that different types of labour require different levels of

education, technical training and skills so that wages must ultimately reflect income differentials between the various categories of workers. Marx acknowledged the potential within capitalism to achieve 'balanced growth' but refuted this as a practical possibility on account of the structure of social relations which are perpetuated in a capitalist society. The working class have inequality of access to the skill hierarchy and fewer educational opportunities. As capital accumulates, interclass inequalities grow against a background of class struggle and antagonism that emanates from the individual's social conditions of existence. The problems associated with this scenario may be further compounded when new trends in consumption are relayed through the consumer-oriented communications media.

The point of tension, endemic in advanced capitalist societies, arises when overproduction, economic recession, public/welfare sector expenditure cuts and other rationalisation measures are recognised. This is generally coupled with diminishing levels of social and occupational mobility and the debilitation of spatial structures. These indicators pierce the myths of capitalist dogma and explodes the presupposition which allegedly equates increasing productivity with greater rewards and opportunities (see Peet 1977a). Moreover, productivity is necessarily checked, labour is shed as its value stagnates as a commodity while the internal contradictions in the social formation generate distinct areas/regions of geographic inertia. Crises within the capitalist society and the basis upon which Marx establishes his concept of class struggle and revolutionary practice is the transformation of the social and spatial environment.

(i) DIALECTICAL THINKING

Marx needed to transcend and ideally fuse two divergent modes of philosophical thought - that of the philosophy of

consciousness (an ontological idealism) and the new
scientific rationality (a mechanical materialism) - in
order to establish his methodological position. The common
thread in both schools of thought was that man and his
reason were autonomous and that objects (i.e. externals)
should not dominate man. Unlike Kant, Marx's epistemology
does not assume an absolute dichotomy between subject and
object, but intrinsically inter-relates the two. Hegel and
Feuerbach had attempted to uncover the earthly core of
religion thereby reducing it into the human essence. Both
Hegel and Marx agreed that the standpoint of subjectivity
is negative. It lacks any explanatory power or the ability
to shed meaning and understanding about the world. While
'objective reality' is coerced in the subjective
consciousness, this needed to be transcended to restore
real vision about man and his environment. For Hegel,
philosophical romanticism and its emphasis on 'subjective
freedom' was aimless, discordant and self-fragmentary.
Hegel's solution proposed the dialectical tension between
apparent (positive) reality and its negative opposite.
'Truth' is the whole, that is within the 'negation of
negation' in which the 'contradiction' between thesis and
antithesis is resolved at the 'higher' stage of synthesis.

In Hegelian dialectics, the real world is the external
phenomenal form of the process of thinking (i.e. 'the
Idea'). The creation of pure thought which is superimposed
on nature and society presupposes their unreality at the
outset. Hegel's dialectics is a method based on man's
active participation in historical process and his self-
reflective ability to understand this participation. By
recognising the dialectical unity of the 'being-for-
itself' and the 'being-in-itself', the subjective
consciousness surrenders itself to the realisation of
'Absolute Spirit', that is, the final metaphysical
synthesis. Marx rejected Hegel's system of an academic
abstraction with the consequent loss of all objectivity
external to the spirit. Marx substituted the Hegelian

'spirit' by the historical class and its practice so that material reality became the basis for both science and the critique (secularisation) of religion. The ontological basis of the philosophy of consciousness is transformed by Marx into man as the active social being (subject) in practice, but one which becomes historically concrete through his participation in work for his material existence. While Hegel's metaphysical premise effaced man's intellect and excluded questions of matter, Marx rejected the notion of any immanent logos as the embodiment of reason. By conceiving material reality as historically made by men and open to change through their practice, Marx's dialectical materialism interprets man and his 'freedom' in an evolutionary historical context rendering man as an 'object' of 'historical forces'. The existentialist doctrine of the unobjectifiability of human subjectivity is, by implication, rejected (see Pivcevic 1970, 138).

(ii) <u>MARX AND CONSCIOUSNESS</u>

Marx argues that consciousness and knowledge are products of a social situation. Although Marx wanted to eliminate any dualism which divorced consciousness from reality, he simultaneously wished to maintain the independence of consciousness from external being (see Lorrain 1979, 37-38). Marx rejects the notion of the spontaneity of ideas or any form of unconscious thinking which "... proceeds outside the above perception and imagination ..." (Marx 1970, 207). Primarily, Marx claims that consciousness is determined by economic circumstances and cannot, therefore, be independent of man's material conditions. Marx suggested that concepts were the product of the assimilation and transformation of perceptions and images. Conceptualisation thus takes place in a social context against the background of a dominant economic base. Concepts and categories in themselves have no value position attached to them. According to Marx, they have no

existence outside of man, nor can they be teleological or
constitute universal metaphysical 'truths' which have no
definite structural relationship in an historic space-time
context.

For Marx, consciousness is intrinsically a part of basic
human necessity, whose material expression is the need for
man to cooperate with others to satisfy the conditions for
his survival: "Consciousness is, therefore, from the very
beginning a social product, and remains so as long as men
exist at all" (Marx and Engels 1970, 51). All human
thinking and reasoning is relayed through the historical
reality of society so that: "... consciousness can never
be anything else than conscious existence, and the
existence of men is their actual life-process ... Life is
not determined by consciousness but consciousness by life"
(Marx and Engels 1970, 47). Marx also notes that in a
primitive societal context, man's consciousness is
constrained and limited to the immediate social and
natural environment, but in an advanced economy, it is
conditioned by the prevailing set of social relations.
Consciousness is never autonomous, nor can it emancipate
itself from real (material) existence, i.e. the mode of
production: "It is not the consciousness of men that
determines their being, but ... their social being that
determines their consciousness" (Marx 1970a, 181).

Marx attempts to uncover the nature and form of the
internal structure of society and consciousness in terms
of its mode of production. Marx recognises that with the
division of labour - particularly the division between
manual and non-manual labour - consciousness risks
assuming forms of idealism (in which Marx cites 'pure'
theory, theology, philosophy and morality) so that man is
placed in opposition to his material existence. In his
scientific (cognitive) understanding/critique of
capitalism, Marx stresses the primacy of existence over
consciousness so that consciousness is unequivocably

reduced to material terms of reference, thus eluding the falsehood of idealism which reduces existence into particular states of consciousness.

(iii) THE MODE OF PRODUCTION

The guiding principle of Marx's work is centred upon the survival of the social system. To achieve this, men are compelled, independently of their will, to enter into social and productive relationships with one another. The realisation of these relationships constitute the economic structure of society upon which a superstructure can be formed. The concept of the mode of production as the foundation of the structure of society and as its determinant base "is the logical conclusion of a materialistic philosophy (Peet and Lyons 1981, 191). Through this idea, Marx attempts to provide a structural explanation rather than a pre-formed science. This means that as a 'science', Marxist theory seeks to construct and reconstruct sets of theoretical relationships which transforms the structures of the social world. Marxism challenges society to surrender the ways in which it organises its experience and forms it values about the world. Macintyre and Tribe (1975) argue that Marxist theory leads society to think in terms of the world which falsifies the theory rather than the theory which disrupts social relations with the world.

Insofar that the economic base is determinant, Marx's analysis asserts that the general process of social, political, cultural, religious and intellectual inferences are found at the 'lower' superstructural level. Human 'freewill', as such, is not a recognised consideration. Since the economic base conditions superstructural relations, then man is without an inner consciousness as there can be nothing independent of his social and economic existence. Practice is man's specific mode of existence and this, according to Marx, is not the

manifestation of an external determination. The concept of work is man's sole condition of 'freedom' insofar that man satisfies his material needs and 'liberates' himself from environmental constraints. Practice, as conscious activity, is meaningful and purposive.

Marx recognised that in capitalist societies where the division of labour sets up class differentiation, social reality emerges as a contradictory reality on account of the permeation of ideology in consciousness and existence itself. The conditions under which men work are the conditions of the rule of a definite class which maintains contradictory relations with other classes. Given that the division of labour is a result of man's reproductive practice, it is not a consciously intended result. The majority is controlled by those structures imposed by the dominant class and has no apparent means of removing them. The role of ideology is to negate and conceal those contradictions which are sustained in consciousness and in practice. Marx refers to the negation of real contradictions as an inversion of reality. As the capitalist process develops, the antagonism and contradictions which emanate from the individual's social conditions of existence are clarified and may precipitate a crisis (see Marx 1967, Vol. 1; Habermas, 1976; Held 1980).

The overthrow of capitalism and the subsequent elimination of the contradictions and antagonisms perpetuated by ideology in the class struggle can only be realised, according to Marx, through revolutionary practice. This alone has the power of transforming social relations so that labour is no longer contained in relations of domination. Marx, however, rejects the notion that revolutionary practice is contingent on men's freewill, but moreover insists that it is a transformatory practice which is conscious of the determination of circumstances to the extent that productive forces have so permitted.

For Marx, revolutionary practice, as the vehicle toward
the removal of contradictions, is not effected by
theoretical deductions or intellectual critique, "... but
only by the practical overthrow of the actual social
relations which gave rise to this idealistic humbug" (Marx
and Engels 1970, 58-59).

SOME INTERPRETATIONS OF MARX:

(i) ALTHUSSER AND PIAGET

Although Marx has identified and isolated this existence
of real problems in the social relations of production,
his work has tended to generate more unsolved questions
than it has answered. This is particularly the case in
both the theoretical interpretation and the practical
transposition of his theory. Much contemporary debate and
controversy has focused on the dialectical relationship
between base and superstructure and the possible extent to
which this mediation has surpressed the role and
significance of the latter. While Marx insists that the
base guarantees the equilibrium and survival of the social
relations of production, the harmony of superstructural
relations may be equally important for the base to
function smoothly. In Marxist terms, practice mediates
between consciousness and social existence but there is no
clear indication that social existence can be identified
with or made exclusive to the base. Although social
existence cannot be wholly dissociated from the economy,
nor is it unconditionally subservient to the base (see
Kosik 1976).

The ambiguity of the distinction between base and
superstructure was largely initiated by Marx himself
insofar that he arbitrarily switched his terms of
reference from one polarity to the other. Larrain (1979,
64-66) shows that the treatment of the base-superstructure
polarity in isolation from the theory-practice polarity

may compound the issue even further: "... the reduction of one polarity to the other may lead to either a theory of reflection or an idealist theory of interdetermination". Marx broadly recognised that superstructural elements are susceptible to all manner of ideological deviance (i.e. false consciousness) which are manifest in terms of social dogmas that influence/stifle societal change. Notwithstanding, socialism for Marx works best when the superstructure is cleared of any idealism, that is, when the totality of its forms - and the state of consciousness - is supportive, reflective and reducible to its material (base) condition. Concerning the position of scientific knowledge, however, Marx (1973, 699) posits it not only as a force of production (base), but also as belonging to the superstructure as a form of social consciousness. If an orthodox Marxist stance is taken, then particular (or all) forms of knowledge must be excluded from the superstructure. Timpanaro (1974, 17) suggests that if scientific knowledge (objective truths) is made coextensive to the concept of superstructure then it is decimated and becomes "... as relative and subjective a phenomenon as religion or law".

If social survival requires the upholding of a particular economic base, then it follows that all superstructural elements must be made consistent with the mode of production. The economic preservation of a system can only be assured through the social stabilisatiaon of its participatory elements. This role is generally undertaken by the 'state' and appears in some form of instrumentalism.

Jakubowski (1976, 38-59) asserts that some aspects of economic relations are directly conditioned by legal and political elements so that Marx's base-superstructure polarity may be theoretically acceptable for methodological formulations, but is untenable and probably non-existent in practice. In this light, it is difficult

to differentiate/identify which elements of social reality are operative, and to which level they are contained.

Althusser's (1969) interpretation of Marx makes the relationship between base and superstructure as indirect and mediatory "through the various levels of a 'foliated' totality" (Gregory 1978, 110). Althusser's concept of structural causality is rooted in the historical movement of the mode of production in the capitalist system in which he raises the issues of 'contradiction' and '(over) determination'. Althusser shows that during pre-capitalist modes of production, workers had their own independent means of production so that surplus needed to be extracted from them by political (state) or ideological (the church) bodies. In the capitalist mode of production, workers no longer have ownership to the means of production so that surplus is directly obtained through the economic mechanism, i.e. the wage-labour market. In Althusser's concept of social formation under capitalism, the economic level is both determinant and dominant, so that the material, political and ideological conditions of exploitation must be reproduced both inside and outside production. Althusser suggests that the contradiction within the economic base of the structure, that is between the forces and relations of productions, determines the nature of the social formation since it reflects the dominance of a particular instance at any point in time. Contradictions, for Althusser, are cumulative and arise from different instances in the social formation, moving and developing unevenly through time, so that each instance is disproportionate in importance to other instances, yet all are intrinsically part of an interrelated and holistic network. Althusser's structuralism not only establishes a dialectical determination in the relations between the base and superstructure, but attributes a relative autonomy to the latter insofar that theory and practice under capitalism concern the material, legal, political and ideological

forms of the mode of production (Althusser 1978, 19-20).
Furthermore, the concept of revolutionary change from one
social formation to another does not, for Althusser, imply
a definitive radical shift of all instances in the
structural whole. A revolution in the mode of production
does not - as Marx would want it - transform the
superstructural instances, some of which (e.g. trade
unions, the church) are resilient to modification/coersion
and survive relatively intact (see Peet and Lyons 1981,
195).

Althusser's concept of social structure establishes a
dialectical relationship between spatial relations and the
social formation seen as a totality: spatial relations are
structured by the social formation, while the social
formation is itself partly determined by its relations
with the spatial environment in which it is located.
Reality, then is contained within this structured relation
(see Callincos 1976). Althusser's dialectic of the
structured relations between space and society had tended
to intensify and compound understanding and explanation of
human geography as political economy, not least through
his insistence that it is not possible "to think of the
process of development of the different levels of the
whole in the same historical time" (Althusser 1975, 99),
but rather to perceive each instance of the totality in
terms of its own rhythm and temporality. If space also
functions in this manner, then it too becomes disjointed
and fragmented according to shifts within the temporality
of the totality. Following Althusser's framework, Castells
(1977) attempts to uncover spatial structure in terms of
the mode of production whose elements comprise the
economic (base) structure, the politico-legal instance and
the ideological (cultural-symbolic) instance (see
Castells 1977, 126-130; Gregory 1978, 118; Peet and Lyons
1981, 198-199). Castells fundamentally bases his analysis
on the assumption that spatial structure is a secondary
consequence/expression of social structure. This delegates

space a position of relative inertia within which the dynamics of social structure - where the production element is paramount - invest space with significance and meaning. Space provides a means by which it is possible to make geographic differentiations of social and economic characteristics within and between regions.

Under capitalism, it is seemingly unrealistic to review social relations in terms of a spaceless vacuum: the basic structures and contradictions in the mode of production are revealed in the dialectic between social and spatial relations. This assertion, however, raises the question of spatial fetishism so that space is attributed some degree of autonomy. Space may then appear as a unique structure with its own laws of inner transformation (see Harvey 1973, 302-313). The concept of space must necessarily constitute a part of the totality since spatial structure is "also the domain within which - and, in part, through which - class relations are constituted ..." (Gregory 1978, 120). The spatial environment - and perhaps, more importantly, the natural resources contained within it - appears to occupy a relative autonomy but only insofar that man interacts with it in his practice. Man ultimately possesses the power and the means to participate responsibly with his natural (spatial) surroundings or alternatively, to abuse his domination over it. The over-exploitation of natural resources in some regions, or distributional inequalities in the transfer of value from one area to another will be reflected in the structure of (socio-)spatial relations. In this respect, the impoverishment/abuse of the spatial component is not only contingent on the practices of the social structure, but simultaneously, spatial structures emerge as dynamic elements within the totality of structures and relations insofar that space expresses the positive and negative attributes of man's (social) decision-making, i.e. the concepts of determinate social formations.

On this point, Althusser's discussion of structuralism does not convincingly show how conscious human action transforms society and space. Moreover, he imposes a dualism between the role and contribution of science and ideology within the concept of the mode of production. In doing so, Althusser deviates from orthodox Marxist theory through his rejection of the concept of revolutionary practice as the means for transforming existing structures into a different form.

On the one hand, ideology, for Althusser (1969), consists of images, concepts and primarily, structures which unconsciously imposes itself within the conditions of social existence. It is an objective level of social reality, but one which surpasses individual (conscious) subjectivity. Ideology appears as a determinate structural form and provides men with a particular representation of their world, and of their relations to it. Its function in relation to historical materialism is that it ensures the execution of essential forms of practice (work) and makes these tasks more tolerable. Althusser (1975, 66) attempts to defend his interpretation of man's ideological dependence through the insistence of the obtuseness and intransigence of social structure for individuals who are a part of this structure. Man mythicizes the representation of the world and therefore, the conditions of his existence in relation to other men. Ideology, for Althusser (1971, 156), is given and pre-existent to man, yet it is not an ideal concept but one which pervades material existence. Men live ideology by their participation in work. Althusser presents ideology as an ahistorical concept which is unrelated to class contradictions and, by implication, spatial inequalities. While ideology is made a functional requirement of social existence, Althusser is unable to explain its role in maintaining the cohesion of the social totality.

Ideology seemingly coerces and subdues the interests of the dominated classes, proliferates contradictions and cancels the possibility of revolutionary practice; that is, the conception of a non-ideological consciousness by Marx's terms.

Since practice does not afford men the possibility of arriving at true knowledge and a profound understanding of the social or spatial structure, Althusser initiates science as the vehicle on which theoretical practice may be founded. Science becomes the antithesis of ideology and is locked in a permanent struggle against it to emancipate the consciousness of men. Science too, for Althusser, exists beyond historical contingencies, but moreover, it eradicates the need for class struggle in revolutionary practice and in effect, reduces man to a function of instrumentalism. Scientific truth which arrives from without, and which imposes itself by itself "is precisely and nothing less than the a priori of positivism" (Larrain 1979, 197). Althusser's account of structuralism is not one where the result is accomplished in its mediation by human practice, but where science as the embodiment of knowledge teleologically produces knowledge 'by itself'. Science is otherwise elevated to an absurd mythical status above all other contingencies, while man's structures and practice are made subordinate to a quasi-transcendental idealism contained in ideology.

Althusser's reading of ideology nonetheless remains pertinent insofar that under the structuralist tradition in classical Marxism, individual actors do indeed appear to participate in practice, while systematically failing to understand the social and spatial structures in which they are enmeshed and reproduce. The recognition of this aspect of the structuralist problematic has increasingly encouraged a reconsideration of the basic concepts/interpretation of Marxism, that is, towards a greater emphasis of the role of the individual agency (the

human condition, and all this implies and embraces) to discover contradictions and to provide a fresh perspective to review the tensions contained in social existence. The ramifications of such a theoretical reconstruction plainly invites a shift towards methodological individualism in socio-spatial analysis (see Giddens 1984, 1985; Elster 1985). Moreover, in terms of Marxian analysis, it implies a move away from the primacy of the mode of production (determinant base structure) to the totality of the social formation: "... the social formation cannot be resolved into the classical Marxist formula of economic base and its ... superstructures. Legal and political apparatuses and cultural or ideological forms provide the forms in which the conditions of existence of determinate relations of production are secured, but they are not reducible to their effects and they are not organised into definite structural levels which merely reflect the structure of an underlying economic base. This means that political forces and ideological forms cannot be reduced to the expression of 'interests' determined at the level of economic class relations" (Hindhess and Hirst 1977, 57).

The ethos of this methodological reorientation must not be seen in terms of attributing an autonomy to the superstructure, nor as an attempt to establish a specific co-presence in the base-superstructure and of structural causality. It simultaneously challenges the revolutionary schema embodied in Marx's science of history, and particularly the philosophical anthropology and ontology attached to Piaget's (1971) operational structuralism - that man has no determinate nature save the assumption that through his activity, man transforms his environment and therefore, himself. Piaget's position, in short, is broadly in agreement with Althusser's concept of structural causality and has attracted the attention of several geographers (see Harvey 1973; Brookfield 1975; Sayer 1976). Piaget's conceptual ontology of structuralism is strictly couched in bio-genetic evolutionary terms and

fundamentally can only discuss the mechanical
(determinate) shifts in the "relations among [the]
elements" (Piaget 1971, 9), but is unable to account for
the dynamism of the totality (whole). As in all
dialectical equations which deal with societal
transformations (i.e. structural changes in the relations
within and between the elements comprising the whole),
Piaget's schema also encounters the ongoing problems and
confrontations generated by the emergence of new conflict
situations and contradictions in every synthesis. Piaget
(1971, 98) equates structures with 'logical procedures'
and 'natural processes' which fashion and shape the whole.
His social totality is reduced to a logico-mathematical
model in which man constructs/deconstructs, modifies and
transforms his own 'universals'. Piaget fails to
convincingly explicate the 'logic' (dynamism) of the
'natural' process which govern his structuralism, both in
terms of its historical spatio-temporal origins or of its
scientific validation.

The value of Piaget's epistemology in terms of its
application to spatial structures is dubious. From a
Marxist standpoint, it does not provide a bridge between
theory and practice, nor does it expose/explain the
relations between social and spatial structures and
concepts, nor the means for resolving conflicts and
contradictions once and for all. Piaget's model otherwise
smacks of positivism insofar that its theoretical (logico-
mathematical) constructions do not lend themselves to any
verification of the presuppositions and conditions which
might determine the validity of the theory (see Hindess
1977, 161).

(ii) MANNHEIM'S 'SOCIOLOGY OF KNOWLEDGE'

Progress in human geography is seemingly contingent on its
willingness to abandon classical Marxist (structural)
theory to both explain the social relations of production

and also, to gain a clearer insight to the meaning of and relationship between society and the spatial environment. This calls for the unconditional (re-)introduction of human primacy not only in the theory of social and economic practice and its interaction with nature, but equally to uncover the meaning and purpose of individual and collective human social existence against the background of the natural world. This demands a clarification of man's ontological position in terms of socio-spatial reality and will therefore permit and reflect the reasoning through which he constructs his epistemological terms of reference and his methodological presuppositions.

Such modifications must necessarily reject the notion of a causally determinate economic structure and process and removes the concept of work and labour from a position of predominance to explain social existence. Practice - as in a strict economic sense - becomes an inadequate measure as a basis for investigating social and spatial formation, so that its meaning must be reconsidered in a wider perspective Giddens (1985) has remarked that the legacy of socialist, social analysis remains useful insofar that it provides a yardstick for identifying the ills and contradictions in present society, but cannot simultaneously be interpreted as some futuristic, qualitatively superior, utopian idealism. Lefebvre (1977, 349), however, in his 'Politics of Space', can envisage no other alternative and enforces the counter-argument that there can be "... no [new] ideas without a utopia". This form of reasoning (i.e. founded on the epistemological assertions of an underpinning 'optimistic humanism') constitutes an immediate risk to the potential realisation of truth claims and their validity in human geography, and more generally threatens to undermine the development and understanding of social theory.

Any reorientation of geographic thought which seeks to

emphasize the significance of the individual consciousness (subject) of each social actor by the rejection of the terms of reference contained in classical Marxist structural explanation also risks the ideological encounter in the theoretical development of its standpoint. Much concerns the possibility of an objective truth being established within the context of historical social reality. A theory which associates itself with a form of utopian idealism must conclusively show that it has a complete and definitive understanding of truth in order to explain the necessary future direction of policy-making and its social implementation. A utopianism whose claim is the offer of a new (future) perspective of social reality, realisable in practice, is coextensive with an epistemological absolutism based on an understanding of social life which commands the consensus of a universal class view. It must also necessarily transcend the interpretation of specific cultural phenomena.

Mannheim (1968a) argues that when the development of a sociology of knowledge permits the participation of a 'knowing subject' (man), then its methodology (as a social science) cannot interpret cultural phenomena exclusively in terms of the methods employed by the natural sciences. The types of knowledge established by the physical sciences, Mannheim contends, are derived from immanent/logico-mathematical laws, whereas the social determination of cultural objects requires an interpretation which "involves the location of cultural products within a totality of which they constitute meaningful parts" (Larrain 1979, 101). Conversely, in the social sciences, the determination of the genesis of knowledge, its content, scope and validity demands the recognition of existential reasoning (Mannheim 1972, 240). Further, Mannheim qualifies his position insofar that the realisation of qualitative truths in a sociology of knowledge cannot be achieved "except in the framework of an existential correlation between subject and object"

(Mannheim 1968b, 194), and again that "social relations
and processes comprising the prevailing pattern of social
life are determinants of the mental life corresponding to
that particular social structure" (Mannheim 1968b, 192).

Mannheim's position - derivative from both the work of
Marx and of German historicism - is further compounded by
the interpretation/relationship of the cultural products
(elements) within a social totality (whole), since he is
seemingly unable to specifically isolate the meaning of
'totality' (see Mannheim 1968a, 73) and cannot therefore
precisely say what categories are contained in it (see
also Jay 1985, who encounters an identical impasse in his
Marxian outline of the concept of 'totality'). Mannheim
precludes the existence of eternal truths in the
relationship between social thought and social structure
so that his basic presupposition towards an understanding
of the totality and its parts (and presumably then to an
ontology of social reality) is a position of autonomy for
the role of the 'subjective knower' (man). Insofar that
Mannheim's analysis of social reality admits to the
theoretical reconstruction of the particulars to uncover
the mode of the totality, his procedure is akin to the
inductive methodological approach (positivist) deployed by
the natural sciences. Yet, the existential input in
Mannheim's conceptual framework must cede to the existence
of irrational aspects in the totality and its parts which
are not reducible to 'normal' scientific analysis.

In order to 'universalize' all the categories within his
terms of reference, Mannheim (1968c, 289) disengages from
the tenets of classical Marxism by dissociating knowledge
and conscious reflection from the economic interests of a
class: "We cannot relate an intellectual standpoint
directly to a social class ..." (Mannheim 1968d, 184). In
effect, Mannheim's 'existentially-determined' field of
knowledge relativizes all disciplines of social science.
This does not, however, provide a clearer insight and

understanding about the sociology of knowledge, nor of the truth-claims pertaining to the reality of social structures and nor, by implication, to spatial structures as composite parts of the totality. Moreover, Mannheim's attempt to reconstruct the theoretical foundation of the sociology of knowledge is rendered increasingly problematic by the imperative to establish a correspondence between the intrinsic (immanent) meaning of thought and the extrinsic (functional) meaning of its interpretation in social practice (i.e. to ground the meaning of the relationship between the transcendent and empirical reality). Mannheim (1971) introduces a dichotomy between ideological and 'sociological' interpretation in the structure of human thought. Unlike Marx, Mannheim does not attribute an ideological interpretation to the historical evolution of social contradictions and modes of production, but fixes it as a condition and expression of the social determination of a social group and its struggle against other (competing) forms of thought. The extrinsic manifestation of ideology arises therefore when individuals participate in a common social and historical process whose constraints and limitations restrict the potential experience and shape the mode of thought of those individuals (Mannheim 1968c, 291). The sociological interpretation becomes a 'relational' concept insofar that it attaches a functional meaning to the intrinsic (idea) meaning of a thought and therefore liberates it from the snares of ideology by locating it to a wider social context (i.e. to 'objective truth'). Conversely, the perpetuation of (different forms of) ideology is the result of the competition among social groups for supremacy which have generated different interpretations of truth and social reality. Ultimately, there are now fewer but more dominant world-views (Mannheim 1968b, 198-210).

Mannheim (1971, 124) does not, hoever, convincingly explain how the intrinsic truth of a thought is transposed

intact by its functional interpretation, thus evading the ideological sphere: "... extrinsic interpretation, while relativizing 'immanent meaning' by functionalising it, at the same time bestows a new sense on it, precisely by incorporating it into a higher context of meaning." It remains that the validity of any truth-claim of an idea is highly subjective insofar that Mannheim's 'existentially-determined' approach becomes atheoretical by confining ideology to its extrinsic meaning and divorcing it from the intrinsic meaning of thought. Mannheim's (1972, 255) concept of 'particularization' (i.e. the limitation of the scope and extent of the truth-claim of an idea) renders the notion of relationism as neither entirely meaningless and false, nor absolute. Truth "cannot be formulated absolutely, but only in terms of the perspective of a given situation" (Mannheim 1972, 254). Mannheim thus tends to relativise the validity of truth-claims in his reading of the totality of society science, except insofar that the expression of ideology reflects the style of thought or outlook of the world held by particular social groups at particular instances in history.

Mannheim does not, however, invite a critical examination of the truth content of 'social determination' (i.e. the interests, aspirations and characteristics of the social groups in which he posits the content of his analysis) so that falsehood or dogma can only be understood "in relation to the truth or untruth of what it refers to" (Adorno 1973, 197). Ideology and truth are intrinsically connected one with the other, yet Mannheim - while acknowledging the ideal of absolute truth - refutes the possibility in practice of anything but partial truths, none of which can ever reveal the complete reality of the social totality. Equally, structures based on partiality cannot be mediated - dialectically or otherwise - towards the achievement of a definitive and permanent synthesis between socially differentiated and polarized categories of thought. Mannheim broadly sets ideological distortion

and utopian thought in opposition to one another. Neither can be decisive or total. While ideology "fails to take account of the new realities applying to a situation ... conceal[ing] them by thinking of them in categories which are inappropriate" (Mannheim 1972, 87), utopian distortions are "... those orientations transcending reality ... which, when they pass over into conduct, tend to shatter, either partially or wholly, the order of things prevailing at the time" (Mannheim 1972, 173). Thus, ideology reinformces the social reality of those who believe that their interests are represented in the present, while utopian (transformatory) standpoints represent a tendency in practice to destroy the social unreliaty/outdatedness of a prevalent ideology (i.e. the status quo).

Mannheim (1972, 183-184) further distinguishes between 'absolute utopias' (non-realizable) and 'relative utopias' (whose potential realisation is checked by the ideological strength of an existent social order). Yet, in the case of 'relative utopias' which have come to fruition, many have, in retrospect, been suffused with ideology insofar that their social realization has imposed new unfreedoms concealed in the fabric of their social reality.

Mannheim suggests that Marxist (socialist) thought and those social orders organised under capitalism represent the only two kinds of absolute utopian expression which is reflected in their perspectives of totality. This, for Mannheim (1972, 225) is a self-defeating position which is unable to sustain itself and whose false idealism will ultimately be superceded by the realisation and acceptance of the limitations of particular standpoints which are held by particular social formations. The limitations/partiality of the validity of truth claims does not, for Mannheim, obscure the accessibility/reality of the social totality, but moreover, the recognition of 'existentially-determined' knowledge contributes to the

ongoing process of assimilation and transcendency in the
"historical succession of thought styles" (Mannheim 1972,
135-136).

Although Mannheim's position is clearly a transgression of
Marxist structuralism, if not, expressively 'counter-
revolutionary' in its theoretical content, it nevertheless
recalls the epistemological debate into the arena of the
'world-view' rather than restricting it to a specific
class context. The most significant aspect of Mannheim's
study for human geography is the reinstatement of the
individual agency in the explanation of social and spatial
formation and the extent to which ideology consciously
deceives the 'knowing subject'. Whereas Marx restricted
the scope of ideology as a distorted knowledge (false
consciousness) imposed on the working class by a dominant
elite to conceal contradictions and maintain the political
status quo, Mannheim begins by universalizing ideology in
all given historical social situations so that it becomes
psychologised. In time, ideology progressively assumes a
specific instrumentalist character and can be equated with
the representation of the conscious deceipt and illusions
of political parties and group interests. The partiality
of truth and error in Mannheim's schema suggests that his
interpretation of ideology contains little meaning and
inhibits any possibility of epistemological certitude
about socio-spatial phenomena. Marx, conversely, rejected
the proposition of ideology as the universal determination
of knowledge and did not consider his theory to be
coexistent with ideology. Marx, on the one hand, professes
the potential realisation of holistic social formations
(truth), while Mannheim's rejection of the possibility of
an exhaustive (absolute) truth suggests that the
perspective of the thinker has somehow become
existentially estranged from meaning, purpose and reality.

Mannheim's version of social formations is therefore one
of different shades of idealism as men seek to assimilate

different points of view. The relativisation of all propositironal truth-claims and categories of thought places human geography in a position of hopelessness where nothing - save partial truths - can be known. The partiality of all standpoints collapses the possibility of totality, objectivity and truth into a universal spirit of scepticism. The relationship between social process and spatial structure remains essentially obscure. Value-freedom and suppositionless modes of thought will constitute the terms of social reality so that any representation/explication of socio-spatial phenomena through praxis is reduced to pragmatism. Moreover, the likelihood of any universal laws which might determine historical development must be dismissed since no absolute truth can ever be uncovered. Human geography - by this measure - is cast into the mould of Feyerabend's principle of 'anything goes' so that the outcome of all social and spatial structures can only be understood as products of 'blind chance'.

POST-STRUCTURALISM, NEO-MARXIST THEORY AND BEYOND:

(i) THE HERMENEUTIC ENCOUNTER IN HUMAN GEOGRAPHY

The hermeneutic schools of thought broadly call for a reconstruction of the theoretical foundations of social theory which in turn, might clarify the formation of social and spatial structure. All philosophical reflection is bound in a conflict of interpretations and because there is no agreement on a general hermeneutics, social scientists cannot speak of universals, but only of theories dealing with the possible avenues towards such a hermeneutics: "The hermeneutic field ... is internally at variance with itself" (Ricoeur 1970, 26-27). Of the two main categories are 'restorative' hermeneutics and the 'hermeneutics of suspicion' (see Ricoeur 1981, 6). The former seek to restore meaning by (empathetically) reconstructing the past (messages) and transposing it into

an understanding of the present: "The true histories of the past uncover the buried potentialities of the present" (Ricoeur 1981, 295). The latter standpoint adopts a critical scepticism towards the given and categorically rejects the interplay of metaphysics (the symbol) and mysticism (the sacred) in human experience. Rather, the 'hermeneutics of suspicion' regard the truth claims of the contents of consciousness as dubious, if not 'false' and seek to transcend this falsity through a reductive interpretation and critique.

Post-structuralism addresses itself to an examination of contemporary social and political issues where history continues to motivate the nature and development of the underpinning philosophy and the style of social analysis. The emphasis is focused upon a reappraisal of the terms of reference on which rationality, reason, social reality and truth might be discussed. Post-structuralism attempts to identify those forces which inhibit radical change and which therefore prevent the realisation of an 'emancipatory' route towards justice and freedom, and particularly those social institutions connected to the state. Although post-structuralism follows Marx insofar that it exposes the mechanics of the social and economic ills generated by advanced capitalism, it does not confine the possibilities of rationality and truth to specific class interests. While Marx contended that no claim to objectivity and truth could be separated from the practices of a particular social class (the proletariat), Lukacs (1971, 204) challenged the orthodoxy of this standpoint by drawing attention to Marx's failure to recognise the role of human subjectivity and individual consciousness in the determination of (objective) social practice: "(The consciousness of the proletariat is) by no means the invention of the proletariat, nor was it 'created' out of void". Lukacs effectively subordinated the historical practice of the class to the conditions and limitations of consciousness. Following Dilthey and Hegel,

Lukacs (1971, 262) attributes consciousness a certain reflexive autonomy so that the 'subject (consciousness)- object (practice)' equation - as the basis for the revelation of the social totality - becomes redefined: "... the strength of every society is in the last resort a spiritual strength. And from this we can only be liberated by knowledge."

An equally important problem encountered by post-structuralism concerns the seemingly inseparable relationship between science and ideology. As with Marx, post-structuralism reaffirms the disregard of history as the main source of ideological distortions, and therefore seeks a critique of ideology towards the development of a non-authoritarian/non-bureaucratic system of organisation. Notwithstanding, the 'determinist' and 'positivist' bias on the (Marxist) interpretation of historical materialism and its restricted methodology limited to the practices of a social class, renders the post-structuralist standpoint to reject most contemporary forms of socialism: "Soviet Marxism, with its dictatorship of the 'political, economic and military bureaucracy', is not equated with a programme for genuine socialist development" (Held 1980, 48).

KNOWLEDGE AND KNOWING

If the aim of the historical-hermeneutic sciences is to clarify meaning, then "geography will have to dismantle the oppositions between subject and object, actor and observer, and emphasize the mediations between different frames of reference" (Gregory 1978, 146). A purely subjective meaning of places risks locking geography into a narrow private assessment of personal experience which has little or no application to a general understanding of real social and spatial structures. Knowledge is an historical and anthropological constant in the constitution of social life, and therefore, of human existence. Societal reproduction cannot simply be reduced

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to its material reproduction expression, but is always
cultural: social groups of all types depend on and are
mediated by knowledge. Stehr and Böhme (1986) refer to
contemporary society as a 'knowledge society' within which
all its spheres of activity are penetrated by scientific
knowledge. It therefore follows that a scientific human
geography must provide the bases for explaining and
understanding the dynamics responsible for hierarchies and
stratification, social class differentials, distributional
imbalances and the measure of political influence
contained therein, the meaning of individual and
collective socio-spatial cohesion and intergration.

The immediate pitfall associated with these issues tends
towards the idealistic forms of interpretation which the
position invites. A purely objective positivist stance
collapses the question of meaning into an impersonal
dimension which masks the interplay of conscious human
activity in the formation of social and spatial
structures. This cannot constitute the basis for a
complete scientific human geography. Moreover, the
relationship between 'systems of ideas' and concrete
socio-spatial structures raises a philosophical dilemma.
Kant fundamentally initiated a division in the unity of
knowledge by his distinction between 'phenomenon' (the
natural world) and 'noumenon' (the abstract world of
thought/spirit). While the former is governed by causal
laws of explanation, the latter is indeterminate and
requires other ways of understanding. Heidegger (1962a)
relayed the impact of Kant's thesis insofar that human
imagination and the temporal nature of existence provided
the only legitimate forum for examining the meaning and
purpose of authentic being. For Heidegger, philosophy,
rather than science, expresses the struggles, truths and
deceipts (contradictions) of being-in-the-world.

Husserlian phenomenology, with its insistence on the
transcendental 'epoche' refutes the claim that historical

reflection can provide universals in the scientific understanding of society. Husserl's rejection of an empirical methodology in the social sciences casts his philosophical standpoint into one of over-subjectivity and cannot constitute the basis for a hermeneutic framework. Dilthey rejected any attempt to introduce metaphysical speculation in the corpus of historico-societal reality: the introspective notion of 'inner experience' was replaced by the concept of "structural relations in a psychic nexus" (Rose 1981, 108). Dilthey needed to transpose the subjective content of being into objective reality without recourse to metaphysical inferences. The description and analysis of the 'psychic structure' would, Dilthey maintained, reveal an epistemological basis for human science. This presupposes a 'reflective experience' within the psychic nexus which is then able to make 'inner experience' the object of legitimate inquiry. In this way, an understanding of the 'life expressions' (concepts, judgements, human actions and affective expressions) of the intersubjective (social) world could be reached.

Although Dilthey recognised that the 'psychic' and the 'natural' are distinctly separate, the mediation of experience intrinsically cuts across and links subject and object. Experience therefore dictates the function and relation in the meaning of the parts from which an understanding of the whole of experience is derived.

Dilthey's hermeneutic approach is, nonetheless, problematic. The emphasis on 'lived experience' is unreliable insofar that Dilthey's system is grounded in the autonomy of man as the basis for all knowledge and understanding. Man creates his own fundamentals but has no certain point of fixed reference from which he can verify the authenticity of the particulars (meanings) which constitute the whole. The nature of human experience remains highly subjective and cannot be made coextensive with rational scientific analysis on the presupposition

that 'historical reflection' generates an 'empirical consciousness'. All understanding hinges on man's critical reflective judgement of historical experience. This standpoint is further restricted by the interpreter's specific cultural identity and by ideology (see Gibson 1978, 139). An understanding and explanation of socio-spatial structures through historical time and events remain rooted in human ideas and belief systems, but evade the question of any universal ethical determinates: "... the geographer's purpose is to understand man's experience; not primarily to judge what is lawful" (Lukermann 1964, 172).

Weber's study of social structures suggests that 'objectivity' had to be reduced to the terms of individual behaviour and then produce grounds on which some empirical validation could be made. Weber's concept of 'rationalisation' is an attempt to uncover the 'irrational' motivations which inspire human action, and to then attribute them a scientific understanding. Weber rejected Kant's standpoint of 'pure reason' and constructed an 'ideal type' of rationalisation in order to mediate between the subject-object dichotomy. Although Weber particularly wished to uncover the inspirational source of the irratironal actions/emotions which might explain the inhumanity of industrial capitalism, he rejected the Hegelian reductionist approach. Rather, the 'putting of one's self in the place of the actor' to understand (past) intentions and actions still did not explain the nature and source of meaning. Nor could any measure of 'ideal' mediation through empathetic participation be an adequate vehicle for the objectivisation of subjective meaning. Religious and artistic experiences, as well as particular psychological states of mind (anger, ambition, pride, greed, loyalty, and so on) are difficult - if not impossible - to exteriorize in communicative form. Weber's principle of 'causally adequate interpretation' for a sequence of

events, on which the probability of one action being linked with another by statistical analysis, hardly touched the subject-object dichotomy.

On the other hand, Weber is attempting to clarify the role of freedom-of-choice in human intentions/activity, but he also seeks a value-free position for an a priori scientific methodology. This is tantamount to a philosophy of opposition which Weber fails to resolve: no (scientific) observer can be loyal to all interested parties: no scientist will theorize or accept a standpoint (value) in which he expresses little or no belief (see Bernstein 1976, 166-167; Gregory 1978, 145). Weber's obscure methodology does not make a convincing case for hermeneutic inquiry in the social sciences.

It becomes apparent that a hermeneutic approach to socio-spatial structures has largely been inhibited by the rigidity of competing paradigms in human geography. Much of the dilemma is an attempt to encourage any one particular 'concensus' of geographers to critically review their respective position and say what their paradigm 'is not'. This suggests the possibility of paradigm mediation where one or more philosophical standpoints may be theoretically fused with another (competing) paradigm in an attempt to formulate fresh epistemological perspectives and innovatory methodological procedures. Schutz (1967) argues that there can be no criteria for objectivity in the behaviour of individual social actors unless there is some consensus for subjective meaning. Although Schutz - like Weber - sought the empirical validation of his concept of the 'life-world', he needed to integrate a phenomenological input in his hypothesis to represent the problem of (subjective) meaning, and accordingly turned to Husserl. Hindess (1977, 57-58), however, notes that Schutz failed to show how a reflexive category could be integrated within a scientific (positivist) framework. Conversely, to abandon a rational (positivist) standpoint

towards a postulation that all life is Geist is tantamount to suggesting that 'Being' (existence) expresses itself most completely in art, philosophy and religion rather than materialism (practice).

Gadamer's route towards the realisation of a complete hermeneutics is to sever the 'romanticism' contained in the historical consciousness. Unlike the 'objective' methodology of the natural sciences, man cannot truly 'take a distance' in historical events because he is always situated in history. A person's own recalled past experiences are reflected upon in an attitude of wholesomeness by his consciousness. This ought to permit the conditions for "placing ourselves" in the context of a particular historical situation (Gadamer 1975, 271). For Gadamer, it is the primacy of 'judgement' in man's thinking and behaviour towards the social world which releases the potential of the hermeneutic standpoint. Thus, the 'authority' of social actors is based less on 'reason', more on the 'acceptance' and 'reception' that their 'judgement' and insight are 'superior' (Gadamer 1975, 248). Gadamer therefore attempts to place claims to (historical) truth in the concrete setting within which they are first experienced. The revelatory path to understanding and truth is encountered in pre-theoretical experience rather than in the objective (outside) sphere of scientific reason.

Gadamer contends that only a radical ontological unheaval – set within the parameters of temporality and the finitude of existence – can produce the epistemological and methodological clarity which, as yet, obscures the true historical dimension of man (i.e. understanding). Gadamer's hermeneutics provides no transcendental grounding for human experience. Rather, it is a 'metaphysics of finitude' not unlike Heidegger's terms for Dasein's 'potentiality-for-being-a-whole'. The conditions of truth and understanding are, according to Gadamer

(1985), to be found in the finitude of historical
dialogue. Put otherwise, existence can be understood in
language which becomes a possibility - condition of truth.
Any consensus over the interpretation of language
necessitates a structure of presuppositions which are
bound in cultural tradition. It therefore follows that
Gadamer's hermeneutics require a prejudgement structure
for the interpretation/understanding of meaning to which
all cultures have access.

In terms of its relevance to socio-spatial understanding
and explanation in human geography, the historical-
hermeneutic approach neither dismantles nor resolves the
tensions and oppositions between subject and object. The
hermeneutic sciences maintain that human thoughts and
actions - and therefore, the basis for meaning - are
grounded in rationality. Guelke (1981, 140), in his
idealist interpretation of geography, maintains that:
"Once a geographer has been able to demonstrate a rational
connection between the geographical behaviour of a group
and its thought ... he has succeeded in providing an
explanation of their behaviour. This explanation does not
rest directly on laws or theories", Guelke (1974, 202;
1981, 141) claims that the causality of human behaviour in
specific social, economic and political contexts defines
the conditions for rationality. On the one hand, Guelke
(1974, 193) wishes to represent the terms of rationality
as purposeful, observable specific acts that enable "a
method by which one can rethink the thought of those whose
actions he seeks to explain". Conversely, Guelke (1981,
136) concedes that "meanings will vary in relation to the
ideas and backgrounds of those who might be concerned
about then", so that "different interpretations can often
survive quite happily because of the lack of data and the
difficulties in precisely inferring an agent's intentions"
(Guelke 1974, 202).

An idealist interpretation for human action and meaning

collapses at this point because there can be no consensus/understanding or rationality since its bases can neither be subjectively defined nor objectively verified. It cannot be presupposed that there is any rational connection between what people do and think. Geographical behaviour - insofar that it refers to the ways in which man exploits environmental resources and builds socio-spatial structures in which distributional networks function - does not always reflect rational strategies. Moreover, geographical activity is frequently motivated on a non-rational basis. This does little to reinforce Gadamer's (1975, 262) claim that the task of hermeneutics is to "clarify the conditions in which understanding can take place". Rather, it emphasizes the shortcomings of a social science whose hermeneutical methodology is restricted to the terms of conscious meaning, while omitting the deeper, unconscious content of knowledge from the problems of existence.

The major pitfall in the hermeneutic approach to human geography is found in its methodological introspection, expressed in its detraction from value judgements, for which it lacks any adequate terms of reference. While Giddens' (1976, 1979, 1984) 'concept of structuration' attributes greater importance to the role of individual actors in the transformation of structures, he maintains that 'social forces' may only be interpreted as the configuration of intended or unintended consequences of action undertaken in specifiable contexts. Nor does Giddens claim that these necessarily constitute a rational basis for moral or political judgement. Moreover, Giddens (1985) view of historical objectivity/change seemingly posits social actors in conjunctures of causal processes over which they have little or no influence (see Bhaskar 1975). This suggests that although social actors produce and transform social and spatial structures, the absence of a universal axiom which might provide the norms for

social behaviour imposes limitations on human understanding and explanatory ability.

Insofar that theories of unintended consequences permit the process of social and political life to be explained in an 'objective' and structural manner without clear recourse to the intentions and purposes of the social actors participating in these processes, the essence and appearance of the social and historical totality may be covertly promulgated as ideology (see Minogue 1985). The dilemma of dehumanized man - whose actions and epistemological terms of reference are couched in a concept of 'autonomous freedom' - reflects his loss of meaning and purpose which the historical-hermeneutic sciences have failed to recover. Theories of 'reconstructive' sciences cannot hope to be 'pure' or ideologically 'emancipated'. Ideology permeates through every level of thinking and social explanation on the basis of the hermeneutic mode of inquiry (see Hesse 1982, 115). The real impoverishment of the human condition remains concealed behind the theoretical facade of value-freedom. The historical-hermeneutic position cannot provide a 'logical sequence' of thought in human intentionality, nor a rational belief for discussing human actions. Moreover, the defining features of individual human existence are unlikely to be found in human praxis, thus confirming the failure of hermeneutics "to elucidate, to bring into our consciousness, the constitution of irredeemably practical structures " (Gregory 1978, 146).

The preclusion of a moral imperative in human thinking and behaviour immediately fragments any understanding and explanation of socio-spatial process and structure. Theories and concepts of historical change and objectivity do not unequivocally clarify fundamental problems relating to epistemological and existential uncertainty. Rather, they direct attention to the need to grasp the factors which bring about man's state of being and which

precondition and set limits on the possibilities of historical change. To these ends, Guelke (1975, 138) suggests that an understanding of human behaviour is ultimately beyond the scope of human geography alone, and that geographers "need to rethink not their techniques but their philosophy". Conversely, for Blowers (1972, 291) the prerequisite "is that the values upon which research is based are made explicit [so that] we may unmask the false objectivity that covers much of our research and confuses our interpretation of findings".

Perhaps the most daunting postulation to emerge from the historical-hermeneutic sciences is that historical knowledge is intrinsically tied to the historical condition in which human existence is contained. On this basis, a science free from prejudice is impossible. Moreover, "the privileged experience ... is no longer the history of the historians, but rather the history of the question of the meaning of being in Western metaphysics. So it seems that the hermeneutic situation within which the interpretation unfolds ... is provided by the history of metaphysics" (Ricoeur 1981, 69-70).

(ii) CRITICAL THEORY: 1. THE FRANKFURT SCHOOL

The 'Frankfurt School' and the 'critical theory of society' which it expounds has an important bearing on the nature and interpretation of socio-spatial structures in human geography. As a school of neo-Marxist thought, critical theory attempts to draw attention to the reasonableness of means and ends in scientific procedure, and particularly those designs and processes which are associated with the technocratic state under advanced capitalism. Critical theory questions the rationality of state decision-making and human praxis when it is governed from the standpoint of instrumental reason. It suggests that the scientific manipulation of social processes has subjectivized the meaning and understanding of reason to

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reinforce the political and economic interests of the
technocratic elite. The practical translation of this
dominance is the distortion of social reality which, in
turn, reflects the instability and contrived nature of
spatial structures.

Like Marx, critical theorists are concerned with the
problem of social domination and the possible routes by
which individuals might be emancipated from the rigidity
of their present structures. While critical theorists also
maintained the historicity of knowledge, they diverged
from orthodox Marxism through their insistence that claims
to objective reason and truth were not dependent on the
practices and interests of a particular social class.
Following Lukacs, critical theorists reiterated the
underscoring of human subjectivity and consciousness as
the fundamental shortcoming in Marx's understanding and
interpretation of human praxis. Rather, critical theorists
sought "the possibility of an independent moment of
criticism" (Held 1980, 15). The early work of the
Frankfurt School in the 1930s - especially that of
Horkheimer, Adorno and Marcuse - was focused on the
development of a critique of ideology which would expose
those beliefs which conceal and distort social reality,
particulary those aspects of 'false consciousness' and
social contradictions perpetuated by social systems of
organisation. Horkheimer and Adorno (1972, 26-28) claim
that technological reason in industrial society compels
people to conform, comply and participate in society in
the (self)interest of survival. This is synonymous with a
pragmatic acceptance of existing institutions in the state
machinery and the adoption of its false consciousness
(ideology). People do not understand the reality they
experience. The conservative ideology, within which and
from which socialization processes are contained and
disseminated, is otherwise unrepresentative of individual,
privatistic reality and moreover imposes deviance and lack
of consensus in meaning and understanding.

The critique of ideology propounded by the Frankfurt School drew upon an interdisciplinary research programme whose theoretical rubric accommodated political, economic and cultural phenomena together with psychoanalysis, from which it was intended to reveal social antagonisms at the level of the individual actor. The sense of critique necessitated the subjection of all spheres of life to new ways of (radical) reassessment. Horkheimer and Adorno did not envisage any impending transformation of capitalism but thought that through a critique of ideology, a conscious awareness of its systematic mechanics could be enhanced, precipitating a possible challenge and undermining of the existing dominant structures: "The Frankfurt School's criticisms of contemporary culture, authoritarianism, bureaucracy and so on were intended to help foster independent thinking and the struggle for emancipation" (Held 1980, 363).

Although Lukacs based his account of historical materialism in terms of class and class conflict - 'the standpoint and struggle of the proletariat' - his concept of 'reification' enabled critical theory to gain impetus. Horkheimer and Adorno recognised that by the terms of scientific reason, reification reduces social relations to an impersonal, objective level. The onus is squarely upon the productive processes which diminish the worker and his product to the appearance of commodities. Under scientific technocracy, men on the one hand believe that social and technical processes create conditions of freedom from the constraints of nature which promise new, superior structures; yet, in reality, its 'enlightenment' is totalitarian and enslaving. The appearance of structures is the outcome of illusion so that subjective rationality becomes the subjection of all reality to logical formalism. The reification of the industrial world is "the central structural problem of capitalist society in all its aspects" (Lukacs 1971, 83). A critical analysis of the nature and impact of reification contains, for Horkheimer

and Adorno, the means for apprehending the "relative irrationality of the total process " (Lukacs 1971, 102) as well as the possibility for establishing some truth-claim about the reality of the social whole.

Critical theory is concerned with the relationship between structure and social practices, but largely disconnects this examination from any particular class interest. The analysis of social phenomena provides the ground where the mediation of the objective and subjective is apparent. Much of critical theory is focused on capitalism as a specific historical form and that social practices tied to its material conditions are unreasonable insofar that they reflect only one facet of conscious existence. Although critical theory follows the traditions of Kant and Hegel, it rejects those aspects which resort to forms of transcendental methodology and idealism. This stance also outlaws the position of phenomenlogical and existentialist philosophies. A positivist understanding of science is equally dismissed on account of its autonomy and detachment from meaning and purpose in the social world. Orthodox Marxism and dialectical materialism can neither provide a basis for the reality of process and structure - critical theory rejects the primacy of determinate economic laws which futuristically move society and space towards some ideal state of existence in history: "The acknowledgement that Marxism in its Stalinist manifestation became a repressive ideology - thereby confirming that as a body of ideas it is not the sole key to truth - constitutes one of the crucial premises of critical theory" (Held 1980, 359). Moreover, the 'critical activity' which emerges from the social structure is essentially related to the nature of the social totality so that the concept of the (capitalist) mode of production is central to critical theory, but with the proviso that critical theorists "interpret the economic categories of work, value and productivity exactly as they are interpreted in the existing order, and ... regard any

other interpretation as pure idealism" (Horkheimer 1972, 206).

The fundamental shortcoming of critical theory in the Frankfurt School is in its admission over the difficulty and extent to which individual social actors might be 'enlightened', and therefore, the degree to which subjects would actively participate in a struggle against existing structures. Bernstein (1976, 184) contends that the Frankfurt School lacks a convincing argument to show how conflicts and contradictions in traditional theory are eclipsed by the 'better judgement' of hermeneutics and linguistics. The nature, and the means of addressing the concerns of the 'emancipatory' potential are largely underplayed by Horkheimer and Adorno. To this extent, the Frankfurt School - with the notable exception of Marcuse's work fails to prescribe the conditions for an active radical political economy or social and spatial organisation. Its conception of society fails to reconcile the individual's constant engagement and struggle with political (authoritarian) domination and the economic mechanisms which govern the distribution and allocation of resources, and which are therefore responsible for the shaping of socio-spatial structures. Additionally, Held (1980) and Jay (1973, 1986) both suggest that a significant deficiency in the Frankfurt School's conception of capitalist and socialist development might be attributed to its experience of the authoritarian state under National Socialism and Nazism.

Moreover, critical theorists have seemingly been unwilling to consider/assimilate human attributes which cannot be adequately contained or discussed by the terms of reference of 'normal' scientific inquiry, and particularly if these are non-reducible to the material essence of social practices and structures. This is seen most pertinently in the area of metaphysics, idealism and belief systems. Critical theorists refute the validity of any propositional truth-claims which expire from these

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forms insofar that they are not based on reason or
rational (critical) systems of thought, and cannot,
therefore, purport to provide the epistemological
foundations for theory and practice. Although the
development of critique in the Frankfurt School
encompassed wide interdisciplinary areas of thought,
'closed' and meta-philosophic. systems are clearly
anathema to critical theorists and exemplify the case
where they "resisted any eclecticism which threatened to
attenuate their critical intentions" (Gregory 1978, 157).

EPISTEMOLOGY AND METHODOLOGY IN THE FRANKFURT SCHOOL

The legacy of the Hegelian dialectical methodology
provides a vital insight to the structure and aims of
critical theory under the work of Horkheimer, Adorno and
Marcuse. Their interpretation of Hegel's philosophy and
method illuminates both the possibilities and limitations
of contemporary critical thought and the extent to which
social processes can realize the goal of 'emancipation'
and therefore, the emergence of new, 'rational'
structures. The divergent theoretical positions generated
by the work of these three critical theorists merit
further attention insofar that fresh perspectives and
interpretations about the present and future nature of
socio-spatial process and structure are discernible. Human
geography, moreover, is afforded the opportunity to review
the apparent advantages of incorporating a wider
interdisciplinary approach in its methodological inquiry
and equally, towards a reappraisal of its epistemological
backcloth in the light of a critical interpretation of
contemporary political economy. It is at this juncture
that geography is confronted by, and becomes interlocked
with ideology in its most disclosed terms of reference.
Put otherwise, the ideological forces which attempt to
mask social reality and reason and the rationality of
human structures (and more generally, of existence itself)
are most acutely defined in the context of their material

expression. Ideology establishes an arena in which the
individual social actor is cast an an alienated,
depersonalised and unknowledgeable being. Against the
backdrop of a potentially totalising dynamics of
domination and dehumanisation, human geography, it seems,
is ultimately compelled to clarify its philosophical
allegiances through a confrontation with, or submission to
the ideological premise, and thus, critically reinterpret
the presuppositions on which its epistemological status is
based.

MARCUSE

Marcuse (1968) adopted critical theory as a means for
uncovering distortions in social structures so that a
recovery of truth would promote a clear understanding of
social practice under past and present conditions. This,
he maintained, would expose the unrealized potentialities
contained in the human condition which, in turn, are
"linked directly to the realization of nature's inherent
possibilities" (Held 1980, 243). Marcuse asserts that
historical conditions - rather than epistemological
precepts - constitute the validity of propositional truth
claims. He begins with the presupposition that man is the
logical and rational point of departure in social analysis
and reason as determined in specific social situations.
Marcuse (1964, xv) primarily sought a synthesis within a
sharply defined dialectic which postulated: "(1) that
advanced industrial society provides the scope for
qualitative change for the forseeable future; (2) that
forces and tendencies exist which may break this
containment and explode the society".

Marcuse maintained, on the one hand, that the multi-
faceted organisational structure of capitalism appeared to
safeguard its forseeable economic future. This, he
claimed, had largely been assured by the development of
its productive forces - the concentration of capital and

financial control, technological innovations, the increasing curtailnment of free competition and growing state intervention. Contemporary nation-state economies, Marcuse argued, were eclipsed by an international structure which, in the capitalist world, integrated economic and monetary strategy with military (geo-political)concerns. Technocracy and corporative interests increasingly occlude the antagonisms which exist in socio-spatial structures. Conversely, Marcuse (1972, 7-37) counterbalances the material and ideological expansion of capitalism with the possibility of revolutionary transformation, but in a less forceful vein than in orthodox Marxist theory. The revolutionary struggle against domination is, according to Marcuse, restricted to a diminishing number of activists in advanced capitalist nations - state propaganda (ideology) masks contradictions (reality) and checks individual disequilibrium — and is manifested in a climate of general social and economic unrest.

The mainstay of Marcuse's concept of revolutionary change is grounded in the belief that international capitalism will ultimately self-destruct when its contradictions attain a critical point. More explicitly, Marcuse (1972, 7) points to the growth of poverty, wide disparities in the distribution of wealth between "a vast working class" and "a small, parasitic ruling class", the increasing role of technology in production processes, material wastages and conspicuous economic and distributional imbalances in the Third World which will foster the formation of anti-capitalist social forces. Two further provisos emerge from Marcuse's observations: first, the intensification of ideology (the threat of international communism) and the possibility of (nuclear) conflict; secondly, the possible emergence of fascist movements as a result of the uncohesive expression and geographical disparateness of protest in the capitalist world.

Marcuse (1972, 124) envisages harmony in the social
structure only through "the development of an effectively
organised radical Left, assuming the vast task of
political education ..." The route towards this
'emancipatory' process and the demise of the capitalist
order is, in Marcuse's view, constrained by the weakness of
the human 'sujective factor'. In order to transcend the
ideological tenacity of instrumental reason, Marcuse
appeals to a reinterpretation of the Hegelian dialectic
and to certain aspects of Marx's early ideas concerning,
for example, the themes of alienation, the potential for
socialism within the 'anarchic' working class and the
utopian perspectives of future trends. Central to
Marcuse's theoretical arguments is Hegel's (1966) concept
of determinate negation. Hegel rejected the notion of a
dichotomy between subject/consciousness and reason as
being independent to the objective domain. Consciousness,
moreover, clarifies its relations with the objective world
through a process of continuous negation. The subject-
object relationship can only be fused through the critical
reconstruction of knowledge. Nor, Hegel maintained, did
the conditional nature of (partial) knowledge necessarily
collapse into scepticism or relativism, but rather
directed the subject to the 'the truth of the whole'.
Hegel's dialectical method challenged the apparent
rigidity and dogma of systematic philosophies and belief
systems which, on Hegel's account, resisted the
possibility of critical reflection and dismissed dissent
as irrational thinking.

Critical theory, by the Hegelian method, claims a means
for surmounting the partiality of perspectives, but unlike
Hegel's final transcendence of all subject-object dualism
in the ultimate revelation of the universal, absolute
Idea, Marcuse (1960, xiii) needed to show that Hegel's
philosophy could be grounded in a materialist critique
"not by substituting for reason some extrarational
standards, but by driving reason itself to recognise the

extent to which it is still unreasonable, blind, the victim of unmastered forces". This change of emphasis represents a crucial difference between the presuppositions held by Hegel (the notion of the complete or 'closed' dialectic). Critical theory, for Marcuse, does not accept the inevitability of fulfilment (i.e. the realisation of the ultimate/ideal structures) through the 'negation' of the negation'. Rather, no dialectical process can be 'closed' in a social and economic sense until social actors - through their autonomous reason/critical reflection - achieve the condition of 'emancipation' (freedom).

Marcuse's interpretation of the dialectical method stresses its potential to actualize the 'coming-into-being' of concrete reality (social relations). Hegel's dialectical thinking represents not only the possible realisation of the universal (the totality of relations) and an understanding of the components (particulars) which constitute its 'whole', but also the embodiment of the rational structure of being (existence). The (presupposed) content of the universal must be lodged in the concept/notion attributed to it by the inquirer - thus, for a critical theorist, the 'emancipation' from the false reality of technocratic structures. The dialectical method is made synonymous with 'truth' insofar that it allegedly contains the dynamics of 'being' and potentially unfolds the realization of 'completeness' (subject-object reconciliation). In terms of the unmasking of ideology, Marcuse (1960, viii) believes that 'determinate negation' exposes the internal inadequacy (the contradictions) in current structures by disclosing "the way in which the real opposes and derives potentialities inherent in itself" (Held 1980, 229). 'Negative thinking' therefore exposes the essence of any finite object both in terms of 'what it is' and 'what it is not', thus enabling the process of synthesis (seen here as a 'stripping-away' or

'bracketing' of the contradictions which conceal the reality/truth of a thing) to continue.

Both Hegel's and Marcuse's concerns tend to raise aspects of phenomenological investigative methodology, especially in the problems encountered in the transcendence (negation) of contradictions towards the unveiling of reality. Although Marcuse broadly recognised Heidegger's concept of the 'inauthenticity' of existence, he rejected the abstract/quasi-metaphysical terms of 'Being' for the social analysis of human structures. Moreover, Marcuse wanted to ground the phenomenological (reflexive) aspects of thought into a dialectic of concrete (historical-materialist) existence. Heidegger's standpoint needed to be overruled because its content suggests room for ahistorical (mystical) interpretations which defy the bases of scientific enquiry. Instead, Marcuse (1966, 113-114) appeals to Freud for a conception of the ontological meaning of Being: "Ananke [scarcity] is experienced as the barrier against the satisfaction of the life instincts, which seek pleasure, not security ... the 'struggle for existence' is originally a struggle for pleasure". According to this interpretation, human existence is grounded in eros, but the increasing coercion of the individual ego by social (technocratic) reason estranges it as a subject of eros. For Marcuse (1970, 13-17), the "reification of the ego itself" is tantamount to the surrender of the individual's (self-)identity and ego-ideals to the 'group ideal' as is manifest in state ideology. The psychology of the individual becomes ideologically stereotyped and constrained by false values. 'Being', as such, is inauthenticated by the irrationality of thought and practical structures. The repressive impact of the reification of social relations through ideology creates a 'disembodiment' of the ego from the individual's (personal) existence. The expression of the totality of social realtions, for Marcuse (1970, 24) is one of alienation and fear (angst).

The retrieval of individual wholesomeness becomes, for
Marcuse, a two-fold function. First, a reconciliation with
material needs insofar that scarcity can only be mediated
by practice (labour) so that the ego is satisfied. Eros
and labour are therefore intrinsically connected.
Secondly, the more abstract individual "drive for integral
gratification" which surpasses the terms of historical
materialism (Marcuse 1966, 18). This is otherwise a search
for truth, not only in the area of epistemology, but also
towards a recovery of "the repressed harmony of
sensuousness and of reason" which psychoanalysis offers in
its therapeutic techniques (Marcuse 1966, 130). On this
account, Marcuse suggests that the potentiality for
harmonious (socio-spatial) structures and the
'wholesomeness' (true reality) of the social totality not
only concerns a materialist critique of (rational)
economy, but equally the emancipation of the individual
from false consciousness (ideology) through the self-
internalisation of fact and value, and not - as Freud
would have it - in the 'group psychology' situation.

Critical theory, according to Marcuse, can only expose the
contradictory nature of social and productive relations by
drawing upon particular aspects of Marx's philosophical
writings and his theory of labour. Marcuse endorses Marx's
critique of both Hegel and Feuerbach. By detaching the
Hegelian dialectic from its ontological base and by
grounding the essence of man and truth in the historical
process of practice, Marx effectively negated Hegel's
standpoint by historical reality itself. Marcuse (1960,
251-273) accepts the 'negation of philosophy' as a
necessary precondition for a critique of the social
totality. Philosophical concepts must be reduced to
(Marxist) social and economic categories (Marcuse 1960,
258), since the 'emancipatory' possibilities immanent in
the existing order requires "man's historical action to
fulfil them" (Marcuse 1960, 315). While Marcuse accepts
Marx's critique of capitalism and the structural primacy

of the proletariat, he overrides the concept of a
determinate (economic) base and substitutes it for 'man's
essential being' - a knowing and conscious activity - in
the historical labour process.

By negating Hegel's purely philosophical concept of the
universality of reason, Marx suggested that capitalism
restructured a (false) universality of reason-in-practice:
"Capitalism developed the productive forces for the
totality of a uniform social system ... and transformed
men into 'world-historical empirically universal
individuals' " (Marcuse 1960, 287). This manifestation of
universality, however, is totalising insofar that it masks
reason and social reality, and alienates men from one
another through class contradictions. Moreover,
individuals are denied the right of access to express
their freedom in the labour process. For Marcuse (1960,
261-292), the "negative universality" of the proletariat
signifies the extent of their unself-fulfilment,
exploitation and alienation in the work process, yet,
through their "universal character", they retain the human
potential for revolution and emancipation from the
unfreedom of the capitalist order: "The proletariat is the
negation ... of ... man as such. All specific
distinguishing marks [property, culture, religion,
nationality] by which men are differentiated lose their
validity ... His concern to exist is not the concern of a
given group, class or nation, but is truly universal and
world historical".

Marcuse needs to show that material need and fulfilment
constitute the basis for human existence and praxis, and
that labour can be made an a priori category of human
existence. Labour, for Marcuse, must represent the raison
d'etre of all human activity and be able to demonstrate
its 'higher' rationality over all other social practices.
Following Marx, Marcuse (1973, 18) maintains that through
and in the world of (material) objects, man expresses his

'self-creativity' and realizes his 'self-(human)
objectification'. In short, 'Being' (the essence of
existence) is reduced to the objective expression of human
work, although neither Marcuse nor Marx can present no
solid truth-claim to validate this presupposition.
Moreover, Marx's only justification for this claim was
primarily derived from his critique of Feuerbach's thesis
on religion, from which he reinterpreted the concept of
'species being'. Feuerbach's (1957, 152-153)
reduction/trans-mythologization of the essence of religion
into the essence of man was broadly hinged on the
presupposition that each species can conceive of nothing
higher than itself: "The history of mankind consists of
nothing else than a continuous and progressive conquest of
limits, which at a given time pass for the limits of
humanity, and therefore for absolute insurmountable
limits. But the future always unveils the fact that the
alleged limits of the species were only limits of
individuals ... Thus the species is unlimited; the
individual alone limited".

While Feuerbach neither dealt with the problem of the
underlying causes of human alienation, nor resolved the
reasons of the fundamental tensions/disunity within human
existence, neither could Marx justify the reduction of the
essence of man/human existence to the totality of social
relationships. In support of Marx's a priori standpoint of
historical materialism, it is hardly surprising that
Marcuse's (1960, 321-322) view of critical theory can
readily dispose of epistemological and ethical relativism
to legitimate its 'truth'. For Marcuse, a (Marxist
interpretation of) theory "that retains the consciousness
of the practice necessary for the progressive attainment
of this ideal society" (Held 1980, 240) is synonymous with
the realization of 'new' rational structures and social
practice. This, simultaneously, ensures the complete
eradication of contradictions (ideology) and achieves the
goal of 'emancipiation'.

Marcuse's (1964, 220) reading of critical theory is to uncover the 'truth value' of social practices which, he believes, can be theoretically assessed by the dialectical method. The 'truth' of human existence and potentiality is defined not by appealing to a metaphysical (immanent) value system or a concept of 'pure thought', but through historical action (Marcuse 1968, 73). Nor does Marcuse (1973, 218) believe that the knowledge generated by critical thinking directs the goal of 'emancipation' into the realm of utopian structures. This, however, is a position which Marcuse (1967) is at pains to defend: he fundamentally seeks the 'negation' of capitalism and instrumental reason and its replacement by a 'new radical order', about the nature of which he says little. Marcuse, nonetheless, maintains that the increasing occurrence of crises within capitalist societies (the concentration of power and wealth) will culminate in the self-destruction of its internal technological and economic structure (in which Marcuse anticipates a recurrent cycle of war and the pursuit of a 'pacified existence'). This will, according to Marcuse (1970, 84-94), be initiated by the vast numbers of the 'underprivileged' in capitalist societies (the structurally unemployed, displaced by automation), by 'national liberation movements' in the Third World (fighting the repression of [neo-]imperialism), and by the radical critiques of the 'oppositional intelligentsia' (academics).

ADORNO

Critical theory, for Adorno, must be based on a systematic critique of philosophy. Structures, on this account, cannot be adequately understood or explained unless a radical shift in philosophical awareness (consciousness) is initiated. The truth of any theory of social structure could only, for Adorno (1977, 132), be established through a (critical) dialectical method, which he termed 'negative dialectics' or 'non-identity thinking'. The primacy of

philosophy represents, for Adorno, the terrain on which
the stimulation and development of self-consciousness is
grounded: "such awareness, without any preconceptions as
to where it might lead, would be the first condition for
an ultimate break in society's omnipotence" (Adorno,
quoted by Held 1980, 72).

Adorno was essentially preoccupied with the problem of the
subject-object dualism and the ways in which distorted
interpretations of its structural relation falsified the
appearance and identity of phenomena in the world. For
Adorno (1973, 174), subject and object are internally
related, interdependent structures, but which are neither
constituted by nor irreducible to the terms of one
another, so that their relation is "neither an ultimate
duality nor a screen hiding ultimate unity". Moreover,
Adorno wishes to expose, in his view, the dominance of
(uncritical) subjectivism in political economy, and thus,
the ways in which ideology permeates into an
interpretation of social structure. Subjectivism, for
Adorno, is expressed most widely in bourgeois idealism
('identity thinking') where objects are subsumed under the
a priori concepts of systematic philosophies. Adorno's
anti-positivist stance was focused on the internal
inconsistency of empiricism and the philosophical
scepticism/pragmatism which it generated. Although Adorno
integrated (a revised form of) Hegel's method of
determinate negation into his critique of social
existence, he rejected most other aspects of Hegel's
concept of philosophy, the relations between (the
dominant) subject and object, and the pre-supposition of
the Absolute Idea (the 'closed' dialectic). Hegel, for
Adorno (1973, 198), "hypostatized the mind", and in so
doing, presented "the object ideologically, calling it a
free agent of the absolute spirit ... recogniz[ing] in the
subject a self-representing objectivity, thus failing to
appreciate the degree to which ideology impinges upon the
individual" (Adorno 1973, 350). Put otherwise, Adorno

rejected the view that the structure of social reality could be apprehended from a position of philosophical externality ('outsideness'). Rather, the historical process and events which constitute present society can only, in Adorno's view, be conceived 'negatively' and that the discrete identities of both subject and object cannot be made to coalesce in unity.

For Adorno, the dynamics of the 'emancipatory' goal are contained in a critical assessment of the (subjective) 'unintentional (part) truth(s)' about socio-cultural formations, that is, interpretations of structure. Drawing on Benjamin's (see Buck-Morss 1977, 307-316) work, Adorno maintained that concrete individual phenomena expressed some knowledge about the universal within their own structure. The truth about phenomena is locked into concepts about concrete world structures and whose process and objective interpretation becomes modified in historical space and time. It is the recovery of the 'truth-content' of these 'ideal' (perception) which dictate the form and grounding of Adorno's philosophy and method. Following Nietzsche, Adorno (1973, 23) rejects idealism and teleological systems as insufficient to explain the social formation since, in his view, there are no absolute criteria to which appeal can be made. Rather, for Adorno (1973, 54), the cognitive process and the unfolding of structural change in history are "internalized in the structure of thinking", that is, contained in a 'closed' developmental system where man autonomously asserts the 'rationality' of his thinking and decision-making at particular points in time. The recovery and understanding of (true) structures, is, for Adorno, contingent on man's ability and willingness to develop new methods of inquiry (but not those whose philosophical underpinnings presuppose the notion/existence of a pre-existing 'idea' or 'absolute' authority). Conversely, Adorno refutes the (Nietzschean) view of the validity of all philosophical systems whose presuppositions are based

on need or want. Such systems, according to Adorno (1973, 144-154) are non-reflexive insofar that they pragmatically seek to identify/coerce objects by subjective terms of reference, that is, through instrumental reason.

For Adorno, the struggle for 'emancipation' and the emergence of new, rational social structures can no longer be realized through the transcendence of present conditions under historical materialism, that is, through the 'revolutionary' social forces envisaged by Marx. Rather, Adorno maintained that crises and class conflict in capitalist societies can potentially be contained, although perhaps not always to the extent where the state is able to legitimate the reasonableness of theory and practice unconditionally. The terms of historical reference, for Adorno, are those of practical disunity and are moreover based on the concepts of domination and power. Under liberal capitalism, the notion of 'free competition' and concepts such as the 'just' distribution of goods were fostered by philosophies which were also reflected in the organisation of socio-spatial structures. The dignity of the individual was retained in the freedom-of-choice which he exercised through his participation in the social and economic fabric. Social classes in their structures were entwined in an expression of concrete unity. In advanced capitalism, the fetishism of the commodity has undermined the freedom of the individual, while the increasing division/specialisation of labour has driven the man (subject)-work (object) relationship further apart. Moreover, the capitalist relations of production have inverted this equation so that man (and his knowledge) has become progressively alienated both in the labour process and in his social relations. Social and spatial structures have become increasingly incomprehensible and reflect the tensions and contradictions generated by the dictums of the technological rationality (see Pollock 1957). The meaning of truth is occluded by the 'false consciousness' imposed

by instrumental reason and whose 'values' mirror state ideology. Technocratic domination is a function of reification and the impersonal, while the concepts of the 'rational' consumer and 'individual autonomy' have redefined the terms of objectivity.

For Adorno (1973, 21), capitalism subverts the freedom of the individual and obliterates any sense of unity in its (re-)construction of the totality: "[its] philosophical systems were antinomical from the outset ... entwined with their own impossibility." Critical theory, in Adorno's view, must therefore constitute an immanent critique of philosophy since: "History does not and cannot provide a stable foundation for any thought system" (Held 1980, 213). Adorno's method of 'negative dialectics' does not offer the practical transformation of structures, but intends to disclose the unfulfilled human potentialities for emancipation. Adorno wishes to eradicate the falsehood of conceptual systems of philosophical thought which deny the mediation of subject and object through the isolation of the latter (the object as 'reality') from that (the subject) which initiates it. Objects (socio-spatial structures) have their genesis in man (subject) and exist for man's purposes in a personal dimension of relations. Through his negative dialectics, Adorno (1967, 32) is otherwise attempting to 'deconceptualize' subjective thinking by teasing out the contradictions between the object's idea of itself (the deceptive, ideological content) and its concrete (true) existence, thus inducing a "heightened perception of the thing [object] itself." This does not, however, necessarily precipitate an absolute view of the totality, but rather points to the limitations of structural constellations. The concepts generated in the cognition of 'non-identity' are, according to Adorno (1973, 149-150), more wideranging and specific than those in systematic philosophiies ('identity-thinking') since they elude the terms of the

ideal/utopian rationale and can connote what an object
(social formation) 'is' and 'is-not'.

On the basis of negative dialectics, socio-spatial
structures can be evaluated in terms of the internally
related categories which constitute their formation, and
may indicate the mechanisms responsible for the dynamics
of structural modification and change in an historical
context. Further, 'non-identity' thinking implies that
society is a subject-object: "Society is subjective
because it refers back to the human beings who create it,
and its organisational principles too refer back to
subjective consciousness and its most general form of
abstraction-logic, something essentially subjective.
Society is objective because, on account of its underlying
structure, it cannot perceive its own subjectivity,
because it does not possess a total subject and through
its organisation it thwarts the installation of such a
subject" (Adorno 1969, 33). By Adorno's reckoning, the
philosophical treatment of socio-spatial structures - and
thus, the social totality - cannot presuppose them to be
'neutral objects'. To proceed from this standpoint, little
will be gained from attempting to understand formative
(social) processes which shape structures. Simultaneously,
the concepts used to reconstruct process and structure are
susceptible to idealisation/distortion if external
(untenable subjectivism) categories are introduced. The
undoing of ideology in socio-spatial analysis - "the
ontology of the wrong state of affairs" (Adorno, 1973, 11)
- requires, in Adorno's (1969, 69) view, a theoretical
basis to its interpretation so that the truth/untruth of a
phenomenon must be presupposed on the basis of what "the
object would, left to itself, like to be".

For Adorno (1968, 84), the reification of social relations
under capitalism is mirrored by unfreedom (the
authoritarian state) and structural inequality so that
"every 'image of man' is ideological except the negative

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one". The (ideological) repression of the individual's personality in the capitalist state, Adorno (1968, 86-88) argues, is tantamount to the psychological destabilisation of the masses (the 'group'). Its expression is found in the weakness of the (individual) ego and is manifested through its inability/helplessness to perceive meaning and choice, truth and untruth in the form of its social and spatial structures. Contrary to Freud's concept of 'ego self-awareness' - where the ego internalizes a contradiction and rationalizes the resolution of a problem - the pressures of the modern political state, Adorno maintains, reify the ego itself and inhibit its potential for self-differentiation. Rather, the ego is driven for the sole interest of self-preservation and regresses towards ego-libido. In so doing, the ego develops narcissistic tendencies and identifies itself with the (authoritarian) state. In sum the state capitalizes on the frailty of individual cognitive (conscious) awareness - given that all id (unconscious) impulses are reducible to Freud's libido principle - and masks the dynamics of process and structure through the perpetuation of ideology. Ultimately, the individual social actor surrenders all his critical judgement and passively coexists with structures unaware of his dilemma, or to the extent of his dehumanisation.

On the basis of this standpoint, Adorno - unlike Marcuse - did not believe that the proletariat possessed the potential for emancipation. Moreover, the surmounting of contradictions and false consciousness could only be expressed negatively, yet, in his wish to transcend historical materialism and metaphysical belief systems, Adorno's (1973, 407) own position for the discovery of a universal is one of increasing pessimism. The essential problem in the social formtion, as Adorno (1973, 320) sees it, is the domination of men over men: "Universal history must be construed and denied. After the catastrophes that have happened, and in view of the catastrophes to come, it

would be cynical to say that a plan for a better world is manifested in history and unites it ... No universal history leads from savagery to humanitarianism, but there is one leading from the slingshot to the megaton bomb". On this account, the likelihood of a truly 'human' goegraphy with 'just' and responsible socio-spatial structures is remote. Social 'enlightenment' becomes the domain of state ideology, while 'emancipation' finds its real expression in the human potential for self-destruction qua annihilation.

HORKHEIMER

The view of critical theory espoused by the work of Horkheimer represents one of the most challenging of standpoints in its application to contemporary human geography as political economy. Horkheimer - unlike his principal contemporaries in critical theory, Marcuse and Adorno - was inconsistent in his views for a critique of society. Moreover, there was marked break between his 'early' work (broadly, from his appointment as director of the Frankfurt Institute of Social Research in 1931, until the early 1940s) and his 'later' writings (which particularly expressed a profound turnabout, if not, ambiguity from his 'orthodox' position, from the 1950s until his death in 1973. See Jay 1973; Held 1980). During this time, Horkheimer's position digressed from one of a radical (neo-Marxist) and practically-oriented critique of economic and social structures (mainly those in capitalist societies) to one which increasingly withdrew from the direct issues raised in historical materialism and which ultimately retreated into the metaphysical and theological domains. Horkheimer's growing mood of pessimism and his flagging faith in the political moment to initiate new, 'emancipatory' structures cannot be attributed to any one particular factor or event, but rather precipitated in response to the cumulative impact of adverse experiential developments. Amongst these, Horkheimer (1972) refers to

the 'totalitarian' state capitalism generated in Nazi
Germany, the (post-1945) growth of monopoly capitalism,
the collapse of Marx's critique towards the development of
socialism into Stalin's authoritarian (elitist),
technocratic state bureaucracy, and the non-realisation of
revolution/proletarian revolutionary consciousness in the
West. Many of these points - and more generally,
Horkheimer's epistemological and methodological shift in
emphasis - will serve as pertinent reminders to human
geography that no critique of social process and socio-
spatial structure can be adequately contained within the
'normal' (autonomous) terms of reference of scientific
inquiry.

'EARLY' HORKHEIMER

Horkheimer's standpoint for critical theory is essentially
grounded in the anti-positivistic mode of inquiry. Unlike
Adorno's insistence for a purely philosophical approach
towards a critique of the structure of society, Horkheimer
wanted to sharpen and develop the applied aspects of
philosophical theory to the history and social context of
the structural relationship between the individual and
society. The traditional philosophical schools of thought,
for Horkheimer, "naively posited either 'an abstract,
isolated individual' [e.g. existentialism] or a
'hypostatized social totality' [e.g. Hegelian idealism] as
the fount of life and proper object of social inquiry"
(Held 1980, 32). A reconstruction/reformulation of
methodological procedure was equally paramount to
Horkheimer's project and was essential to (a rejection of)
the case of orthodox Marxism.

Horkheimer's recasting of the Hegelian dialectic into the
'materialist' or the (historically) 'unconcluded'
dialectic did not hold the promise of the surmounting of
societal contradictions, nor the ultimate realization of
utopian/ideal structures. Rather, its success (progress)

was contingent on the historical practices of men, in which the conceptual manifestation of the terms of 'objective' reality remained, for Horkheimer, impossible and inconceivable. Put otherwise, individual (subjective) thought can never, on Horkehimer's account, grasp the meaning of 'absolute truth' without resorting to an ahistorical perspective: "The claim that there is an absolute order and an absolute demand made upon men always presupposes a claim to know the whole, the totality of things, the infinite. But if our knowledge is in fact not yet final, if there is an irreducible tension between concept and being, then no proposition can claim the dignity of perfect knowledge. Knowledge of the infinite must itself be infinite, and a knowledge which is admittedly imperfect is not a knowledge of the absolute" (Horkheimer 1972, 27).

In sum, Horkheimer's philosophical position outlaws the ground of (classical idealist) metaphysics in which concept and object become fused. The tension which Horkheimer maintains in the concept-object relationship is a reference to the ways in which ideology distorts the subject's perception and understanding of social reality and existence. Following Feuerbach and Marx, Horkheimer seeks to detach the dialectic from its (Hegelian) idealist form by ascribing all philosophical and theological categories to the terms of autonomous human reasoning, and thus to the determinate basis of (Marx's) practice. All knowledge is effectively reduced to Marx's notion of praxis and the social totality portrayed as a formation which is forever restructured and transformed by human activity, yet there is "no general formula for handling the interaction of the forces" which constitute the dynamics of societal process and which generate structural form (Horkheimer 1972, 29). The relationships between the forces which comprise the social totality can only be understood historically, but never in terms of constants and universals.

Central to Horkheimer's philosophical and methodological reformulation of process and structure is the unconditional eradication of metaphysics from the content of (critical) theory. Although he claims that dialectical theory provides the vehicle for this aim, Horkheimer must then also make dialectics coexistent to the concept of truth if it is to avoid the charge of relativism/pragmatism. On the basis of this presupposition, with the elimination of the "metaphysical character of finality, the solemnity of a revelation, [dialectical theory] becomes itself a transitory element bound up with the destiny of men. The unconcluded dialectic does not however lose the stamp of truth ... the uncovering of limitedness and onesidedness in one's own and in other's thought, constitutes an important aspect of the intellectual process ... The theory which we see as right may one day disappear because the practical and scientific interests which played a role in its conceptual development, and more importantly the things and conditions to which it referred have disappeared ... but a later correction does not mean that an earlier truth was an earlier untruth ... the dialectic freed from the idealist illusion overcomes the contradiction between relativism and dogmatism" (Horkheimer, quoted by Held 1980, 182).

Through dialectical theory and its procedural method of 'immanent criticism', Horkheimer (1974, 171), at all costs, wishes to dispense of the classical philosophical tenet of 'thesis-anithesis': "The assumption of an ultimate duality is inadmissable ... The two poles cannot be reduced to a monistic principle, yet their duality too must be largely understood as a product". Horkheimer grounds the notion of universal ideals in the (false) political and moral philosophy of the bourgeois social order, whose expression was found in the ideology of liberal capitalism. Its universalistic principles of 'justice, equality and freedom' were negated in practice and were thus exposed as an enslaving dogmatism.

In order to justify the legitimacy of critical theory, Horkheimer initiates two philosophical (non-rational) 'leaps' which otherwise attempt to express an optimistic (futuristic ideal) condition of 'hope' towards the discovery of the 'universal law' within the historical totality. First, insofar that critical theory is grounded in the practical interest of 'emancipation' from state domination and social (class) divisions, Horkheimer (drawing close to the view of Lukacs) insists that only a revolutionary (radical) political consciousness can mediate the gap between theory and practice, and thus concretize the conditions of real material freedom; that is, by unmasking the contradictions contained in ideology. Secondly, through the realization of the first goal, immanent criticism will be able to claim the classical notion of truth for itself so that "things can be called by their right names" (Horkheimer 1974, 179-180). This latter standpoint must also presuppose the possibility of an 'uncoerced ego' within the autonomous categories of (rational) man whose reasoning is entirely free from ambiguity and incertitude (see Olsson 1978).

In sum, the 'early' Horkheimer is broadly in agreement with many of the fundamental tenets of orthodox Marxism, so that structural change through praxis concerns the ways in which ideology distorts consciousness, and thus, the individual's perception and understanding of reality. On Marx's account, societal development is grounded in the unfreedom of individual participation in the relations of production due to the competitive element within the commodity economy. The contradictions and false consciousness generated by the capitalist system demands that the individual surrenders/negates his individuality (unique, personal identity and attributes) to a position of 'blind and anarchistic' individualism (the egotistic and impersonal).

LATE HORKHEIMER

By the late 1930s and early 1940s, Horkheiker (1972, 220-221) hints to a growing pessimism over the possibility of the unconditional realisation of 'emancipation' (i.e. new structures) from the economic structure of capitalism through the practice of the working class. Although Horkheimer believed that the antagonisms and contradictions prevalent in state-capitalism are indicative of the eventual collapse of its structures (its potential self-negation), he did not envisage the facile removal of a 'totalitarian form' of capitalism through revolution (based on Horkheimer's views of the authoritarian-fascist state in Nazi Germany). Horkheimer, moreover, switches his terms of reference for critical theory/emancipation to the potential for a 'rational society' through human praxis, but one which no longer expresses a specific class interest.

By the mid-1960s, Horkheimer's (1972, xviii) position on the critical interpretation of society and its structures - and any philosophical presuppositions which underpin a critique - harnessed an ethical imperative "to protect, preserve, and where possible, extend the limited and ephemeral freedom of the individual". Horkheimer clearly sought a re-evaluation - and possible integration - of metaphysics and theology in human existence, that is, man's conception of the transcendental infinite (Being) - Horkheimer's 'Wholly other'. Horkheimer ultimately claimed that the 'theological moment' constitutes the means by which society is able to transcend the limitations and contradictions of actual (immediate) reality, and thus realize the goal of emancipation (see Siebert 1976; Carlebach 1978). The legitimation of this standpoint - as Horkheimer saw it - necessitated the validation of human experience which transcends the parameters of empirical ('normal') reality. Although Horkheimer rejected the possibility of radical political change qua structural

transformation, he did not abandon the precondition of
human autonomy (in theory and praxis) for the removal of
ideology. For this reason, Horkheimer's conception of
theology was necessarily areligious insofar that it
refuted those views postulated by traditional belief
systems, and otherwise attempted to ground the
(unknown/impersonal) terms of a 'first-order experience'
into individual social reality. From this, Horkheimer
hoped to develop the interest in a rational society but
failed to show how this could be made coextensive with "a
quasi-religious belief in something other than the
present" (Held 1980, 419), or with the meaning/expression
of human autonomy.

2. HABERMAS

The view of critical theory expounded through the work of
Habermas has generated an important neo-Marxist
perspective for the study and interpretation of socio-
spatial structures in contemporary human geography, as
well as calling into question the epistemological and
methodological conditions on which social scientific
inquiry is based. Habermas is, above all, concerned with
the emancipatory interest, that is, an interest in reason
and a presupposed potential and capacity for individual
social actors to express self-determination and self-
reflection in their social existence. The emancipatory
interest is then achieved by "involving the active
participation of everyone in the control of social
phenomena ... people must be subjects and not objects"
(Kolakowski 1978, V3, 392). Habermas seeks to transcend
the limitations of critique advanced by the Frankfurt
School, although like Horkheimer, he contends that
knowledge is historically rooted and interest bound, and
that subjects need to be practically engaged in the
content and formation of critical theory: "[The] internal
telos [of critical theory] is to enhance the autonomy of
individuals and to abolish social domination and

repression. It aims at communication free of domination. Such a critical theory ... can become practical ... by initiating processes of self-reflection ... [leading] toward practical emancipation" (Wellmer 1976, 258).

Habermas posits himself somewhere between the optimistic radical view of social transformation expressed by Marcuse, and the pessimism of Adorno and (the later) Horkheimer. Moreover, Habermas develops the view that - contrary to Adorno - there are definite foundations for knowledge and values. These can be apprehended, on Habermas's account, through a reformulation of the competing traditions of philosophy and social thought so that through a critique of human interests, some clarification of truth might be established. Habermas contends that the spread of instrumental reason and the emergence of technocratic consciousness impose a disintegrative effect on social existence and fragment human understanding. Practical (structural) problems are annexed into the technical domain so that the terms of scientific rationality assume a "simultaneous double function, as a progressive force of production and as ideology" (Larrain 1979, 206). For Habermas (1971, 89), the basis of scientific rationality is unacceptable since "neither the model of the original sin of scientific technical progress nor that of its innocence do it justice".

Habermas broadly contends that since the 'age of enlightenment', the rise of scientism has progressively eroded the concept of epistemology as the critique of knowledge. Science has subsumed all conditions of possible knowledge into its paradigm and is itself immune from philosophical critique. The (de-)emphasis of knowledge in terms of its technical expression has subordinated the role of epistemology to one of methodology. This clearly has important ramifications concerning the status and role of the 'knowing subject'. In the classical tradition, the

constituting activity of the cognizing subject determined
the basis for understanding knowledge. Under the
scientific rationality, there can be no court of external
appeal independent of science by which its enthronement of
instrumental reason as the sole basis of human action and
cognition has led to "the meaning of knowledge itself
becom[ing] irrati onal - in the name of rigorous
knowledge" (Habermas 1972, 68-69). By drawing on Weber's
concept of rationalization, Habermas contends that
capitalism - marked by its increasing state intervention
and the manipulative ideological basis achieved through
its harnessing of technology and scientific research - has
coerced human communicative interaction and replaced it
with a system of 'purposive-rational action', that is, the
logic of scientific-technical progress and the social
structures which is prescribes. Its success is geared to
the potency of the ideological forces which maintain its
appearance so that the 'technocratic consciousness' (the
ideologization of the masses) in effect depoliticizes
human subjects. Social actors lose their capacity for
self-reflection and self-understanding. Contrary to the
standpoint of orthodox Marxism, Habermas (1971, 114)
rejects the thesis of revolutionary emancipatory movements
towards the transformation of structures. Rather, the
scientific-technical rationality is able to offset and
contain these trends through the ideological
enforcement/legitimation of political power.

Habermas (1972, 1974) maintains that a critical social
theory must be based on an examination/critique of
knowledge-constitutive interest and their relationship to
human praxis. Further, Habermas (1979, 1984) also proposes
a concept of 'communicative competence' so that the
'systematically distorted communication' imposed by
instrumental reason may be removed and the condition of
self-(critical) reflection restored. This implies an
unmasking of the ideology which pervades the scientific-
technical rationality. On this account, the aims of

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critical theory are diverse and complex when it encounters
the mesh of the technocratic state. The growth of multi-
national corporations, the interdependence of science,
technology and industry, the increasing domination of the
state over society and its attendant means-end rationality
fosters the need for an emancipatory "struggle for the
critical soul of science" (Wellmer 1974, 53).

Habermas seeks to ground the conditions for knowledge,
understanding and ultimately, the acquisition of new
structures in a complex reformulation of historical
materialism. The 'survival value' is taken as the logical
point of departure since the reproduction of human
existence is, for Habermas, bound within man's historical
material conditions. Habermas (1979) contends that the
orthodox Marxist view of historical materialism is
concerned with an analysis of work (the way in which human
labour reproduces and transforms the material conditions
of its existence) and interaction (the cultural and
political aspects of the institutional framework of
society and the ways in which this is modified through
revolutionary historical struggles). The dialectical
relationship between these two realms generates, in
Habermas's view, an irreconcilable dualism between
scientific-technical progress (the forces of production)
and the institutional machinery (the relations of
production). The former is marked by an impression of
creative, innovatory freedom, while the latter
characterises the distributional machinery which directs
and organises patterns (modes) of social integration (and
therefore, also inspiring social/class conflict where
particular class interests are not represented) through
power structures and ideology. On Marx's account, social
processes - and their expression in the formation of
practical structures - are locked in to the two-fold
confrontation with technical and practical activity.

Habermas (1974, 168-169) argues that Marx tends to reduce practical activity to the terms of the technical so that productive labour (work, and the instrumental reason associated with it) "becomes the paradigm for the generation of all the categories, everything is resolved into the self-movement of production. Because of this, Marx's ... insight into the dialectical relationship between the forces of production and the relations of production could very quickly be misinterpreted in a mechanistic manner." Put otherwise, Marx's dialectical interplay between 'freedom' and 'necessity' is collapsed to the crude deterministic (positivist) terms of the latter (i.e. instrumental technical-scientific activity). Marx, moreover, presents a natural science of man where the categories of knowledge are restricted for the purpose of domination and control (see Habermas 1972). The epistemological and methodological status of Marx's account of historical materialism is largely impaired by the usurpation of communicative action (speech) to instrumental action. So long as the structure of speech is constrained in this way, there can be no conception of an anticipated form of social existence where value-norms (truth, freedom, justice, equality) are possible.

While Marx stressed the importance of the productive forces in historical materialism as the primary condition of 'learning processes' in a theory of social evolution, Habermas (1979, 97-98) seeks to transcend this position by extending it to "the dimension of moral insight, practical knowledge, communicative action, and the consensual regulation of action conflicts - learning processes that are deposited in more mature forms of social integration, in new productive relations ... that ... make possible ... new productive forces". In this light, Habermas tends to regard Marx's theory of capitalist development as "a 'subtheory' of historical materialism" (Held 1980, 270). The basis of all human interests are, Habermas contends, necessarily a priori grounded. These experiential domains

include the interests of work and interaction (language), as well as the institutional framework which dictates and legitimates the organisational (rule-governed) nature of the system. The overriding (a priori) interest in reason and rational activity in human existence generates, according to Habermas, a form of knowledge which invites the potential realisation of individual autonomy and responsibility. This, more precisely, constitutes the basis for Habermas's 'emancipatory interest', which in turn focuses upon the recovery of "the forgotten experience of reflection" (Habermas 1972, vii).

The tripartite formulation of interests which contain the terms of reason and rationality in human existence - and which provide the means for interpreting and understanding social processes and structures - are represented by Habermas as: (i) the empirical-analtyical sciences (the technical-work sphere of action); (ii) the historical-hermeneutic sciences (the practical-communicative sphere of intersubjectivity); (iii) the critical sciences (the emancipatory sphere concerned with the removal of the asymmetrical aspects of social relations, that is, domination and ideology).

In the first case, Habermas contends that the interests of the empirical-analytical sciences are devoid of any emancipatory content. The scientific rationality fundamentally constrains communicative interaction (a condition of 'undistorted'/de-ideologized speech) through its institutional framework. The empirical-analytical sciences are grounded in presuppositions (a priori interests) which generate rules for the technical conception, domination and manipulation of social phenomena. This corresponds to a process of socially institutionalised, deterministic system of praxis. Empirical statements, laws, theories and hypotheses are represented and validated as 'values' which are imposed on socio-spatial and economic systems in the guise of 'truth

conditions'. An authoritarian/paternalistic system based on the (technocratic) domination of process and structure precludes the possibility of individual expression and impairs self-reflection (critical awareness). The unity/totality of knowledge is fragmented and individuals are both devalued and dehumanized.

The developmental trends in advanced capitalism - state intervention and technology - have progressively reified the meaning of social reality. The concept of 'free market' commodity exchange has been eroded by the forces and interests of instrumental reason. The public sphere has been accordingly subjected to processes of depoliticization and 'refeudalization' by the 'rational' controls/organisational principles of the technocratic order. The (dominant) state regulates the economic process and therefore, the outcome of social-spatial structures. It is moreover concerned with the containment/ rectification of dysfunctional tendencies, thus supporting the interests of large corporative concerns and the private utilization of capital. For Habermas, scientific-technical innovation undermines the concept of surplus value dependent on labour. Marx's labour theory of value is displaced, as are his theories of base-superstructure, class struggle and ideology (see Habermas 1971, 104), since economic exchange processes are directly regulated in the institutional (non-economic) framework. Political regulation assumes a 'negative dimension' which does not presuppose a 'free' consensual representation of structures.

The ideological function of the technocratic consciousness is the legitimation of dominant political interests at the expense of all other (competing) societal sectors. Moral considerations are repressed and dismissed by the 'objective necessity' of science and technology, whose own value - survival - is fraught with hermeneutical problems and smacks of pragmatism. The statements and observations

made by empirical-analytic knowledge are no more than
expressions of "the success or failure of [technical]
operations" whose factual reality is grounded in "an a
priori organisation of [human] experience in the
behavioural system of instrumental action" (Habermas 1972,
308-309).

Further, the scientific (positivist) paradigm is unable,
within its own terms of reference, "to account for the
possibility and nature of ordinary language and of
intersubjective agreement in general" (Held 1980, 303).
The scientific interpretation of intersubjective
communication must, according to Apel (1972, 8), appeal to
metaphysical suppositions which disclose a "pre- and meta-
scientific rationality". The eradication of the
communicative function of language, and its reformulation
in physicalistic-behaviouristic terms is tantamount to a
position of 'methodological solipsism' which asserts "the
tacit assumption that objective knowledge should be
possible without intersubjective understanding by
communication being presupposed" (Apel 1972, 10). Such a
position, according to Habermas (1972, 91) is untenable
since "the task of methodology is not to clarify the
logical [objective] structure of scientific theories but
the logic of the procedure with whose aid we obtain
scientific theories".

The purposive rational procedures postulated by the
empirical-analytical sciences fail to legitimate or
explain the role of intersubjectivity and language in
scientific activity. The theoretical knowledge generated
by scientific inquiry is concerned with prediction. It
excludes the terms of practical (human) reason and cannot
provide a sufficient account of social reality. The domain
of reason and rationality towards the construction of
practical structures collapses, by implication, into the
sphere of privatistic reflection "justified only by

reference to a decision or a commitment of belief or faith" (Held 1980, 306).

In the second case, Habermas contends that the hermeneutic sciences disclose an alternative conception of social reality which has important ramifications regarding methodological procedure and the question of human interest. The constituting interests of the historical-hermeneutic sciences are not those of technical control but rather the claim that its knowledge "grasps interpretations of reality with regard to possible intersubjectivity of action-orienting mental understanding specific to a given hermeneutic starting point" (Habermas 1972, 195). Habermas does not attempt to formulate the ontological roots of social reality but instead suggests that hermeneutic inquiry presupposes that individual human behaviour, thinking and actions are related to a system of intersubjective meanings. This, in turn, clarifies an understanding of the motives, purposes and beliefs which underpin human praxis. The specific meaning of human phenomena are, according to Habermas, constituted in a twofold expression: a diachronic dimension which emphasizes 'self-formation'; a synchronic dimension based on intersubjective understanding and linguistic communication.

Following Dithey's concept of understanding (verstehen), the central task of the interpretative approach is focused on an analysis of human consciousness on the basis of empathy. The understanding of experience is contingent to the reconstruction of a subject's intentional actions or the symbolic object of his thinking/aims. In this way, meanings are recovered. Understanding is a process dependent on the psychological re-enactment of 'lived experience' which enable the historical world to be reconstructed. Such a methodology is fraught with problems and risks the charge of psychologism, descriptivism, objectivism and relativism. The validation of social

reality by the hermeneutic method of inquiry cannot be justified on the (scientific) basis of the repetition of a unitary psychological state, but rather on its ability to recapture the meaning of individual intentionality, purposes and actions. The understanding gained by this method supposedly generates a form of public knowledge from which symbolic structures can be constructed. Socio-cultural phenomena are thus represented in language. Although Habermas would contend that knowledge itself can only be refined through the pursuit of intersubjective understanding, this goal in turn becomes constrained by the individual's willingness to explore self-formation/realization, as well as the extent to which actors are prepared to reciprocally recognize each other as intentional subjects who share common meanings which are related to practice.

Although all propositional truth-claims must be open to critical verification/modification, hermeneutics - for Habermas (1972, 172) - provides a hypothetical basis for the mediation of the subject-object dichtomy which is contingent on the ability of social scientists to "learn to speak the language that they interpret". Ordinary language cannot be limited to the analysis of systems of grammatical structures since understanding is intrinsically tied to practical reality. Conversely, a phenomenological bias towards 'pure objectivity' severely impairs the possibility of undistorted dialogue. This will tend to introduce a 'break' between theory and practice, fact and value, and science and life (reality) so that the validity of truth-content and the degree of (self-) deception (i.e. the ideological input) will remain undisclosed. The interests of the hermeneutic sciences are reduced to an uncritical (descriptive) study whose premises are grounded in relativism. Nor does it adequately satisfy the imperative that: "The plausibility of critical social theory depends on an acceptable

explication of the relation between language, action and history" (Held 1980, 311).

Interpretation cannot, according to Habermas (1972, 194), be grounded in a context-free neutral standpoint, nor can any appeal be made to some external, ahistorical transcendental subject which might provide the preconditions for the constitution of possible experiences. Understanding is bound in language, whose meanings are disclosed in the mesh of history and tradition. The criteria which Gadamer (1975) introduces as the 'conditions of understanding and meaning' in the hermeneutic sciences seemingly provide important insights into the problems of structure and process. These fundamentally relate to certain presuppositions about the nature of knowledge and historical truth. The process of understanding is made synonymous with "the original character of the being of human life itself" (Gadamer 1975, 230). Language becomes a possibility-condition of truth. The propositional truth-claims of the 'knowing subject' cannot, however, be divorced from the historical-temporal structure and are the products of socio-cultural-tradition. Tradition endows phenomena with meaning, while history provides accessibility to meaning through space and time, i.e. it prescribes the conditions for empathetic understanding.

Gadamer argues that the content of tradition contains prejudices/prejudgements which are integral elements of understanding. The process of objective understanding is, in this hermeneutic tradition, inseparable from the developmental subjective process of self-understanding/self-formation.

Habermas rejects the standpoint of the hermeneutic-historical method of inquiry for social sciences largely on the basis of his objections to Gadamer's procedure. The a priori structure of tradition/prejudice imposes

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constraints on intersubjective communication and interpretative understanding. It does not lend itself to critical analysis. If tradition - and the knowledge and understanding that it generates - cannot be made a condition for critical investigation, then any 'consensus of tradition' is tantamount to a prejudgemental structural dogmatism which does not enhance the understanding of meaning. Truth-claims must be rejected since they are grounded in 'distorted communication'. A hermeneutics of the history of tradition can only assert its 'authority' through the legitimation of a false (ideological) premise. Any interest in reason is, in effect, "under suspicion of being pseudo-communicatively induced" (Habermas, quoted by Held 1980, 315), so that it is reduced to non-reason. Ordinary language, Habermas argues, must be open to critical review insofar that the medium of communication both conceals and reveals the meaning of social reality, and thus clarifies the role of tradition (culture) and authority in human interests.

Finally, it is within the case of the emancipatory or critical interest that Habermas wishes to root man's interest in reason. This concept seeks its expression through a unity of knowledge and understanding, but one which is grounded in the human struggle for 'self-preservation', i.e. survival value. The possibility-condition of the critical enterprise is largely governed by man's capacity to reconcile theoretical knowledge with practical activity through self-reflection/self-determination (see Habermas 1972, 197-198). The attainment of critical self-reflection requires, in Habermas's view, the use of Freudian psychoanalysis (that is, 'depth hermeneutics'), where the validity (truth content) of the interpretation of a phenomenon (active or symbolic) is manifested through the recovery of the past in the unconsciousness of the analysand. Freudian psychoanalytic techniques therefore attempt to expose the origins and expression of pathological disorders in the behaviour and

thinking of the subject. The recognition of such deformations may then be transposed into the domain of critical thought and analysis in the social sciences.

Habermas wishes to bridge theory and practice through a theory of communicative competence since on the social anthropological level, the 'evolutionary' historical development of the human species has generated distinctive human social organisational systems and codes of legality and morality through the modus operandi of linguistic communication. Man otherwise transforms his thinking and practice through cognition - based on linguistic inter-subjectivty - and acts upon this as a purposeful and meaningful basis in his material existence. Unlike Marx's insistence on the mode of production to explain structural phases of economic development, Habermas claims that human rationality supercedes that of the technological sphere. Moreover, the institutional forces which govern societal organisation are more closely embedded in belief systems and moral representations of socio-cultural lifeforms than they would care to admit.

Habermas's (utopian) concept of an 'ideal speech situation' (i.e. a genuine, undistorted linguistic consensus) is based on normative structures which must be open to rational justification. Habermas must presuppose that all speech is ideally oriented towards a condition of truth in which 'justice' and 'freedom' are expressions of the fulfilment of emancipation (the embodiment of rationality). Practical emancipation thus implies the existence of "generalizable interests ... which can be communicatively shared" (Habermas 1976, 108). Further, the extent to which social actors can be engaged in the 'emancipatory interest' is a function of the process of self-reflection (i.e. a willingness to participate in critical thinking).

The anticipation of the possibility - condition of an

ideal form of social existence recognizes the need to surmount the actuality of a systematically distorted communication (i.e. ideologies/belief systems which are unable to rationally legitimate their standpoints). In this sense, the emancipatory interest is also tied to a discussion of power and domination and offers a key whereby distorted views of social reality can be rationally identified and unmasked. This view constitutes the ground for Habermas's (1976) 'legitimation crisis' where the normative basis of the false consciousness - which sustains an existing socio-political order and its economic structures - is severed by rational critique.

The expression of human cognitive interests is manifested through linguistic intersubjectivity so that language discriminates between value and fact and is therefore a vehicle of social transformation. Contrary to Marx, Habermas maintains that the foundations of social organisation cannot be reduced to the 'base' needs of economic structures (material existence and its reproduction), but are historically rooted behind technology in non-economic institutions. The emancipatory interest must not only confront the falsehoods (non-rationality) attached to the mechanics of economic systems of production/distribution, but must initially deconstruct the tenets of the ideologies systems of distorted communication) which underpin them: "... there is no certainty that emancipation will follow automatically from greater technical progress" (Schroyer 1973, 155). Normative structures are, on Habermas's reading, a 'superstructural' phenomenon by Marxist definitional terms so that: "Cultural traditions are the basis of the rationalisation of action" (Held 1980, 281).

Habermas's theory of cognitive interests (the inter-relationship between the empirical-analytic, the historical-hermeneutic and the critical sciences through which reality is disclosed) nonetheless remains

problematic and controversial. According to Gregory (1978, 158), "... the imperatives of the critical sciences rests on an equivalence between the three interests", yet Habermas often clearly subordinates the content of all cognitive interests to the emancipatory condition, so that "the interest in emancipation becomes an interest in the transcendence of ... structures of distorted communication" (Held 1980, 319). Even so, if Habermas wishes to maintain that a critical science is not a separate form of knowledge - but is derived through a dialectical relationship between the empirical and hermeneutic interests - then he must also presuppose that instrumental action and language contain all the components which constitute a universal (ideal) understanding and explanation of social organisation. Moreover, Habermas recognizes that the cognitive strategies which underpin the interests of human existence represent both the transcendental conditions of knowledge and yet, at the same time, are naturalistically grounded in the reproductive structures of human labour and linguistic intersubjectivity. Put otherwise, cognitive interests are either empirically based when the terms of reference are grounded in a natural history of (autonomous) individual determinism, or they have a transcendental status of a constituted objectivity external to the constituting subject man (see McCarthy 1978, 111). The postulation that particular interests pertaining to human history must be validated within a theory of social evolution necessarily demands some presuppositions about the pre-historical conditions of the socio-cultural life-world, i.e. of transcendental subjectivity. The theory of cognitive interests smacks of philosophical circularity on account of the tension generated by this unresolved dualism. Habermas (1974, 14) too acknowledges this dilemma insofar that the 'quasi-transcendental' status of cognitive interests is "a product of an embarrassment which points to more problems than it solves".

The theoretical dichotomies in Habermas's work are equally extended in other related considerations. While Habermas (1974) wishes to pursue the scope for actual human development possibilities in a materialistic setting through the rational reconstruction of the historicity of social existence, he recognizes that the critical element of reflection in the self-formative process of the individual social actor engages him in the 'deep' (transcendental) structures of unconscious (sensuous) activity. This provokes a need to examine other questions such as the ontogenesis of thought, the content and meaning of moral consciousness, and the role of myth and mysticism.

A SUMMARY CRITIQUE OF HABERMAS

If man is to engage in critical self-reflection - and participate towards the transformatory goal of an ideal social formation - Habermas must first show that linguistic philosophy transcends all other theoretical structures. This position is fraught with difficulties. A theoretical ideal form of social organisation has yet to be practically concretized. Such a proposition may be challenged in itself as being an ideological concept which is politically and economically untenable. Habermas (1974, 33) recognizes that decision-making cannot be "justified theoretically and then carried out organisationally". Moreover, any form of strategic action is prone to "an irreducible element of uncertainty and risk" (Held 1980, 349). Insofar that Habermas wishes to elevate communicative activity over productive activity as the predominant function in the constitution of human praxis, inter-subjective communication is made the basis for social reality and rationality. The removal of the instrumental rationality which governs contemporary politico-economic and legal systems is contingent on a consensual disengagement from the 'motivational commitment' which perpetuates the normative (ideological)

basis and existence of a state system. A systems (legitimation) crisis signifies the inability of the state apparatus to conceal political and economic contradictions (or the failure to offset a crisis by relaying contradictions from one part of the sub-system to another), but Habermas is not optimistic about such an eventuality in advanced capitalist societies.

The philosophical 'closed' system of thought on which instrumental reason is based outlaws critical (emancipatory) thinking as dissenting and irrational (aconsensual). The preservation of the system (and its attendant ideology) necessitates the suppression/coersion of individual expression (freewill). A dominant order which entrenches its dictums through the fragmentation of cultural values (and thereby restricting access to alternative ways of thinking) otherwise masks the holistic structure of knowledge and social reality. Social actors will not then generally understand the reality they experience - that is, their relations with nature, with others or within themselves.

Contrary to Habermas's anticipatory assertions, there is little evidence to support the suggestion that society is shifting into a radically different 'post-modern' era, where the desire to establish universally generalizable political and ethical norms is imminent. Rather, the normative consensus which sustains an instrumental rationality is preserved as long as the possibility of an 'unconstrained discourse' among individuals who participate freely and equally is rejected as being practically unrealizable. For Habermas, inter-subjective communication remains a 'conflict situation' until such time when all forms of existing state control are removed by the emancipatory interests of society. It remains uncertain, however, as to whether Habermas's hypothetical proposition - that individuals will spontaneously move towards a universal linguistic consensus - will

necessarily become the case. Given that the state and language would need to be connected to explain the reasons which underpin the suppression of 'generalizable interests' (see Gouldner 1976, 150-152) - and thus to provide the ground for understanding/transcending the theoretical domain of instrumental control in order to reconstruct the 'relations of production' in practice - any 'new organizational universal' beckons the arrival of other forms of (state) centralization whose norms, values and beliefs-systems may not be representative of the diversity of human needs. In this sense, the ability of society to transform itself implies the coexistence of 'emancipation' as a goal inherent in reason with the danger of new forms of dependencies.

Habermas ultimately fails to provide any outline - provisional or definitive - concerning the likely form that any new social formation may take. His only solid emphases are directed towards the issues of (an ideological confrontation with) state power and the development of a (utopian) communicative ethics (see Benhabib 1986). The emancipatory task does not convincingly initiate the grounding of (a new) rationality becasue Habermas cannot show how the terms of the universal generalizability of interests are achieved by individual (autonomously-derived) reason. More pertinently, the realization of the emancipatory goal may rather, in the first instance, be tied to people's conscious awareness of increasingly unmanageable contradictions (irrationalities) and material wastages generated by particular modes of production (see Mandel 1975, 501-507). Where the technocratic ideology is unable to provide a 'technical' solution to such contradictions, the concept of a 'legitimation crisis' is then supposed to explode the irrationality of the dominant system.

While Habermas's neo-Marxist perspective is oriented towards the eradication of class struggle in advanced

capitalist societies and to unmask the contradictions which sustains them, Larrain (1979, 210) argues that "the truth may be on the contrary, that the ruling class has succeeded in camouflaging itself by using the name of science. Science has not replaced class contradictions as the source of ideology, but the dominant class has instrumentalized the name of science to pretend it has". While science is not in itself ideological, it can only function effectively, according to Colletti (1975), with a principle of 'no-contradiction'. The charge of a 'dialectic contradiction (an apparent logical opposition of interests) in the social reality of science implies the struggle of opposites in a philosophical context. This would seem to suggest that the fundamental contradiction of society is not in the social relations which entwine men with nature, but concerns the human condition itself.

Put in its historic context, Kant recognized that the concept of reason advanced by Enlightenment thinking contained a dialectic between 'pure' universal reason, and reason as an instrument of domination. This view emphasized the dualism between the transcendental element in the human 'self' (and the subject's conscious awareness of the holism of being) and the function of (material) self-preservation which calls upon the (empirical) objectification of man's relations with nature. The crux of the problem is rooted in the concept of the 'domination of nature' as it is grounded in the Judaeo-Christian tradition, and moreover, the way in which it has been progressively secularized according to the developmental interests of philosophical and politico-economic systems. Insofar that scientific-technical progress has been made synonymous with knowledge in contemporary times: "whatever does not conform to the rule of computation and utility is suspect" (Horkheimer and Adorno 1972, 6). Put otherwise, the scientific paradigm insists that man's relations with nature can only be known through a mathematically formulated universal science, so that nature - as pure

matter - becomes an object of manipulation and domination. Man thus turns against himself as the thinking subject, so that those with privileged (ruling) access in the system's hierarchy reinforce and perpetuate the dualism between man and nature, and man with man in the interest of power and domination.

Through the distortion of the theoretical basis of religious belief, science is made to represent the sole authority, unmediated by social relations. The scientific concept of domination is necessarily all-embracing and its practical (economic) outworkings (i.e. the reproduction of material existence/self-preservation of the system) tend to exert oppressive and divisive socio-spatial consequences. In short, the expansion of technico-productive forces has failed to prescribe the conditions for human emancipation.

The social and economic contradictions generated by instrumental reason have become increasingly 'rationalized', insofar that the technocratic state legitimates its authority through the manipulation of material needs (in the interest of survival) against the backdrop of the depoliticization of the masses. The permeation of ideology in science is not - as Habermas would appear to claim - an appendage of advanced capitalist societies, but is rather indicative of the historically contradictory condition of man himself. Man enslaves himself in states of false consciousness on account of the loss of categories concerning the origin and purpose of his existence. This primarily appears to confirm man's preoccupation with/over-emphasis on the material accumulation of goods, ad infinitum. It tends also to reflect the global disequilibrium of human socio-spatial relations and is manifested through the terms of 'social injustice' and 'distributional imbalances' and other similar themes recurrent in contemporary radical geography.

Ideological struggles will not necessarily be resolved
under the terms of Habermas's concept of 'unconstrained
discourse', but rather through a profound reconsideration
of human value systems (and the behaviour/decision-making
these generate), critically situated in an historic space-
time context. While the modern institutionalization of man
is, in many ways, symptomatic of the suppression/removal
of human dignity, Habermas's emancipatory idealism towards
acultural society does not guarantee the preservation/
reinstatement of human 'true worth'. The use of Freudian
psychoanalysis in critical theory as a route towards
emancipation is open to scepticism. Psychotherapeutic
techniques - which claim to enhance the individual's self-
reflection - are, according to Ottmann (1982, 86), the
"emotional acting-out of the conflict" rather than a
primary cause of liberation.

The concept of understanding the meaning of phenomena as a
fundamental goal of science, speaks from the basis of a
(socio-cultural) tradition primarily because such a
history exists. Critique too, according to Ricoeur (1981,
99-100) is a tradition hinged on the concept of
emancipation, but that: "Perhaps there would be no more
interest in emancipation, no more anticipation of freedom,
if the Exodus and the Resurrection were effaced from the
memory of mankind". This would seem to imply that
Habermas's rejection of monadological/mythico-magical
world-views as a part of the emancipatory structure of
critical thinking is suspect.

3. CRITICAL THEORY AND THE ETHICAL IMPERATIVE

The work of the Frankfurt critical theorists and Habermas
suggests that the terms of reference which may define an
ontology of socio-spatial reality - and, by implication,
the philosophical and theoretical underpinnings in human
geography - are confined to one of three possible
standpoints:

First the transcendence of the present social, economic
and political order through the autonomous achievements of
man and his ability for (critical) rational thinking
towards a new 'emancipatory' state of being. This retains
many of the themes used in Marxist analysis (albeit
subject to critical reinterpretation) and in particular,
is in broad agreement with Marx's reading of ideology.
Insofar that this case focuses its goal on the realization
of (futuristic) ideal/utopian social formations, it is a
form of 'optimistic humanism' which has clearly been
supported by Marcuse and Habermas.

Secondly, an unconditional consensus of submission to
technocratic and corporative institutions and their
attendant ideologies. This implies the acceptance of
reification, that is social ills, economic contradictions
and false consciousness in the interest of material
survival. At a covert level, this standpoint is synonymous
with a climate of pessimism, fear and nihilism, yet - in
Adorno's view - corresponds to the conditions of
contemporary social reality.

Thirdly, an appeal to an adjudicating principle which is
neither concealed in an ahistorical vacuum (i.e. non-
verifiable), nor metaphysically detached from 'being', but
whose propositional truth-claims can be internalized and
rationally shown to mediate through historical space and
time in an omnipotent (universal) and immanent capacity.
This standpoint is coextensive with the transcendental
'theological moment' sought by Horkheimer. If this
standpoint is to be consistent with the terms of the
emancipatory interest, it must be tied to a universal form
of communication (linguistic expression) free from
internal and external constraints from which the
individual social actor can ground a rational
understanding of praxis. McCarthy (1973, 153) in his
discussion of an 'ideal social condition', cites four
'validity claims' which must all be met to satisfy the

terms of communicative competence: (a) The statement is comprehensible. (b) That all propositions are true. (c) The speaker is justified in making the statement. (d) The speaker means unequivocally what he says.

It also follows that the statement must be authoritative (but not authoritarian) and that the source of this authority is legitimate and verifiable as such. The directive provided in its propositional truth-claims must express a 're-organizing principle'. To this extent, it is law-giving, but not in the scientific-technical (instrumental) sense of the domination, manipulation and unfreedom of its recipients. If individual social actors are to be endowed with responsibility and care (affective yet practically translatable attributes) towards their socio-spatial relations, then this standpoint must therefore constitute a social ethic. Each social actor is accountable to the terms of the propositional truth-claims of the principle in both a personal-individual context and the wider collective social sense. Social actors are not required to surrender/deny their personal individuality but rather to enter into relations with the ethos of the principle on an inter-subjective and purposeful basis. This relationship is mutual and reciprocal and based on an undertaking of trust and 'good faith'.

It is not synonymous with a concept of 'optimistic humanism' insofar that it does not unconditionally pursue/promise an 'ideal' (utopian) outcome because individual social actors retain the freedom-not-to-comply/recognize its propositional truth-claims. Its only finite standpoint is in its justification.

CONCLUSION:

(i) THE PRIMACY OF THE INDIVIDUAL IN ECONOMIC GEOGRAPHY

A human geography of political economy frequently depicts
the economic content in terms of the particular political
interests to which it is made subordinate, rather than the
conditions of social reality. Economic geography tends
therefore to underscore any element of human freewill in
individual choice and decision-making which is otherwise
usurped by a synthetic theoretical value system. Human
'bads' (selfishness, egoism, etc) have become an integral
part of this theoretical rationality. The 'rational
economic actor' is made contemporaneous with the
maximisation of personal welfare (individual gain, ad
infinitum) to the disregard of the material predicament of
others. Utilitarianism, hedonism and egocentricism,
override personal values (human 'goods') such as
responsibility, care, trust, restraint and so on. The
theoretical framework of economic explanation and
prediction regards rational activity in terms of atomic
individuals with fixed patterns of consumer behaviour.
Non-conformity with these ideals (which will otherwise
contradict and possibly invalidate the theory) is
dismissed as non-rational thinking/behaviour.

Few human geographers have examined the origins of
economic 'wants'. This suggestion threatens to divest the
individual social actor in his conceptual role as an
autonomous, free economic agent. The rejection of human
reason in the determination of economic choice and wants
outlaws any notion of freedom. The belief that by changing
socio-economic structures, individuals can be
transformed/encouraged to pursue 'freedom-through-
automony' is a standpoint frequently promulgated by
'welfare' and radical geographers. Lee (1979), for
example, equates the socio-spatial problems and stagnation
of cities in advanced capitalist nations with the

structural defects of its mode of production, rather than a 'malfunctioning' of the system (similar views are propounded by Harvey 1973, Castells 1977, Peet 1977 and Harloe 1981).

A Marxist interpretion of human geography needs to show that its emphasis on the primacy of economic structures gives a true account of the reality of social relations. If, as according to Marx's (1973) thesis, egotism and inequity arose as products of bourgeous capitalism, then changing the economic structures will alter individual behaviour. Revolutionary (Marxist) ideals therefore tend to omit any reference to the human affective condition so that 'meta-inferences' such as greed and selfishness have no place or meaning in socio-economic praxis. Rather, man has no conscious meaning/awareness until economic and historical antecedents come into play. Any attempt to 'get behind' practice sets man as a biological expression in an existential vacuum where he is otherwise represented as 'nothing'. Such a standpoint is contradictory insofar that (orthodox) Marxism posits a utopian ideal grounded in the presupposition that 'perfect structures' will transform individuals into 'perfect (materially fulfilled) beings'. If the Marxist assertion is incorrect – so that individuals are innately egotistical – then no amount of structural change will unconditionally guarantee a radical transformation in the equality of individual existence – material, aesthetic or otherwise.

In both the cases of the neoclassical and Marxist views, the representation of human material wants – whether they are grounded in a biological and/or socio-economic premise – are fundamentally made to correspond to impersonal forces which have no basis for the inclusion of moral (just) preferences and values. Neoclassical economics broadly refutes an altruistic solution as non-rational behaviour as it undermines the individual's ability to maximise his utility. Altruism cannot be realistically

implemented by law (i.e. enforced cooperation against the individual's personal interest for the welfare of others). Law cannot, therefore, be a substitute for social ethics and neither do the capitalist or socialist systems necessarily generate loyalty and trust to laws and institutions.

The tension within the philosohpical dualism which sets 'man' against 'structures' as the true point of reference for social scientists qua human geographers, is offset by an interesting twist: "An emphasis on the individual need not involve ignoring the importance of wider social and economic considerations, but it may induce some scepticism about how much can be achieved by social and economic change alone. On the other hand, emphasizing the priority of society may involve absolving the individual of any responsibility for social evils" (Trigg 1985, 142). Further an institutional (structural) revolution devoid of spiritual content is invalid: "For it is privatistic iniquity, not social iniquity, which is the root cause of evil ..." (Ley 1974, 71).

While institutions in political economy attempt to maximize some ethical end - perhaps on a criterion of 'aggregate social welfare' - a concept of 'perfect rationality' in neoclassical terms fails to eradicate the 'free-rider' problem as long as utilitarianism remains a 'legitimate principle' in its theoretical framework (see Hamlin 1986). Moreover, under a concept of 'imperfect rationality' individual social actors are more likely to become aware of their inability to make correct judgements - even if they fail to 'learn from experience'. From this perspective, however, the primacy of the individual overrides any coercive reference to socio-economic background or the nature of protective, institutional power structures.

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(ii) WORK 'FOR MAN' OR MAN 'FOR WORK': THE CONCEPT OF WORK AND PERSON

The concept of work is synonymous with any human activity
(praxis) whether manual or intellectual. From work,
dignity is derived. In a contemporary context, political
and economic ideologies have eroded this ideal. The
compartmentalization of man into his various aspects of
geography, culture and civilization, together with the
tensions, conflicts and crises generated by the tempo of
scientific technological change (qua 'progress')
increasingly demand a redefinition of the meaning of work.
The disproportionate distribution of wealth and poverty
and economic disparities between regions, nations and
continents have stimulated geographical research into ways
of initiating a more equitable programme of development.
The preoccupation with the 'class' question as the central
issue of socio-spatical debate has increasingly been
eclipsed and superceded by the 'world' question. Moreover,
it is the global sphere of inequality and injustice which
amplifies the meaning and proportions of a class problem.

If work is understood as a transitive activity, then its
origins are grounded in man (the human subject) so that
work is the external object of human effort and
application. This presupposes that all environmental
resources can be discovered and used by man for his ends
through his conscious activity. This standpoint postulates
a specific dominion of man over the visible earth insofar
as it comes within the range of man's influence and of his
striving to satisfy his material and physical needs. As
man confirms this ongoing state of dominion, he
nevertheless remains in the original ordering of things.
This implies that phases of economic growth and
acceleration and periods of scientific and technological
discovery and innovation have never exceeded the initial
fixed content given at the outside of all existence. This
conceptually embraces all past ages of civilization and

economy as well as present reality and all future phases
of development. This process is universal and embraces
every individual on both a conscious and unconscious level
and covers every historical phase of economic and cultural
development.

Technological progress, on the one hand, facilitates man's
work by perfecting and accelerating it. Productivity is
then quantitatively and qualitatively enhanced.
Conversely, technology can be imposed detrimentally where
the mechanisation of work supplants man by depriving him
of personal satisfaction and the incentive to creativity
and responsibility. At best, man is reduced to new forms
of economic serfdom or otherwise effectively loses his
relationship with technology in the case of redundancy.
This dilemma is charged with content and tension of both a
social and an ethical character. The basis for determining
the value of work is not primarily the kind of work being
done, but the fact that those performing the work are
persons. This means that the primary basis of the value of
work is man himself and that ethically, work is 'for man'
and not man 'for work'. It follows that work cannot solely
be assessed in terms of its socio-occupational value but
by the measure of dignity of its subject. Even
presupposing that work constitutes a purpose, this purpose
has no definitive meaning in itself because it is man who
provides the purposeful input. The implicit danger is the
treatment of work as a specific kind of 'merchandise' or
an as impersonal 'force' needed for production. This
concept is prevalent under all forms of materialistic
economism, whether capitalist of collectivist, and is
reflected in the spatial organisation of society. Where
the emphasis is centred on the objective dimension of
work, then man - as the subjective component - is reduced
to an instrument of production in a secondary capacity.

This historical background to the conflict between labour,
capital and technology under liberalism and capitalism and

the subsequent rise of the 'proletariat question' and the emergence of socialism is well established. For human geography, the attraction of the 'radical' Marxist approach in socio-spatial analysis is considerable. It seemingly offers a clear explanation of the historical formation and development of capitalism, the degradation and exploitation of workers, and unmasks many of the ideological precepts on which world capitalism is based. In its practical translation, the orthodox Marxist standpoint presupposes the 'collectivisation of the means of production' so that through the eradication of the private ownership of capital and resources, labour will be truly emancipated. The collectivist solution implies the elimination of regional imbalances and the economic disparities which bedevil the geography of the capitalist world order. Notwithstanding, some fundamental objections can be raised against the position of radical geography.

The position of authoritarian capitalism is clearly unacceptable insofar that it dogmatically defends the exclusive right to the private ownership of the means of production. This inevitably generates social injustices which are manifested in a geographical context though the manipulation of capital and resources between and across spatial areas at varying magnitudes. Following a principle of the common access of goods, some forms of the 'socialisation' of goods and certain parts of the means of production are necessary and legitimate. The bureaucratic centralization of the means of production under a collectivist system does not, however, ensure any transformation towards any emphatic socialisation process. It may give priority of labour, but may also claim a monopoly of the administration and disposal of capital which, in turn, does not necessarily guarantee an unequivocal equilibrium in the spatial distribution of resources.

Labour has yet to be associated with the problem of the

ownership of capital. The opposition between labour and
capital cannot be derived from the structure of the
production process or from the structure of the economic
process. Rather, labour and capital have always been
intrinsically connected but with the proviso that
everything contained in the concept of capital is a
collection of things (objects) which are the result of
human labour. Man alone is a person, both as the subject
of work, and independent of the work that he performs:
"... capital cannot be separated from labour ... [nor can]
labour be opposed to capital or capital to labour, and
still less can the actual people behind these concepts be
opposed to each other ..." (Pope John Paul II 1981, 45).

The 'consistent image', in which the principle of the
primacy of person over things is unconditional was
fragmented by the social evolution of the 'economistic'
perspective, that is, by a philosohical shift of emphasis
in human thought. In this way, labour was separated from
capital and set in opposition to it, and vice-versa,
reducing them to two (impersonal) production factors
juxtaposed in a common perspective. The individual person
and his moral values cannot, however, logically be made
subservient to the premises derived from materialist
theory (i.e. the primacy and superiority of what is
material) unless man is prepared to surrender his status
as a person (i.e. to admit that he is less-than-man).
Accordingly, the spatial ramifications which emanate from
these terms of reference must also concede de facto the
role of man as impersonal 'subject' against the
predominance of the production process (a collection of
'things'). In this context, the 'human' element of a human
geography of political economy must clearly be withdrawn,
so that any observed distributional patterns or figments
of spatial organisation must rightly be referred to as a
'geography of things'.

PART FIVE: HUMAN GEOGRAPHY, POWER AND ETHICS

HUMAN GEOGRAPHY, POWER AND CONFLICT

Human geography is increasingly marked by a climate of
frustration and uncertainty in the areas of epistemology
and methodological procedure. The social reality of the
geographic environment broadly manifests a lack of
purpose, meaning or direction. The erosion of social
relations and the dysfunctioning of the spatial fabric of
distributive organisation reflects the growing anonymity
and alienation of individual social actors not only in
culturally-specific situations but also in the wider
global context. Declining levels of intersubjective
communication and understanding have offset and
accelerated the deterioration of mutual participatory
action towards the redressing of socio-spatial
disequilibrium and environmental debilitation in both
advanced industrial economies and nations in the
developing world. The confusion and ambiguity which
pervade the terms of reference employed by science (i.e.
those which define the reasoning and rationality of its
decision-making) generally amplify the growing
predominance of two juxtaposed themes: the power of the
(increasingly authoritarian) political state; the absence
of any clearly defined social ethics.

Technocratic planning and political instrumentalism have
tended to intensify socio-spatial problems. They are
impervious to the pursuit of individual creativity or to
the realisation of self-expression. Socio-spatial problems
increasingly tend to mirror the shortcomings attributable
to the dictums of centralised technocracies, particularly
those in the advanced capitalist world: the accumulation
of material wealth and the obsession with political and
economic power and domination. Much of this is a chaotic
scenario where social conflict may be closely related to
the economics of unemployment whose spatial expression
discloses wide geographical imbalances within and between
regions. A deeper examination of the causes of these

problems may only be found at the level of state ideology
and the covert ways in which the application and
interpretation of the state's philosophical underpinnings
are manifested in practice. Alternatively, the scientific
and technical sophistication of the authoritarian state
may be channelled into open military conflict, either to
destabilize the political economy of an 'adversary' or in
an attempt to radically modify geo-political frontiers and
thus undermine the cultural fabric of specific areas in
the world which are seen to constitute a threat to the
dominant ideological system.

Much of this is a geography of psychological disorder
which either dismisses or distorts ontological and
epistemological considerations in its evaluation of the
purpose and use of the spatial environment. For those
individual actors whose praxis is situated in the socio-
spatial formation, the overriding emphasis on the
materialistic terms of social reality not only devalues
the spiritual and aesthetic content of being (see Bailey
1986), but simultaneously dehumanizes the geographic
subject through a synthetic and incomprehensible
representation as to the purpose and meaning of man and
his existence, and his relationship with nature. 'Well-
being', 'happiness', 'contentment' and 'wealth' are devoid
of any substantive content and whose materialistic terms
of reference are coextensive with 'getting', 'having' and
'wanting' rather than clarifying the more profound
ramifications of these concepts. What then is to be done
and how might it be achieved? Is radical and lasting
change which takes account of the fullness of the human
personality, its value and belief systems, a conceivable
and rational possibility, or is a social and spatial
exegesis an untenable optimistic expression of Freudian
'wishful-thinking', and therefore a practical nonsense?
Johnston (1982) has argued that no real progress or
understanding can be made in human geography until an
adequate theory of the state - and a methodology which

elucidates the rationale of state policy-making - has been evolved. Any investigation which attempts to examine the (re-)organisation of space will encounter the dualism between the institutional (power) structures of the political state and the ways in which it prescribes and attempts to legitimize the behavioural climate of social relations (some norm of social conduct). The apparent tension and irreconcilability between the standpoints and intentions of the technocratic state and a social ethics which evokes the spiritual (psychic) and affective attributes of human existence is a paradox inasmuch that their schism indicates not only philosophical differences of opinion but moreover, the fundamental disunity and condition of 'unknowingness' within man himself.

POWER, ETHICS AND THE POLITICAL STATE IN HUMAN GEOGRAPHY

Technocratic rationalism has broadly made 'materialism' (the capitalist world order) and 'work' (the socialist nations) the measure of 'progress' and 'success'. Both systems prescribe an 'ethic' of (a seemingly limitless) technico-scientific mastery and power of man over nature. Much of this can only be achieved when (moral) value systems emanating from cultural and religious practices are swept aside and/or 'scientifically' reinterpreted. The ethos of the 'technocratic ethic' is to emphasize a sense of peoples' unlimited 'freedom' to manipulate and exploit the natural and social world for their own ends. The purpose and meaning of existence are founded on the principles of hedonism, utilitarianism and egoism. There can be no sense of responsibility, care or accountability: all are inconsistent (non-rational) with its terms of reference.

While the sense and meaning of 'political rationality' remain essentially obscure, the concept of power in the contemporary political state is more clear. Essentially, it legitimizes itself by fear, repression and threat to

its subjects. Insofar that the political state (or the international grouping of nation-states through a common system of economic, political and military interests) is contained by territorial (spatial) delimitations, its functions are rightfully of concern to human geographers. The political state has largely conferred its own relative autonomy as a law-making entity, devising its own regulations and structures. The effectiveness of state power is hinged on various techniques which encompass the economic, social, cultural and religious fabric of life. Primarily, the state requires obedience and achieves this through its relations of power within society. The influence of such power and jurisdiction is ultimately marked by geographical parameters. The primacy on the technocratic domination of all aspects of life implies that the authority of the modern political state is not based on a juridical or moral guarantee. Moreover, the role of technocratic elitism concerns the preservation of its power structures and to check trends which potentially threaten to undermine its authority and, by implication, the system of social and spatial relations it has prescribed: "So why bother ... with the rank-size rule, or any so-called laws of location; much more relevant is the basic political law - 'get power and then hang on to it' - which has many spatial ramifications" (Johnston 1977a, 7).

The technocratic state maintains a front of pseudo-paternalism which otherwise conceals an authoritarian machinery whose function is to (ideally) prescribe and regulate both process and structure within the social formation. The manipulation and control of the socio-spatial system by the state power structures undermines any concept of 'democratic planning' procedures. Public participation is shunned and the wider sphere of the collective social interest pertaining to "the various goals that are being considered ... in resources, as well as in personal and cultural values" (Wirth 1939, 508) is otherwise dismissed. Rational planning under the

technocratic state is a purely secular business whose
'organising principles' are totalizing and which provide
no basis for explaining human discontent or 'estangement'
(see Relph 1976, 1981). Power - and its supportive network
of ideological precepts - masks social reality to create
an illusion of meaning to further its own ends:
domination, enslavement, gain, the proliferation of
injustice, and so on. All existence becomes distorted by
the philo-scientific theorizings of the technocratic state
about the human condition, where opportunism, and
pragmatism govern all its concerns and intentions.

As the power structure in advanced political economies
(whether capitalist or socialist) increasingly displace
any notion of truth, people become stereotyped and deluded
by the bureaucratic elites which govern their interests.
Technocracies qua 'scientistic orthodoxies' dispossess
their subjects of all that is of real cultural and social
value, that is, the individual is denied any
responsibility for independent moral judgement.
Responsibility, as such, implies a condition of complete
subservience to the state (i.e. the ruling elite) so that
"people will [not only] see things that do not exist"
(Tuan 1974, 246) but will also believe in values which do
not exist. State power is to a large extent sustained by a
form of 'group hallucination' or condition of social
schizophrenia. So too will the organization (and any
dysfunctioning) of the spatial structure reflect the
relationship between power structures and society, and the
extent to which 'lived experiences' of the immediate is
offset by some (ideological) preoccupation with utopian
futurism, or whatever.

As in all forms of knowledge, human existence is also
subjected to the scientific demystification of life. A
structualist explanation of human geography will restrict
the socio-cultural understanding of geographic phenomena
to purely political and economic terms, so that in terms

of the relations of power with society: "The ultimate goal of the human sciences is not to constitute, but dissolve man" (Levi-Strauss 1966, 247). If, however, the subjectivity of human beings is constituted in the main by cultural and religious practices, then no individual social actor can authentically 'externalize' (distance) himself from the specific cultural instance in which the terms of social reality are grounded. The false consciousness generated by the ideological tenets of state power structures concerning the nature and organisation of space and society can be effectively undermined through human reflexivity (i.e. self-understanding). Trigg (1985, 204), however, offers a paradoxical proviso insofar that: "A reflexive social science applying its findings to itself will soon destroy itself".

Jung and Koestler have both stressed that the balance between the conscious and unconscious life of the individual is of critical importance for the maintenance of awareness and wholesomeness and therefore, to fully apprehend and understand social reality. An atheistic (psychically inert), secular culture finds no intrinsic meaning or purpose in human existence, nor the true sense of the acquisition of knowledge and wisdom and least of all, the value of moral responsibsility. Its only appeal is to the finite terms of reference of scientific explanation couched in bio-chemical, physicalistic and materialist expressions only. Levi-Strauss (1963), however, maintains that symbolism, ritual and mysticism are sacrosanct even to the most secularized technocracy. Further, Foucault and Jung associate the development of the modern Western state and its structures of power with the concepts evolved in the institutionalization of Christianity. Foucault (1982, 213-215) claims that the 'pastoral power' and its conceptual framework in the Christian Church has lent itself easily to forms of political imitation. The political state has accordingly revised, reinterpreted, distorted and inverted such power-

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forming concepts as 'service', 'pastoralism', 'sacrifice', 'confession', 'salvation' and 'truth' to suit its own ends and purposes.

If individual social actors are necessarily to be made subordinate to the political state, then ideology must mask/eradicate metaphysics and religion which are made coextensive with a "dependence on and submission to the irrational facts of experience" (Jung 1983, 357). Religion, moreover, claims to offer an external point of reference from which the individual is able to exercise judgement and fairness in his decision-making. Further, the role of religion provides an extramundane category which relativizes the claims of political power structures and affords the individual an existential justification for the exercise of spiritual (psychic) and moral reflexivity in his deliberations of society and space. State policy can potentially be exalted to a credo above all critical reflection so that the (totalitarian) political state becomes an 'object of worship'. It alone has the power to prescribe and interpret its doctrines/ ideology 'authentically'. The political state, moreover, must use its structures of power to perpetuate its own authority and existence. To achieve this goal, it may establish socio-spatial differentials and disparities which can be reinforced by media campaigns, systems of surveillance and statutory administrative machinery. Essentially: "The mass State has no intention of promoting mutual understanding and the relationship of man to man... The more unrelated individuals are, the more consolidated the State becomes, and vice-versa ... The dictator State... is based on the greatest possible accumulation of depotentiated social units" (Jung 1983, 399-400).

The contemporary political state can rarely claim to have absolute (totalizing) power. Conflicts (systems or legitimation crises) are frequently generated in the relations between the structures of power and society (see

Foucault 1982; Habermas 1976; Held 1982). These typically arise against forms of state domination (social, ethnic, religious), of exploitation (economic) and of subjectivity or submission (where individual rights are attached). Any combination of these may exist at any one time. 'Antiauthority' conflicts generally arise when some facet of individuality is apparently threatened by political power structures so that a (sub-)system crisis identifies and attacks a specific form of power. The spatial inequalities generated by unfairnesses in the allocation of goods and the environmental scarring of landscapes in the exploitation of primary resources tend to reflect the general mode of social consciousness. If certain uses of knowledge constitute a 'threat' (physically and/or psychologically) to human existence, it is rarely disdained by the dominant politico-scientific elite if such knowledge reinforces the structures of power. The technico-scientific rejection of 'limits' and the absence of moral responsibility in social planning and development attempts to foster a social climate of uncritical acceptance towards the aims of the political state. The individual social actor is rarely encouraged to inquire into the roots of his specific ontogenesis, nor of the possible correlation it may have with the conditions of contemporary social and economic existence. The epistemological and methodological standpoint of the technocratic state is rigorously maintained through the political relations of power with society. The prospect of confronting the issues which uncover the real sources of global injustice - even in the distributive terms which concern the human geographer - is not only problematic but may also raise scepticism, ridicule, outrage and conflict, particularly if the ideological structures of power are unmasked: "... the historical background of practices ... which make objective social sciences possible, cannot be studied by context-free, value-free, objective theory; rather, those practices produce the investigator and

require an interpretation of him and his world" (Dreyfus and Rainbow 1982 , 166).

Geographers have increasingly become attracted to the problems of social injustice and inequalities in the allocation and distribution of goods in a spatial context. Put simply, the ideal redistributive terms implies permitting access to goods and services hitherto denied to those who have been excluded from equitable participation in the economic and technical systems of the technocratic state. Such a change in emphasis also suggests removing (some of) the material advantages and benefits of those who exploit the oppressed. Short of those who advocate radical structural transformation (revolutionary Marxist theory) in advanced capitalist systems, others have attempted to formulate a liberalist solution. This calls for an idealised articulation of Western man in terms of his ability for moral self-understanding. Gauthier's (1986) principle of 'minimax' relative concession presupposes that people are unequal in material endowments but that a rational point of agreement can be reached by the limited reappropriation of wealth through a system of bargaining. It requires that each actor acquires needs sufficient as to neither jeopardize his own position, nor worsen the situation of others. Equality, as such, is manifested as a consequence of prohibitions on particular forms of unfairness and exploitative relationships. Notwithstanding, all decision-making concerning the allocation of resources requires some consideration of the effective aspects of a social ethics at the level of collective as well as individual conscience. O'Neill (1986) suggests that the ideal social order is one which transcends concepts of justice and instead fosters a climate of mutual trust and beneficience.

A liberalistic 'middle ground' which echoes theoretical concepts such as social justice and egalitarian notions largely fails to establish the bases for its supposed

objectivity. This approach tends to be self-legitimating, pre-assuming the validity of its procedural method while simultaneously deriving 'principles' and 'justice' from them. The objective grounds for a moral consensus depends upon the adequacy and plausibility of the 'internal strategy' which seeks to justify the criterion. Conversely, a subjective morality - which frequently promulgates absolutist expectations - is generally unacceptable/untenable because it requires the existence of an 'external strategy', that is, some metaphysical or religious concept to which it is possible to appeal and on which a consensus can be achieved (see Fishkin 1984). Much, however, must be read against the content of the propositional truth-claims of a metaphysically grounded social ethics when measured against the magnitude of social and economic ills and the basis for political decision-making in the modern technocratic state.

The technocratic state largely bases the terms of its rationality on the dictum that all human needs are ultimately fulfilled through materialism (practice). Marx, for example, understood social justice in terms of a material struggle, not as a cultural or metaphysical quest. Philosophically, Marxists must develop an account of truth which is neither instrumentalist nor a correspondence view. Any extrapolation of truth raises moral issues, yet Marxists have consistently rejected morality as a product of pure ideology in class societies. Lukes (1985), however, exposes this view as a paradox: when Marxists reject morality as ideological, they are rejecting morality in the narrow sense of any system of rules. All systems, however, will treat individuals in accordance with a common standard, but if all individuals are intrinsically different by definition, then organisational (political) systems will treat people unequally. This will inevitably be reflected in the spatial organisation and structure of society. While Marxism's 'moral philosophy' is precariously hinged on a

strong utopian view of the socialist future, it
nonetheless concedes that the need for a social ethics
unavoidably arises as a 'realm of necessity' whose
expression corresponds to a precognition of some
fundamental human 'good'.

Habermas – in his attempt to ground the conditions for a
consensus view in a 'rational' society – draws heavily on
Kohlberg's (1971) cognitive developmental psychology.
This may otherwise be discussed in terms of a search for
an 'ethical optimum'. Kohlberg's theory broadly suggests
that there are stages in law and morality and in world-
views which are apprehended on both the individual and
collective social levels. For Habermas (1979, 120), this
corresponds to an "expansion of ... consensual action",
that is, stages towards a universal rationality. Lukes
(1982) and Thompson (1982) both remark, however, that
there is no scientific evidence which might justify the
notion of sequential stages in the development of 'moral
consciousness' and nor, by implication, can there by any
realistic terms of reference for discussing an 'ethical
optimum.' The relaxation and possible discarding of all
social and cultural values which Habermas seeks in his
theory of communicative ethics may conversely precipitate
"a reprimitivisation of instinctual demands" (Ottmann
1982, 95). Such an eventuality would be tantamount to an
increasing aggressiveness directed (in the first instance)
against the structures of power in the political state
which otherwise constitute the institutional forces of
social oppression. Put in its geographical context, it
invites a situation of possible spatial anarchy which
finds no recourse to acknowledge the legality or ('moral')
principles of any political order which attempts to
organize social and spatial structures 'from above'. The
rationale of Habermas's 'communicative' and 'emancipatory'
ethics becomes suspect and "... must not be seen in terms
of a liberation from power and authority as such, but in

terms of an attempt to legitimate 'just' forms of power
and authority" (Ottmann 1982, 96).

Mackie (1977, 91-99) goes some way towards reinforcing
this argument in his claims that any (ethical) 'principle
of universalization' is unlikely. Society, he claims,
evaluates morality in terms of relevance and less by the
size of numerical differences between one group and
another. Differences in moral interpretation reflect
differences in personal perspectives. For Mackie, these
differences can only be reconciled by seeking a
generalizable maxim which might accommodate such variance
at some point of acceptability. Mackie's standpoint,
however, smacks of pragmatism and moreover, can claim no
solid grounds for working towards a position of
'acceptable moral compromise' through rational discourse.
The ethics of the political state introduces a definite
distinction between (the primacy of) economics and moral
understanding: the latter is generally subsumed in terms
of the former. Both corporate capitalism and centralized
state socialism elevate the role of science and technology
as the final solution to all human needs and problems.
This corresponds to an instrumentalist ethical format
orchestrated by the institutional (power) structures of
the political state rather than through any spiritual and
cultural transformatory process within society. A social
ethics which presupposes that (structural) socio-spatial
change must first be preceded by a change in the
consciousness of individual social actors is anathema to
the technocratic state. Roszak (1975, 193-197) suggests
that there is a 'psychic price' to be paid for scientific
enlightenment and the technological mastery of nature:
people often experience social alienation and estrangement
in their relations with the structures of power but their
"spiritual disconnectedness" cannot be satisfied by any
political order.

The technico-scientific rationalization of ethics is

otherwise an attempt to ground the metaphysical element of
human existence in materialism and therefore, to subjugate
the theory and formation of ethics to the structures of
power in the dominant political state. The
demythologization of cultural and religious values
implicit in the content of ethics corresponds to the
secularization of the mystical and the sacred. It has led
Dickinson (1983, 1) to inquire: "Should 'wealth' be
measured only in terms of money and the material
possessions it will buy, or should spiritual and cultural
values be assessed?" All forms of societal organisation
which are institutionalized by a code of ethics will
generally be suffused with some combination of customs,
rituals and symbolism. Modern society still appears to
require some sense of quasi-mystification acting as a part
of its guiding principle(s). This suggests a search for
ontological origins which are derived from epistemological
inquiry but one which in a contemporary secular context
implies an optimism that this 'mysticism' will provide
meaning to the purpose of existence and to the reality of
institutional structures (see Gaskin 1984).

The spatial organisation of society has increasingly
necessitated that human geography should develop and
clarify a value-position from which the terms of its
rationality and its interpretation of social reality might
be evaluated. This is an essential pursuit if geography as
a discipline of knowledge in the social sciences is to
legitimate its status with a raison d'etre as well as to
"prescribe a standard of health" (Roszak 1973, 368). The
elucidation of a social ethics is not only fraught with
philosophical conflict but will also encounter the
ideological structures of the political state. Many of the
conflicts which philosophical reason fails to resolve will
frequently generate a social ethics which is established
on a set of prohibitions, over which the political state
presides. Kant's quest for a moral principle which might
be objectively and universally valid for human decision-

making could not be grounded a priori on the standpoint of
'duty' as the formal content of reason. Kant's
'categorical imperative' (practical rule), moreover,
demonstrates that any attempt to evolve a universal law
which is grounded in the terms of reference of an
autonomous human reason will become relative and
pragmatic, so that almost anything can be formulated as a
'general rule' (see Horkheimer and Adorno 1972, 85).
Rather than removing the dichotomy between subject and
object, disparities are reinforced because, in practice,
there is no adequate means for assessing competing ends in
society. Kant's extrapolation of practical (moral) reason
emphasizes the inconsistency of human thinking and
behaviour. Any appeal to the unconscious realm of human
reason collapses the ethical dilemma into the metaphysical
domain (i.e. non-reason).

Enlightenment philosophy provided the foundations for an
'ethics of pessimism' whose expression is frequently
grounded in utilitarianism. This, according to Hampshire
(1984), signifies a position of conflict and general
disagreement in the area of moral knowledge and the
inadequacy in the choice and scope of the philosophical
terms of reference with which to deal with the problem.
The impetus which has granted contemporary expedience to
utilitarianism qua 'decisionistic ethics' can be most
pertinently grounded in the (nihilistic) writings of the
Marquis de Sade (1740-1814). De Sade exploded the logical
inconsistency of the (pseudo-)moralism of liberalistic
philosophical thinking and expounded the full
ramifications of Enlightenment thinking. De Sade's
philosophical ideas were encapsulated in a form of 'bio-
chemical determinism' so that every aspect of existence
must be understood in purely mechanistic terms. Social
ethics, on this account, are incidental and moreover,
irrelevant, non-rational manifestations of the human
condition: "Morals become only a word for a sociological
framework ... a means of manipulation by society ... The

word 'morals' ... is only a semantic connotation word for non-morals. What 'is', is right" (Schaeffer 1975, 39). Effectively, reason is reduced to instrumentalism so that its 'use-value' is superior to its propositional content. The morality that is formulated and enforced by the technocratic state is grounded in ideology whose expression is found in behaviourism and (Freudian) psychological determinism.

Put in a geographic context, the presuppositions which underpin the ideology of the technocratic standpoint suggest that social actors respond instinctively to stimuli and disincentives (obstacles) within the spatial environment. Space - and those actors who participate in the socio-economic fabric of the territorial entity - is characteristically competitive, exploitative and hierarchical in terms of the organisational structures and social stratification superimposed upon it. Space is attributed a subjective dimension in which people are objectivized as (passive) opportunists who are essentially preoccupied with the maximisation of their own ends. There is no moral content in any consideration of conceptual criteria such as distributional justice, fairness in the accessibility to goods and services, and so on. Man is otherwise discredited with having any measure of intuitive reflexivity in his interaction with the spatial relations of society. He cannot, therefore, critically evaluate the legality of state power machinery which implements and maintains the spatial structures which constitute the basis for social praxis and ecconomic practice. The social ethics of the technocratic state offer no proviso for moral collective responsibility. Citizen participation, as such, is orientated towards the recognition of political authority and obedience to the 'moral' interpretations predetermined by the state itself.

The morality which is formulated and enforced by the technocratic state is socially and spatially divisive.

Moreover, it is tantamount to the legitimization of (politically and legally) controlled forms of 'social anarchy' where the actual causes of differentials remain untouched. The totalizing autonomy bestowed on human reason alone affords the modern political state a position of unrestricted power and authority which, in terms of Nietzsche's 'anti-system', negates any notion of freedom, justice or fair representation. The extent to which human geography is able to resist the dehumanization of its content will largely depend upon the nature and intentions of the political apparatus which controls the relations of power in society. These will be reflected in educational policy-making and may be specifically tied to syllabus design and content. The state may determine and implement 'national guidelines' across the educational curriculum. Such measures may introduce a format for the ideological presentation of disciplines of knowledge in the social sciences, whose aim is to mask or desensitize those issues which are controversial and/or value-laden. Alternatively, the state may unconditionally prescribe what can and cannot be taught. In either case, it is an attempt by government to offset or eradicate social conflict which is generated through the necessity for a moral interpretation. Moreover, the effectiveness of state power is challenged in any confrontation with society which threatens to undermine the authority of its philosophical and procedural rationale. The imminent danger constituted by the intensification of the relations of power is where the knowledge imparted through education is reduced to a condition of complete subservience and impo tence under the totalitarian state.

In this light, the 'survival value' is reinforced as the exclusive ethical principle of human existence over which the 'will to power' of totalitarian thought and practice predominates. A naturalistic social science which expounds a behavioural ethics fundamentally requires to be critically deconstructed and redefined in a natural

perspective so that it may become a means to human
fulfilment rather than an end in itself. To these ends,
Smith (1980, 147) adds the reminder that: "Unlike other
sciences, human and natural ecology are contemplative and
judgmental in spirit." Under the tenets of 'normal'
scientific inquiry, however, the terms of 'freedom' and
'responsibility' are largely synonymous with an
individualistic concern for 'self'. This standpoint is
divorced from and indifferent to any moral considerations
about the problems and difficulties of 'others', and that
socio-spatial differentiation and a psychological
distancing from others become the overriding criteria for
individual well-being. In sum, the unity of (moral) reason
and domination in technocratic society presides over an
understanding of social ethics, but one whose
philosophical terms of reference readily collapse into
solipsism.

HUMAN GEOGRAPHY AND SOCIAL ETHICS: THE PROBLEM OF THE 'VALUE APPROACH'

Contemporary ethics are broadly based on situationism.
This standpoint presupposes that human existence consists
of a series of situations and that each situation
manifests of itself a norm of action. This is made
synonymous with a person's thinking, decision-making and
actions. Every concrete situation must be accepted and
experienced in its totality, disregarding any concern for
'outside' inferences. Abstract (metaphysical) norms are
necessarily excluded from the corpus of concrete and
existential experience. Situationism places the primacy of
experience over virtue and otherwise recognizes no general
norms in human existence beyond the immediate situation,
that is, the context of experience. A situationist ethics
is in opposition to the views expounded in Kantian
'ethical formalism' which claims that every material
(concrete) ethic is empiricist by definition and

ultimately degenerates into forms of hedonism and
utilitarianism.

Simplistically, situationism rejects any concept of 'moral
duty' or 'responsibility' in social praxis but instead
substitutes these terms for the notion of 'freedom'. For
these reasons, situationism is philosophically most
closely related to existentialism and pragmatism, since it
tends to place excessive emphasis on the role of the mood
of the subject at the expense of the objective structure
of the person to whom reference action is directed.

The significance of situationism, existential philosophy
and the ethical dilemma which this area raises is of
considerable importance to human geography and has not
been entirely neglected. Existentialism has been
popularized primarily through the work of Sartre who
sought to formulate a new method of inquiry which would
replace the unsatisfactory presuppositions of positivist
epistemology. Existentialism is concerned with the ways in
which people define their personal relations with the
world. For Sartre, 'man first of all exists' and 'is
nothing else but what he makes of himself'. Jaspers too
supports the case for the primacy of subjective
(anthropocentric) inquiry, arguing that the world has no
objective (external) point of reference so that space and
time are essentially projections of subjective
configurations of thought and experience. The
existentialist methodology is equally concerned with the
concept of 'distance' or 'estrangement' so that its
philosophical expression is one of dualism: on the one
hand, man wishes to engage in social relations with others
but conversely, must disengage (distance) himself from
social relations in order to retain/verify the
authenticity of his existence/being (see Buber 1957). The
philosophical circularity generated by existentialism
suggests that man dreads the loneliness and isolation on
the side of 'disengagement' because he is confronted with

'nothing'. If 'disengagement' is made coextensive with 'authentic being' and thus, 'freedom' from the inauthenticity of organized socio-spatial relations, then all existence is absurd because man cannot reconcile the dichotomy (disunity) of his dilemma (the problem of being). Existential man is condemned to a fragmented understanding of his own (self-)existence and that of others.

It follows that there can be no possibility of social integration nor any certitude of 'knowing' in the organization and management of the spatial environment. Either all existence is (and always had been) absurd, impersonal and anarchic ('nothingness') or man must seek an alternative explanation to uncover the meaning of 'being'. Few contemporary existentialists have stood their ground because they are unable to formulate any constructive terms of reference on the basis of meaninglessness ('nothing'). Rather, in his attempts to gain insight to his ontological alienation, man frequently succumbs to the (logically inconsistent) standpoints offered by political ideologies and 'normal' science. These hardly succeed in removing the dilemma of existential emptiness nor the need for 'relatedness' and 'belonging'. An existential geography becomes a wasteland of placelessness and human hopelessness grounded in a philosophy of alienation and pessimism from which no sense or meaning of an 'ethical content' in existence is forthcoming, or indeed necessary. If it is presupposed that man 'makes his own reality' - and that a person's understanding of perception constantly changes over historic space and time - then a generalizable (cultural-specific or universal) social ethics which cuts across perceptive (observable) society and space is unlikely to develop.

Existentialism qua situationism leads man to assign meanings to places, where some places become more

meaningful than others (through a numerical consensus of those with similar outlooks/experience) while others become increasingly obscure or lost in the 'historical consciousness'. Any understanding of 'meanings' in the wider existentialist context is in fact meaningless because there is no firm epistemological basis in which the propositional truth-content of 'meaning' can be grounded or verified. Essentially, although man seems compelled by necessity to assert himself in a societal context and enter-into-relations with others as a means of attempting to confirm the authenticity of being, it remains that he fundamentally seeks to subjectively reconstruct a landscape (space and place) on an individualistic basis. From this standpoint, the existentialist dilemma is reinforced by the inadequacy of any terms of reference which might explain/resolve the 'distance' barrier which separates authenticity (truth) from inauthentic relations (untruth). The pragmatic aspect of existentialism/situationism implies that the 'source of creativity' which inspires thinking and conscious awareness cannot be identified so that the existentialist condition "becomes a history of man's encounter with himself" (Samuels 1978, 37).

A situationist ethics which derives many of its concepts and methodological procedures from existentialist philosophy fails to clarify the linkages which would otherwise permit man to 'relate' to the phenomenal world and others in it, and neither does it arouse his 'concern' which might ultimately motivate him to overcome his 'detachment' from others. The existentialist content of situationism renders any notion of a 'fixed' ethics as both absurd and a hindrance towards the realization of human potential. Moreover, the assertion that the individual social actor must first be 'true to oneself' cannot possibly be qualified within the terms of reference of existentialism. According to the situationist-existential standpoint, there is 'nothing' in either the

present or the future which suggests any shift in philo-
psychoanalytical emphasis that might enlighten the
problems inherent in the human condition. All men are
ontologically alienated because they have no universal
framework in which to discuss the existential dilemma.
Man's 'estrangement' is not only observable in a
contemporary social-spatial context, but indeed runs
through his entire history of being. For the human
geographer, it is not simply an enhanced understanding of
the spatial environment (perceived natural phenomena) that
will provide him with a generalizable code of social
ethics which satisfy the terms of existential reality.
Rather, he must seek meaning and understanding within
'self-awareness'. Yet, the pursuit of this goal appears to
suggest that man must transcend the terms of conscious
(empirical) reality, because the autonomous
(anthropocentric) standpoint of the existentialist
approach fails to resolve the disunity (despair,
pessimism, alienation, etc) and the ethical vacuum
associated with the human condition.

Existentialism lacks any adequate terms of reference which
might uncover the significance/content of man's
unconscious (spiritual or psychic) existence or of the
ethical consequences of his thinking and actions. Rather,
the philosophical existentialism which underpins a
situationist ethics reinforces the claim that human values
can only be derived from human (experiential) existence,
but with the proviso that: "No God, therefore no essence
of man" (Grene 1959, 44). Although existentialism provides
certitude in revealing the personal inauthenticity
(nothingness) of human socio-spatial relations, it has no
basis for providing a constructive explanation of the
meaning and purpose of existence. Many of the values which
man employs in attempting to evolve a 'common ground' or
'universal syntax' (which aggregates generalizable social
attitudes yet simultaneously preserves the individuality
of the social actor) frequently appeal to social, cultural

and political criteria for their propositional (truth) content. These, like ethical ideas, may broadly be based on subjectivism (prejudice) and are otherwise theoretically suspect. For Williams (1985), the contribution of philosophy to ethical thought is explicitly negative and that the one possibility for any adequate methodological basis of inquiry is the grounding of ethical life in considerations about human nature. The issues which underpin these considerations are essentially metaphysical rather than materialist or linguistic.

The integration of ethical values in a spatial ontology of human social relations not only presupposes the existential alienation of man at the point of origin, but also acknowledges the need for a reaffirmation of human dignity in a contemporary setting where the meaning and purpose of 'being' are increasingly obscured by advanced technological societies. Macquarrie (1972, 267) believes that when existentialism (situationism) is made synonymous with atheistic humanism then individuals are 'autonomous moral agents' whose actions are based on self-determination and freedom, while for others, the untenable (existentialist) bases for (self-)authentication inspires individuals to pursue "those very limits of existence where faith arises". An existentially grounded situationist ethics is unconcerned with the verification of any propositional truth-claim which raises the possibility of an encounter/relationship between man and 'Being' (logos). Yet it tends to ambiguously concede that some meta-ethical (non-rational) imperative is inevitable, despite the inadequacy of its philosophical terms of reference with which to understand the meaning of the concept. In the face of these difficulties people nevertheless "for good and evil, whether sane or insane, rational or irrational, well-intentioned or demonic, make their choices and their landscapes" (Samuels 1981, 131).

When man attempts to rationalize the meanings and

significance of his surroundings (place) on the basis of existentialist philosophical underpinnings, then every landscape becomes a unique expression of each individual's perception of space in a specific situational context. Any ethical values which are raised by the situationist standpoint will be problematic and may only be able to claim a social consensus (a level of generalizability) with considerable difficulty. Moreover, any prospective development of ethical norms in human geography is likely to encounter the meaning of 'goodness' and 'evil' if individual social behaviour and decision-making are to be sufficiently explained. This suggests the need for a view which recognizes the fundamental disunity in the human condition – man's dignity and his depravity. Midgely (1984) argues a case for the recognition of the existence of evil and claims that every individual has a capacity for 'wickedness'. This reinforces the view that people are responsible for their own (moral) choices and actions and in this sense, the interpretation of 'conscious development' (self-awareness/authentication qua 'truth') expounded by Nietzsche and Freud is rejected inasmuch that people's motives are varied and multiple. Nor is it sufficient to attempt to explain the concept of evil in behaviouristic terms which forlornly seeks to equate 'public wickedness' with 'social problems' and 'private wickedness' with 'mental disorders'. Put otherwise, 'evil motives' are transposed into 'evil purposes'. People do not invent new motives or values which can then be articulated in ethical terms, although individuals and institutions frequently attempt to legitimize the content of their ethical reasoning through ideology. This does little or nothing to clarify the terms of social reality but rather distorts and conceals the rationale of true intentions and purposes: "Evil is personal, an ingredient of man's nature, hence its tenacity, hence the flimsiness of social science models of man and the failure of plans based on such models" (Ley 1974, 71).

The enhancement of opportunism, hedonism, utilitarianism
and egoism - together with the ideological dehumanization
of individual social actors under the technocratic state
and corporative agencies - is a contemporary global
phenomena which is steadily eroding the moral fabric of
society. The institutionalization of power relations under
the political state and corporative agencies seek to
legitimize particular forms of behaviour and attitudes in
the interest of maintaining the status quo, even if this
sanctions public immorality. While "the ethics of
capitalism stress aggressive competition and the
conspicuous differentiation of the successful from those
who fail" (Smith 1978, 358), the socialist state too is
found wanting since it broadly fails to recognize that
there are both finite and ethical limitations in the human
capacity to improve the 'quality of life', while
categorically rejecting any notion of (innate) human
greed.

Unless 'care' and 'responsibility' are recognized as
essential parts of human virtue (goodness), then human
freedom - on which existentialism and a situationist
ethics are based - is necessarily devoid of content,
meaning and truth. Nor will man be able to experience or
exercise 'justice' or 'fairness' in any real capacity. The
development of a substantive ethics for human geography
demands the unconditional integration of a personalistic
norm in the social sciences. The world of objects consists
of people and 'things', but a 'thing' is not only devoid
of intelligence but also of life. No animal or plant can
rightfully be called a 'thing', yet can neither rightfully
be equated with a person. The fundamental difference
between a person and other life-forms is not one of degree
- nor one which is inferred by man's superior intelligence
- but rather the infinite distance between the psyche of an
animal and the spirituality of man. The 'inner life'
(geist) of the person not only distinguishes his
uniqueness but enables him to assert himself with

knowledge and understanding about the meaning of truth and his environmental relations. A person is ultimately free to choose his course of thinking and action according to 'good' or 'evil' intentions and this essentially constitutes the basis of 'freewill'. Put otherwise, individual decision-making is motivated on a personal and moral level, while animals react on a natural and instinctive level.

The person is capable of rising above his instinctive nature through the spiritualization of his inner life (psyche). This precludes the using of others so that under a personalistic norm, relationships between people are based on dignity. Hedonism and utilitarianism are outlawed since they are in contradiction with the real structure of human (social) praxis. Failing this, there can be no discussion or realization of the 'common good' of society. Human freewill, in turn, is governed by man's willingness to reason over the question of existence. All people participate in the general order of existence (being) but no life-form has existence of or by its own means since no entity contains the source or final cause of existence. Man is a limited being in every sense and is self-sufficient in no profound way. Many human value systems are fictitious and largely based on historical and experiential disillusionment. The 'ideal' and reality become polarized giving way to a social ethics grounded in a non-rational philosophic romanticism. This may quickly collapse into a widespread social climate of intolerance and even hatred, so that man is intrinsically unable to discern the values of others. This is partly based on the individual's mistrust of others – their motives and desires – but is equally a reflection of his own 'inauthenticity' (shame, alienation, aggression, etc) which he also perceives in others.

Most forms of psychological analysis tend to idealize concepts such as truth, responsibility, justice and

freedom because they are evaluated in an 'emotional-affective' way. The interplay of emotions in the methodological input often endows the object of enquiry with values which correspond to subjectivism. Yet even as psychology attempts to uncover the structure and foundation of man's inner life, it increasingly confirms that the most significant characteristics of the psyche are focused on truth and freedom. Truth, therefore, cannot be dissociated from human cognition: "Truth is for man a function and a task for his reason" (Wojtyla 1982, 77). For truth to be grounded in an awareness of, and a distinction between truth and falsehood, much depends on the individual's attitude towards moral values. Questions of 'attitude' and 'awareness' are, however, situated beyond the parameters of material existence. Put in a geographic context, an evaluation of the spatial problems which arise from inequalities in the distribution of resources - and particularly those relating to the developing world - strongly suggests that the (moral) values of the person cannot be subordinate to economic policy or political ideology. The socio-spatial problems associated with impoverished areas frequently attract an emotional-affective reaction from those who have the means to rectify the disequilibrium. Because the attitude is based on 'reaction', the content of truth remains obscure as the internationalization of the causes of social injustices and spatial disparities requires - in the first instance - a critical evaluation of self.

Scheler's (1958, 1970, 1970a) philo-anthropological approach to the problem of human values provides a challenging perspective to the development of contemporary social ethics. In contradiction to Kant's 'ethical formalism', Scheler argued a case for an ethical theory based on a phenomenological analysis of 'social emotions'. Put otherwise, Scheler claimed that a 'material ethic of values' was not necessarily empiricist or materialistic, but rather that the 'emotional' content of human existence

constitutes an a priori ethic. Scheler's position is based on the presupposition that man has a privileged and unique access to 'essences' which correspond to an 'objective hierarchy of ideal values', open to phenomenological investivation. Scheler's 'a priori of the emotional' extends the discussion of an 'ethic of values' into the metaphysical (non-rational) sphere. For Scheler, only by transcending the limitations of rational (scientific) thinking can the individual establish an authentic relationship-with-others which, in turn, confirms the authenticity of the individual self and its role in the world.

Like Husserl, Scheler advocated a Cartesian 'act of withdrawal' insofar that man is able to 'disengage' himself from the spatio-temporal context of existence. Unlike Husserlian methodology, Scheler rejected a reductionist-style 'bracketing' of existential judgments where an 'Absolute essence' is isolated from the world of Life. According to Scheler, the Spirit (geist) in man is activated by his participation in Life but this represents a constant struggle and tension (disunity) between spiritual/psychic (intransient) existence and the forces of natural/worldly (transient) existence. Rather than by exercising an approach based on intellectual rationalism, the self-assertion of Spirit in man is achieved through an attitude of 'contemplative ideation'. The notion of the gradual (mutual) permeation of Spirit and Life enables man to transcend scientific knowledge and to discover the true meanings of (metaphysical) 'essences', that is, ideal values. Although Scheler's 'primacy of man' emphasizes the purposiveness of his economic activity, it predominantly asserts the person's ability to transcend the limitations of a materialist existence through his 'detachment' from worldly things. Because man is intrinsically both spiritual and physical, neither facet of his existence can be discussed without reference to the other. Ethics are specifically a manifestation of man's spiritual condition.

While neither a phenomenological approach nor the
scientific methodology provide an adequate philosophical
understanding of human existence, the latter tends to
undermine and ultimately destroy the meaning of ethics and
values because it identifies them as a threat to its
supremacy. If - as is promulgated by scientific
explanation - human cognition is exclusively concerned
with producing or reflecting 'mirror images' of the
'object world', then the psyche must also be 'material' in
essence which refutes any charge of 'contemplative
spirituality' in the area of human values. If science is
to provide an ultimate frame of reference for social
values, then it must define both the origin and content of
those values and the way in which they are transmitted in
the social world within culturally - specific contexts.
Sperry (1983) envisages a science-based value theory
through a union of science with ethics and religion, but
where 'states of consciousness' (values) are synonymous
with 'mental phenomena' arising from complex brain
structures. His contention is that science can determine
values. Although Sperry draws attention to social and
geographical 'evils' including overpopulation and
environmental pollution, his theory fails to justify the
philosophical 'leap' from considerations about 'mentality'
(states of consciousness/awareness) to considerations
about the formulation/articulation of 'values', and then
to the contention that 'science' can provide all solutions
to social evils.

The apparent schism between science and values is of
increasing concern to geographers, but one which moreover
demands a reconsideration for the basis of 'truth'
(certitude) in relation to 'freedom'. Much of what
constitutes a 'scientific ethics' is grounded in
behaviouristic theorizing and/or the generalizability of
socio-cultural practices, all of which are steeped in
ideology, relativism and pragmatism. The metaphysical
attributes of the human condition are unconvincingly

'dymystified', 'rejected' and reduced to purely empirical/objective phenomena without any adequate scientific explanation. A 'scientific ethics' otherwise attempts to legitimate its 'value-position' by appealing to its own internal categories and assumptions, but these are grounded in an impersonal view of human existence and are essentially non-reflexive. The scientific standpoint is ambiguous insofar that it precludes the meaning of and interrelationship between truth and human freedom in social ethics. Rather, the widening of horizons in human geography and a more profound understanding of its content and contribution to the questions of knowledge and existence depend upon "a heightened awareness of the basic issues amongst geographers ... resolving conflict between scientific and ethical values ... a consistent, individual effort to develop ethical guidelines, and to follow them..." (Mitchell and Draper 1982, 198).

To transcend the parameters of a scientifically-defined ethics in human geography is tantamount to an attempt by man to pursue an unpragmatic and unidealised account of truth based on the exercising of human freewill. This view presupposes that truth is a condition of freedom and a realization of freedom based on that truth permits individuals to 'distance' themselves from values which seek to exclusively tie the purpose and meaning of 'being' to material existentialism. Expressed in terms of cognition and praxis, a social ethics which is grounded in an intrinsically related concept of truth and freedom permits man to grasp the real sense of self-determination in his decision-making and accountability for his actions. Although the essence of such an ethics is unequivocably metaphysical, its cognitive transposition is manifest in practice and assumes a purposeful dimension.

It follows that any reference to 'commitment' and 'problem-solving' in geographical investigation is only possible on the basis of a concept of truth which

emphasizes the ethical completeness of the person. Failing
this, there can be no legitimate appeal to a psychological
(scientific) completeness of the individual for the
development of values in human geography. An ethics which
stresses a commitment of genuine care, concern and
responsibility fundamentally recognizes the personalistic
value of others. If this is not the case, then such a
'commitment' collapses into a form of egoism. Where
geographical decision-making is based on a behaviouristic
'ethic' or on a systematic state ideology (or on some
combination of the two), the value of the person is
subordinated to it and is invalidated. There is no basis
for meaning or understanding in terms of respect, loyalty
and dignity between one person and another. The mode of
socio-spatial organization exacted by the technocratic
state is motivated by egoism and ultilitarianism from
which it dictates its position through an 'authoritarian
ethic'. This does not constitute a norm grounded in
concepts of truth, freedom, responsibility or care, but
rather finds its expression in suppression, manipulation,
alienation and fear. Ethics embrace a person's interior
and external behaviour: either the two are inseparably
linked, or - where the personalistic norm is discarded -
an irreconcilable dialectic of 'insideness-outsideness'/
'subject-object' imposes itself. Without a clear norm or
principle from which the full value of every psychological
situation can be deduced, there can be no 'ethic of
commitment' towards geographical problems.

Scheler adds weight to the discussion insofar that he
attributes much of the dilemma in developmental ethics to
man's 'resentment' or unwillingness to pursue truth (the
authenticity of 'being'). Man's apparent lack of
objectivity in his judgement and evaluation of the world
has its origin in 'weakness of will'. Moreover, man
(freely) elects to adopt an erroneous and distorted sense
of values to offset the real significance of his
ontogenesis and of knowledge. 'Resentment' devalues the

credibility of intersubjective relationships (respect for the other) and therefore exerts a dehumanizing influence. It falsely asserts that egoism, hedonism, utilitarianism and subjectivism are acceptable human attributes and that there are no moral dilemmas to be encountered in 'being'. On this basis, there may be a bilateral accommodation between (competing) egoisms, but it is likely to be relatively shortlived. Nor can it be legitimately claimed that 'emotive-affective' reactions towards socio-spatial phenomena are necessarily 'authentic'. Primacy of 'emotion' cannot, however, be held over person; rather, it is the reverse: "'Authenticity' of feeling is quite often inimical to truth in behaviour" (Wojtyla 1982, 163).

Although man is charged with the responsibility of judgement in his spatio-temporal domain - and, as such, is the sole executor of justice, welfare, fairness and so on - it does not follow that he is the author of truth. Put otherwise, the 'evidence of one's feelings' is not a satisfactory criterion for the evaluation of others, nor for decision-making in the wider social (collective) context. The subjectivisation of all situations may, in fact, tend to exert a destructive influence and therefore generate a 'distancing' of relations with others. To experience the real value of others - their grievances and problems - not only calls for a critical evaluation of empirical data but also demands the transcendence of 'emotional-affective' senses through the 'spiritualisation of the psyche' (inner life). The secularization of a social ethics for human geography can only deal with the external manifestation of phenomena ('outsideness') and provides no basis for explaining concepts such as 'discontent', 'estrangement' and 'emptiness'. The completeness of ethics requires the recognition of a metaphysical precept in its content so that "the way forward is the way inward" (Roszak 1975, 239).

PART SIX: CONCLUSION

The conscious subject of all geographical inquiry in the social sciences is man, without whom there can be no definite point of reference of any meaning or significance. Human geography, notwithstanding, has become increasingly concerned with the problematic issues of epistemology and methodology which might explain and possibly resolve the apparent tension within the discipline itself. The pursuit of these objectives has interlocked human geography with the questions raised by its relationship with science, knowledge and existence.

Geographers - akin to other social scientists in allied disciplines of knowledge - have, on the one hand, sought academic recognition and respectability through the adjudication of science, but are conversely at a loss to clarify and defend the essential nature and content of geography within the parameters of the scientific citadel. Moreover, the dilemma in which geographers find themselves is rooted in the confusion, uncertainty and ambiguity which circumscribe the area of epistemology. Those questions which pervade an understanding of the ontology of socio-spatial reality tend to be treated with even greater reluctance and obscurity on the part of social scientists. The ontogenesis of human existence - and that of the natural environment in which the concepts of space and place are grounded - is a fundamental pre-requisite to the understanding of human geography. Yet it remains a 'grey area' which is evaded or dismissed without adequate explanation by science, presumably because it demands 'getting behind' the philosophical standpoints which attempt to ground the conditions for 'knowing'. Short of postulating a behaviouristic (impersonal) thesis based on the tenets advanced by (neo-)Darwinian explanation, science has largely been unable to present a coherent view of the meaning and purpose of human existence, or of man's relationship with and dependency on the natural environment and its resources. These shortcomings provoke a consideration of the negative attributes which

constitute the basis for the management of distributional
networks and the geographical problems associated with
economic disparities, social deprivation and injustices
and so on. While ontology implies an investigation of
'essences', metaphysical theorizing is largely anathema to
science because it has no adequate terms of reference to
explain the inference of acausal (indeterminate)
principles in practical social reality. Meta-theoretical
considerations, moreover, are frequently discounted by
science as possibility-conditions of phenomenal
investigation.

Human geography must ultimately reconsider the wider
implications of its status as a 'science'. Science grounds
its interest and prescribes its method through its own
autonomous categories of theory and practice. The
technical interest threatens to eclipse the individual in
such a way as to dominate every aspect of existence. The
instrumentalization and orchestration of society and space
by the technocratic state and corporative institutions
constrain individual freedom of choice and expression so
that the relationship between science and society becomes
increasingly opaque. The permeation of ideology in science
and society plays a crucial role in the distortion of fact
and value. Notwithstanding, the grounding and
dissemination of these contradictions (states of false
consciousness) are fundamentally attributes of individual
and collective self-deception which reflect a general
condition of existential inauthenticity. Despite a growing
momentum in contemporary science and society towards a
position of a 'post-everythingism', this otherwise
reflects an apparent inability and pessimism to deal with
the actual.

Progress in human geography has been largely constrained
by the modern Western scientific paradigm which prescribes
what is factually admissable (truth) or inadmissable
(delusion). While the overriding issue of the scientific

paradigm primarily concerns the need to discover a
universal concept of truth which will effectively
innovate/restore unity within the disunity of opposite
(competing) ends in human (social) existence, all its
arguments must, notwithstanding, presuppose a distinction
between subject and object if any meaningful statement is
to result. The causal laws of the natural (objective)
world constitute the rules of the paradigm and provide the
explanatory mechanism which 'makes sense' of human
experiences. For human geography, socio-spatial phenomena
are situated in a behavioural matrix where the individual
actor is the ongoing product of a system of social
engineering. Human existence, however, cannot be
simplistically reduced to an impersonal physico-chemical
expression. Nor is a purely atomistic view of the human
mind a sufficient basis for supporting the notion that the
person is a product of sensory behaviour patterns which
are exclusively geared to concepts of materialism or work.
No convincing case can be found in the normative
presumption that a seemingly ongoing dialectical function
between the components which comprise the social formation
will – at some unspecified, future point in time – provide
the ultimate synthesis towards a new dynamic understanding
for the management and organization of people and space. A
structural explanation of human geography switches the
emphasis of the scientific paradigm towards the concept of
power and the ways in which technocracy attempts to
legitimate and extend its authority. Scientific progress
qua paradigm change increasingly risks the charge of
sterility, inertia and dogma. Science tends to
unconditionally resist and exclude forms of knowledge
which digress from its referential parameters of reason
and rationality, yet many of these elements are widely
manifest in human thinking and behaviour and have a
profound impact on the constitution of social reality in
its spatial context. Put otherwise, that which cannot be
assimilated into the propositional mould of scientific
inquiry (causal empiricism) is suspect and unacceptable.

Much of the current debate in human geography is deeply entrenched in a frantic search for a viable schema of action whose overriding concern is with the material and physical survival and reproduction of society. The magnitude and proliferation of geographical problems in contemporary global society are both legion and awesome: the technico-scientific mismanagement of environmental resources, the distributional imbalances in the allocation of the goods which satisfy basic needs, the geo-political ramifications of military hostilities and conflict are but a few. Geographers have increasingly tended to become preoccupied with a developmental programme which interlocks socio-spatial processes and structures with political practice, through which it is believed possible to realize the goal of an 'ideal' mode of social and economic existence.

Differences in political persuasion amongst geographers have released a plurality of approaches whose thematic expression range from 'technical control' (positivism/ instrumentalism), enhanced 'mutual/intersubjective understanding' (humanism) and the 'critical-emancipatory' school of thought. Although geographers have become increasingly aware of the depth of philosophical choice which underpins the presuppositional content of the various modes of inquiry, the relative degrees of insight generated through the plurality of different perspectives amounts to little more than a grasping of fragmentary partial truths about society and space. No philosophical school of thought has yet to generate a firm epistemological basis on which human geography might establish a more complete (holistic) view about the nature of reality and truth. While a plurality of paradigms in human geography may be useful in exposing the merits and shortcomings of competing approaches, it may achieve little else than to ensnare geographers within the circularity of philosophical discourse.

The pace and scope of paradigm change is, however, typically constrained by the 'scientific acceptability' of any new criteria, that is, the ease with which knowledge can be integrated into orthodox (ideologically dominant) systems of thought. While paradigm shifts are taken to represent real structural changes in the social formation, they frequently fail to take account of the dynamics of social changes and are unrelated to the expression of values and attitudes which question the meaning and purpose of existence. Such myopia not only imposes definite parameters which restricts the developmental horizons of knowledge, but simultaneously initiates a form of censorship which precludes any possibility-condition of truth. Under the 'normal' scientific paradigm, 'scientific knowledge' counts as the only form of intellectual and spiritual knowledge but must ground this claim in the contention that man is a 'perfectly rational agent' in the social/cognitive sciences - which clearly he is not (see Cherniak 1987). Rather, there is greater reason to suggest that there is a disproportionate relationship between scientific progress and social wellbeing than had previously been recognised. This tendency inevitably reverberates through the spatial fabric of social relations especially when scientific and technical developments are innovated into the social formation (that is, both at the 'infrastructural' and 'superstructural' levels) by the political state and its ideological machinery.

This view appears to unequivocably tie human geography to political action in order that it may harness a practical expression at the collective social level. Conversely, the ideological inconsistencies and the socio-spatial shortcomings contained in a political economy approach of human geography readily collapse the (presupposed predominance of the) material aspects of existence to the terms of a moral dilemma. Neither a geography in capitalist societies nor that which is formulated under a

Marxist structuralism has been able to develop an
acceptable social and environmental ethics on the basis of
scientific knowledge qua materialism alone. The tasks of
'commitment' and 'emancipation' under the aegis of a 'new
regional geography' must not only relate processes of
social change (and therefore modifications in spatial
structures) to a mediation between the cultural-specific
and global level of explanation (see Janos 1986), but
equally extend its paradigmatic horizons beyond the
confines of a 'neutral' and impersonal science. Failing
this, there can be no understanding of man as the personal
agent in human geography, nor of the dynamics which
underpin his beliefs, value systems and behaviour.

The pursuit of concepts such as 'emancipation', 'justice'
and 'rational decision-making' in human geography must be
preceded by an enhanced understanding of 'self'. Put
otherwise, it is necessary to 'know' the substantive
content of any 'commitment' through the authenticity of an
individual's personal existence. Human understanding - as
the basis for meaningful intersubjective relations - is
unlikely to be adequately contained in the structure of
language. If language is raised to a quasi-independent
'external' status (subject) then man (object) is
effectively made subordinate to it. Language cannot
function as a vehicle of mediation to express human
thinking and reflection about the relations within the
social formation. Rather, as Heidegger and Wittgenstein
have shown, when philosophical and methodological
procedure are geared to the primacy of language, then
questions of meaning, rationality and reality (in the
context of geographical inquiry) ultimately collapse into
the realms of metaphysical speculation and (linguistic)
'silence'.

Understanding, moreover, must be grounded in meta-
psychological processes where human intuition corresponds
to an immediate awareness of the meanings embedded in

perception and experience. Intuition, therefore, becomes a
vehicle for the transfer of psychic inferences to the
conative and affective attributes. Put in this
perspective, the individual actor is value-laden and
carries within his cognitive reflexive thinking a 'moral
fabric' in his geographic decision-making which is
exercised through his freewill. This would seem to suggest
that 'truth' is a property of judgements rather than
propositions, since a cognitive understanding of
intersubjective relations and social ethics can only find
a sufficient basis in the personal intuitive mind (see
Reid 1986).

The learning process in human geography consists of active
construction/reconstruction of personal meaning in which
content and context are crucial to an enriched
understanding of knowledge and existence. This challenges
the inductivist view of science and is at once at variance
with the idea of an impersonal and 'neutral' (value-free)
procedure which sets behavioural (Piagetian) psychology as
its mainstay to explain learning processes. Although
'normal' science primarily seeks unity through the fusion
of mind and body, it fails to accommodate a whole range of
'extraordinary' phenomena which are otherwise expressions
of the individual's spiritual or psychic existence. Far
from dismissing these attributes a superstitious or
illusory residues from the primordial (pre-scientific)
past, 'intuitive understanding' - and the mysticism which
it frequently evokes - reflects a timeless thread in human
existence which cuts across history and space through the
'collective unconsciousness' or psychic memory. The
'collective memory' of the human race operates on both a
cultural - specific and universal level and carries the
meaning and purpose of existence and reality regardless of
personal world-views or belief systems.

The philosophical systems of thought which underpin the
understanding/explanation of geographical phenomena are

broadly lacking insofar that they fail to account both for the inconsistencies and tension of opposites generated through competing interests, as well as the possible inter-connection of 'synchronistic occurrences' (causally unrelated events) which permeate into the world of social (objective) reality. Moreover, the conditional (time dependent) status of an autonomous science means that its propositional truth-claims may perhaps be satisfied at one time, but not at others (see Wright 1987). The increasing momentum towards the complete dehumanisation of human geography is seemingly ominous unless a radical shift in its philosophical and methodological emphases is forthcoming. The reconstitution of a meaningful and purposeful human geography demands a reworking of the ontology of social reality, and thus, of man himself. That this suggests an upheaval in the order of an 'epistemological break' which otherwise challenges the legitimacy of the categories on which the 'normal' scientific paradigm bases its concepts and internal stragey, is undeniable. Failing this, however, an impersonal social science will be relativist, pragmatic and unreliable insofar that nothing can ever be known with any certitude, nor understood in any profundity that the humanitarian and moral considerations so frequently raised by human geography can be apprehended with a new sense of awareness and urgency (see Head 1986).

Human geography - perhaps more than at any other time in its comparatively recent historical development - has reached a decisive crossroads where it must choose between a purely secular and mechanistic cast for the explanation of socio-spatial phenomena, or to tread the more uncertain path where the existential structures of 'normal' scientific inquiry collapse into the mystical and 'extraordinary' domain of human experience. While the standpoint of modern (post-enlightenment) science has increasingly sought to expel mysticism from the content of its rationale, all branches of scientific inquiry -

natural (physical), biological, cosmological and social - indicate that there is an unequivocal unity-in-diversity behind and within the universe which has been established by a 'law-giving' or 'organizing principle'. Paradigm shift - for want of a better term - is tending towards the realization that observer and the observed are one and cannot be meaningfully separated. The postulation of an 'anthropic principle' in cosmological science should not, therefore, preclude its application to the social sciences. For human geography, an 'a priori' materialist preoccupation with the efficiency and organization of (socio-)spatial distribution systems is but a partial representation of human completeness and invites all manner of deviance and contradictions in term.

Rather, the materialist concerns and dilemmas expounded by an applied human geography cannot be holistically apprehended unless they are preceded by the individual's self-knowledge ('individuation') of his participatory role in spatio-temporal processes and structures. Seemingly, a return to something akin to a Baconian standpoint for a 'natural' scientific approach in human geography - where the mystical/indeterminate has a recognised and indispensable place in human rationality and reason - provides an increasingly logically consistent alternative to the dehumanising and non-explanatory impasse offered by an instrumentalist philosophy of existence (see Capra 1983). If the fusion of physical (normal) and metaphysical (extraordinary) provides the necessary key to the unity of 'insideness' and 'outsideness' (i.e. understanding), then a realism which must essentially comply with the tenets of a 'non-positivist' empirical methodology that Johnston (1986) would have for human geography is clearly inadequate on this basis.

The central dilemma of human geography has been marked by the fundamental philosophical and existential disunity between body, mind and spirit. Much of the onus for the

acceleration of this tendency can be attributed to the deterministic character of modern scientific development. Modern man's terms of reference have become increasingly orientated towards the (over-)emphasization of the empirical categories of the world (i.e. 'outsideness'). The scientific insistence of the unconditional causal explanation of all social-spatial phenomena has brought any metaphysical view of the world into disrepute. This has been accompanied by a parallel movement towards the demystification of transcendental images perceived in the phenomenal world. Whilst the ideal of a 'pre-established harmony' (an absolute synchronism between the physical and the psychic) by an antecendent order which is a priori to human consciousness - yet endows man with meaning and purpose - has been fiercely opposed by 'normal' science, the notion has hardly been disproven (see Leibniz 1962). Moreover, Jung's (1985) postulation of the 'principle of synchronicity' may increasingly be seen less a superstition, more a hidden truth. The psychic level of intuitive awareness ('insideness') is a phenomenal world in itself which can be reduced neither to the neurological nor the metaphysical, but from which emerges a clear distinction between that which is apperception about the external world, and that which is true perception. While 'apperception' corresponds to an isolated (fragmentary) state of mind confined to conscious activity and reflection about man, space and place, 'perception' is conversely tuned to the laws and dynamics of unconscious phenomena (that which is 'behind' apperception) and transcends the fixed categories of spatio-temporal knowledge imposed by 'normal' scientific explanation.

By this measure, the goal of true perception is one of individual pursuit directed towards the restoration of a rational unity between the seemingly transient and intransient aspects of existence. Far from being a retreat or disengagement from the 'real' world, the activation and transposition of 'inner awareness' to the cognitive level

of articulation and reason will explode the 'unreal' parameters of an 'autonomous' science and its ideological systems which constrain and confound geographical thought and inquiry.

GLOSSARY

Absolute: A concept which is complete, unconditional and self-existent. It cannot be modified by cultural, psychological or any other circumstantial inferences. Sometimes used an an antithesis of relativism.

Anthropic Principle: The postulation that precise physico-chemical circumstances are necessary to enable the universe to be cognizable, that is, if it is to be capable of evolving observers who can be aware of its pattern and structure.

Anthropocentrism: The view that all thought and considerations are ultimately grounded in man and human structures.

Anthropology: That which deals exclusively with man, his relationship with himself and with other men, this including the studies of sociology and psychology, but nothing beyond man.

Antithesis: The direct opposition of contrast between two things.

Archaeological method: After Michel Foucault. A theory which suggests that the human sciences can be analyzed as having an internal self-regulation and autonomy. The view that discourse is a rule-governed system and which is self-referring.

Archaeological (structural) holism: After Michel Foucault. That the whole determines what may be admissable even as a possible element. Where the whole is therefore greater than the sum of its parts. That there are no parts except within the field which identifies and individuates them.

Archetype: After Carl Jung. The psychological interpretation of dream symbols that have appeared throughout the history of man.

Authenticity: A term used by existentialists whereby man validates the genuineness of his existence by an act of the will or a feeling of dread.

Autonomous man: The right of personal freedom or of freedom of the will, as in Kantian philosophy.

Axiom: An established principle or self-evident truth.

Background practices: The historical social, cultural, religious and linguistic elements which endow the subject and institutions with meaning.

Behaviourism: Doctrine that, given adequate knowledge, all human actions admit of analysis into stimulus and response.

Being: A term denoting the area of bare existence.

Connotation: The implication of meanings to words other than the definition of the word.

Cosmology: The scientific study of the evolution of the universe.

Deduction: A form of a priori reasoning or inference where the particular is grounded from a logical analysis of general premises and propositions.

Determinism: The view that human behaviour and action is not free but controlled by motives regarded as external forces which render freewill an illusion.

Dialectic: A method of reasoning whereby change takes

place by means of triadic movement. Two opposites (thesis
and antithesis) are resolved in a synthesis which in turn
becomes a thesis and the process thereby continues.

Dualism: A theory which recognizes two independent
principles.

Empiricism: The belief that knowledge is the result of
experience, not of theory.

Epistemology: That branch of philosophy which is concerned
with the theory, nature and source of knowledge, its
limits and its validity.

Existential: Relating to and dealing with moment by moment
human existence. Dealing with empirical reality rather
than theoretical considerations.

Existentialism: An anti-intellectual philosophy of life
which maintains that human experience cannot be grounded
in nor explained by scientific or rational terms of
reference. Existentialism emphasizes that man is free in
his decision-making in a contingent and seemingly
purposeless world.

Geist: Spirit. An expression of intellectuality and
sensibility.

Hermeneutic: That which concerns the area of
interpretation.

Humanism: There are two meanings: (1) Any philosophy or
system of thought that begins with man alone which attempts
to explicate a unified meaning of spatio-temporal
existence; (2) That part of humanistic thinking in the
above wider sense which emphasizes the hope of an
optimistic future for mankind.
Humanism is sometimes associated with the philosophies of

phenomenology and existentialism.

Hypostatize: A metaphysical and theological term of reference. That which is rendered as unsubstantial or attributed to an abstract expression.

Idealism: A system of thought in which the object of external perception is mind-dependent.

Ideographic: A method which attempts to isolate the singularity and uniqueness of a phenomena.

Individuation: After Carl Jung. The process of self-becoming or of self-awareness in the development of the individual.

Induction: The inferring of general law established on the basis of the observation and study of particular instances. The theorem is deemed to be valid that if it is true of any particular case then it is also true of the next case in a series.

Instrumentalism: A term associated with the orchestration and manipulation of ideas and knowledge which is grounded in a pragmatic philosophy.

Linguistic Analysis: A branch of philosophy which attempts to extrapolate the meaning of philosophical concepts in terms of their natural (ordinary) language context. Philosophy is a vehicle for the clarification of 'surface' structures rather than offering explanations, particularly those allied to a value position.

Logical Positivism: A philosophical school of thought which restricts knowledge to facts derived from observable phenomena. It holds that all metaphysical theories are strictly meaningless since, in the nature of the case, they are unverifiable by reference to empirical facts.

Materialism: The view that reality is nothing but matter and its movements and modifications. Consciousness and mind are wholly due to material agency.

Metaphysics: The theoretical study of knowledge and existence which critically examines the meaning of reality. That which is beyond physics.

Methodology: The study of the procedures and principles whereby the question of truth and knowledge is approached.

Monadological: A philosophical term, after Liebniz, denoting the ultimate unit of being, that is, of God or some divine principle.

Monism: A theory which rejects the duality of matter and mind.

Mysticism: Two meanings are prevalent: (1) A tendency to seek direct communion with ultimate reality of 'the divine' by immediate intuition, insight or reflection; (2) A vague speculation without foundation.

Naturalism: The view that reality is constituted through the empirical world alone, not by some supernatural agency.

Negative Dialectics: A critical mode of enquiry which assesses the relation between concept and object, between the set of properties implied by the concept and the object, between the set of properties implied by the concept and the object's actuality. It attempts to show the developmental contradictions in the object's own claims about itself and about what is possible.

Nihilism: A denial of all objective grounds for truth. A belief that existence is fundamentally senseless and meaningless whose scepticism and negativity frequently

precipitates destructive tendencies in the individual or in society.

Nominalism: A doctrine that asserts that only the particulars (elements) are real and that universals and abstract concepts are mere names.

Nomothetic: A method which is law-seeking and concerned with the formulation and verification about phenomena.

Ontogenesis: The origin and development of the individual being.

Ontology: A branch of metaphysics which is concerned with the essence of things or being in the abstract as opposed to material existence.

Pantheism: Doctrine that God and Nature are identical. The universe is an extension of God's essence rather than a special creation.

Paradigm: An ambiguous concept which broadly corresponds to a set of beliefs, values and methodological procedures which are recognized and shared as a consensual view by those who adhere to a particular school of thought.

Parallelism: A concept which attempts to establish a relationship, correlation or contact between two opposites, such as mind and matter or good and evil, so that any imbalance, disunity or tension is no longer apparent.

Phenomenology: A philosophical school of thought which is broadly the antithesis of the logical positivist standpoint insofar that the subjective encounter (reflexivity) of experience and consciousness is paramount to the areas of knowledge and truth.

Practice: The realm of work; the organisation and (re-) production of materialism.

Pragmatism: A philosophical viewpoint which assesses the criteria of meaning and knowledge solely in terms of its practical bearing upon human interests, that is, through experiential and experimental inquiry.

Praxis: The wider sphere of human activity in its social, cultural, religious and other related facets.

Premise: An assertion from which a mode of thought is inferred and developed.

Presupposition: A belief or theory which is assumed beforehand as the basis of argument or logic. Such a prior postulate often consciously or unconsciously affects the way a person subsequently reasons.

Propositional Truth: Truth which can be communicated in the form of a statement in which a predicate or object is affirmed or denied regarding a subject.

Psychologism: The view that all statements of fact and value can be subsumed under psychological terms of reference.

Quantum theory: A branch of physics which investigates the behaviour of sub-atomic particles and other related phenomena.

Rationalism: That which is related to or based upon man's power to reason consistently. That reason alone is a source of knowledge and is independent of experience.

Realism: A view that universals or general ideas have objective existence. That reality is not mind-dependent.

Reification: A process whereby a person, social phenomena or abstract concepts take on the appearance of things. The reduction of the personal to the impersonal. That which is alienating.

Relativism: A view that knowledge can only be understood in terms of its relations to place, time and belief systems.

Romanticism: A philosophical view of life or reality that has no base in fact, but is rather the product of an exaggerated optimism.

Scientific Method: The development and procedures by which a science obtains knowledge. A term which is usually equated with logical positivism.

Semantics: (1) Science of the study of the development of the meaning and uses of words and language; (2) The exploitation of the connotations and ambiguities in words.

Solipsism: A metaphysical view that the self (the individual) is the only knowable, or the only existent thing.

Structuralism: A view which attempts to establish basic elements (concepts, actions, languages) and the rules or laws by which they are combined in the area of human activity.

Structuration: After Anthony Giddens. The conditions whereby the role of human agency interacts with the continuity and/or transformation of structures, and thereby the extent to which human agency influences the reproduction of the systems themselves.

Synchronicity: After Carl Jung. The simultaneous occurrence of two or more meaningfully but not causally

connected events. Also known as the Acasual Connecting Principle.

Teleology: A doctrine of final causes which forwards the view that developments are due to the purpose or design that is served by them. The ends are a necessary means of understanding the cause.

Totemism: A belief system in which natural objects are assumed to represent the ground of relationship within a social group.

Vitalism: A doctrine associated with pre-scientific biology which asserts that life originates in a vital principle distinct from chemical or other physical forces. The origin of the concept has been equated with Aristotle's 'entelechy' - the vital function which transforms mere substance into a living organism and which simultaneously strives towards a state of perfection.

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