

THE QUESTIONING PROCESS IN THE DEVELOPMENT OF KNOWLEDGE

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"The logic of the human sciences is ... a logic of the question"

(Gadamer 1975: 333).

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ABSTRACT

The aim of the present study is to investigate the role of questioning in the learning-teaching process, with particular reference to English second-language students studying the disciplines of the Human Sciences. The broad context for the study is the imperative for higher education institutions in South Africa to meet the learning needs of those students previously disadvantaged by the Apartheid schooling system. The focus of the research is on how particular kinds of questioning may serve to mediate between the historically constituted disciplines of textual knowledge characteristic of the Human Sciences and the worlds of knowledge and understanding of new, underprepared learners.

The study was conducted in two phases. In the first phase, the subjects were students (n=117) admitted to the University of Natal through an alternative selection process, the Teach-Test-Teach Programme. The selection procedure was designed to reveal the academic potential of students who did not meet the standard academic criteria for admission. In order to develop and consolidate their identified potential, selected students were required to participate in a foundation course. The data for this first phase were drawn from aspects of students' performance on the foundation course, in particular, their responses to tasks designed to elicit different kinds of questioning engagement.

The second phase of the investigation was situated in a context of curriculum development in the Department of Psychology, necessitated by the changing learning needs of substantial numbers of underprepared students. The primary subjects in this phase of the study were the second-language students of the first-year psychology class (n=274). The study explores the nature of their engagement with the task demands of different kinds of examination questions. In addition, the

task engagement of these students was compared with that of a group of failing first-language students (n=88) in order to establish whether the academic difficulties of the two groups could be explained in the same way.

The framework of analysis incorporated a combination of quantitative and qualitative elements. However, given the textual nature of the tasks in the Human Sciences, the usual relation of the quantitative and qualitative modes of analysis was reversed, with established general quantitative trends providing the context for more detailed qualitative analysis. Categories for analysis were derived from the data drawing on theoretical analyses of the mediated nature of both tasks and cognitive functioning.

Tasks conducted in the first phase of the study were of three kinds: questioning text; modeling appropriate questioning of text; and analysis of academic questions. Contrary to the received view that students are passive or inactive, analysis of their responses to these tasks reveals a highly active process of cognitive engagement. The data show that because underprepared students do not understand the implicit questioning epistemology of text, the question posed by a textual task is transformed and reconstructed. This reformulated question then provides an inappropriate framework for the construction of a possible answer.

In the second phase of the study, the investigation focuses on students' engagement with conventional academic assessment questions. The transformation of given questions was again evident; inadequate answers could be interpreted as very effective responses to entirely different questions than those posed. The analysis of engagement with different kinds of academic questions (factual, relational or conceptual) reveals that the particular formulation of the question provokes varying kinds of inappropriate engagement. This finding provides a strong indication of the mutually constitutive nature of tasks and cognitive processes. Finally, a comparative

analysis of students from different educational backgrounds reveals that the phenomenon of underpreparedness can be distinguished from other sources of failure. The study concludes that the nature of academic tasks, the process of instruction, and the cognitive engagement of students are all implicated in the problem of underpreparedness and must, therefore, be addressed in the design and implementation of effective intervention strategies.

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CHAPTER 1

RATIONALE

1. RATIONALE

1.1 Context of Study.

The context of South African society in transition provides the impetus for this focus on the process of questioning. However, these terms have become so common-place that it is necessary to clarify the nature of this transition and its implications particularly for education. The most immediate sense of the 'transition' is from the recent history of the oppressive practices of Apartheid towards a more equitable and democratic society. The nature of this transition has central significance for both intervention and analysis in the educational sphere. The provision of differential education was a key ideological bastion of Apartheid, designed to develop different skills and abilities for highly segregated roles and functions in society. The years of inadequate schooling for African Black students, augmented by deliberate policies with respect to the content and form of such education as was provided, has had far reaching consequences. The effects are variously evident, but can be succinctly phrased as a 'lack of access' to successive educational levels, whereby a minuscule number of students finally exit the school system with results that qualify them for entry to tertiary education. This inequity or differential selectedness (Bourdieu and Passeron, 1977) is a serious challenge to universities that assert the liberal values of access on the basis of merit. How can merit be comparatively identified where prior learning opportunities have been manifestly unequal?

Perhaps of even greater educational import, is a more encompassing conceptualisation of the transition that is currently in process, a conceptualisation that takes a longer historical view. The construction of the new democratic South African society entails bridging divisions that have far deeper roots than the immediate (and disastrous) effects of Apartheid and its schooling system. Beyond the artificially created separations, lie divergent learning histories, 'African' and 'Western' traditions that now confront one

another in a globally evolving context. This confrontation, which in the past has entailed the almost complete domination of one system by the other, can now no longer be resolved in so facile a manner. Conflict, where there is an orientation towards the reconstruction (or even reconstitution) of society, creates a new and fruitful territory for investigating the foundations of two trajectories of knowledge construction, two cultural worlds. If the epistemic foundations of knowledge construction characteristic of these world-views could be better understood, it would facilitate their transformation and mutual impact (Bradbury, 1995; Craig, 1987; Craig & Miller, 1985).

The political imperative of access for all students on an equitable basis to institutions of learning, creates an educational space within which different cultural and specifically, learning trajectories may confront one another. The accepted functions of academic institutions, (to extend the boundaries of knowledge through research and to teach the best of current knowledge to new generations of scholars) become problematised in a period of transition where, to borrow a wonderful phrase (albeit a sexist one) from Bronowski, "new men are knocking at the door" (1973: 267 - 268). Education must, essentially, always involve change, implying movement or development through encountering and mastering new fields of knowledge. However, where there is continuity between the past and the present, and where the future seems neatly entailed in the present, this central characteristic of change seems to be subverted. Education in a static frame becomes little more than an induction into the skills and knowledge bases of the past, very often preserving access to these domains for the privileged few. The fecundity of a context of conflict and transition, such as South Africa today, lies in that what has become taken-for-granted within one particular learning history becomes exposed as a set of conventions and constructions rather than a singular unequivocal truth. In other words, the imperative to open up the academic world to those who come from outside of

the tradition, forces an epistemic self-reflectiveness on the part of those within the tradition that would not ordinarily have been necessary, or even possible.

The challenge, therefore, for South African universities through the last decade of the 20th century has been to increase access for all students not only to tertiary institutions as such but, more importantly, to the processes of enquiry and traditions that typify them. Only the development of such access holds the potential for full participation in, and the possibility for transformation and reconstruction of, the enterprise of knowledge. In these terms, the task of the educational researcher becomes that of "dynamic analysis" involving altering the "automatic, mechanised, fossilised character of the higher form of behaviour, [turning] it back to its source through the experiment" (Vygotsky 1978: 64).

South African society in transition provides an exceptional moment for this kind of investigation in that it manifests particular fluidity, through the meeting of two traditions, 'African' and 'Western'. This historical juncture of transition, or what Marx refers to as a "period of decay" (1986:15), presents a particularly fruitful research moment, an opportunity for explanatory investigation, as in a period of transition, "generative structures, previously opaque, become more visible to agents" (Bhaskar 1979: 61). If what is to be investigated is itself in the process of change, the research paradigm must incorporate that very process of change, instead of attempting to artificially 'freeze' or 'fix' the phenomenon. A developmental paradigm (Vygotsky 1978) explicitly acknowledges and accommodates the changing nature of the focus of study. This focus on change might be termed a dialectical approach, which Pascual-Leone extends from a conceptualisation of "... Nature as a whole, as *overdetermined* (i.e., determined in excess of need) by a multiplicity of hidden, continuously evolving and interacting, causal/dynamic factors" (1987: 536). In even greater measure the parameters of social reality are not fixed and finite, but constantly shifting, particularly in periods of socio-political transition.

The overt goal of education to provoke learning (change) in learners is, in essence, process rather than product orientated. It is because education is intrinsically concerned with change and process, that Carr and Kemmis argue for the development of a research paradigm that is "*in and for education*" rather than "*on or about education*" (1986: 156). Such research will, like education, expressly aim to impact on, and contribute to, the process of change under investigation. In this connection, Marx's injunction is pertinent in pointing towards an interactive (and proactive) paradigm for research in the social sciences: "The philosophers [researchers] have only interpreted the world, in various ways; the point is to change it" (1986: 23).

This project consisted of two phases of investigation, each occurring in the context of shifting interpretations of the imperative for institutional transformation. Over the last decade, interventions addressing the learning needs of underprepared students have shifted from a marginal 'add-on' model (the 'student support' of the eighties) to forms of curriculum development that have impacted on mainstream teaching (Carrim, 1993; Lazarus et al, 1989; Mehl, 1988; Molobi, 1994). The first phase of the research was conducted in the context of a wider research project initiated at the University of Natal in the earliest stages of the institution's engagement with the questions of redress and equity. An alternative selection programme, the Teach-Test-Teach programme, aimed to increase access by assessing students for entry to the university on the basis of potential rather than prior learning. These selection decisions necessarily had implications for the educational practices of the institutions at the entry level. Initially, students selected by these alternative means were supported by the provision of parallel development sessions (1989 - 1991), that provided the vehicle for the research conducted in Phase One of this study. These support sessions outside of the regular curriculum were, in time, incorporated in teaching-learning developments within disciplines across the university curriculum. In this way, educational development work was acknowledged as part of the

mainstream curriculum rather than a marginal activity. The second phase of the project coincides with attempts to transform curricula within discipline-boundaries, in this case, psychology (1995 - 1998). The content and form of the first year programme in psychology was radically restructured in recognition of the department's responsibility to specifically engage with the learning needs of a changing student population. In this phase, the problem of underpreparedness is recognised as central, rather than peripheral, to the educational practices of the academy as a whole.

1.2 Phase One: The TTT Programme.

Given the context of inequality and the commitment of the University of Natal to equalising opportunities for entry to degree studies, a research project was established to investigate and implement alternative methods of student selection. The usual method of student selection was based solely on matriculation results, a method that measures the efficacy of school learning and thus, inevitably reveals the inadequate and inappropriate past learning of 'disadvantaged' students. Alternative assessment has most often (as is still currently the case in South Africa) been attempted by means of psychometric, edumetric, or aptitude testing. The argument for such alternatives is basically that school results are unreliable indicators of a student's 'true' ability. Aptitude or other tests claim to be specifically designed to assess abilities that may not manifest themselves in school performance but that students, nevertheless, may possess. Despite such developments as the anti-test movement, psychometric testing is still a substantial international industry. In South Africa, where there are such vast inequities in education, objections to such testing procedures stem from a recognition that psychometric tests, can do little more than tap the past (unequal) learning of individuals (Griesel, 1992; Miller, 1989(b); Feuerstein et al, 1980, 1981, 1981). Where school results are 'incorrect' due to malpractice on the part of those who mark the papers or because there was some disruption or distraction that prevented the student performing his/her best, then (and **only** then) will a psychometric,

aptitude, or edumetric tests reveal something different. While cries of corruption abound about the matriculation system in South Africa, no-one would deny that this is only one (and a relatively minor) factor in the disadvantage which Apartheid education has delivered. Beyond the inaccuracies of measurement lies a real lack of opportunities to learn the very skills and knowledge that such tests (matriculation exams or aptitude tests) measure. Because of this, conventional testing will not make substantial redress possible, as only those who have previously been advantaged in some way will demonstrate the required proficiencies and level of mastery.

This reality means that assessment for potential which is both accurate and fair (hence satisfying the university's dual commitment to excellence and equity) requires not just the development of another test, but a complete paradigm shift (Feuerstein et al 1981(b); Griesel, 1992; Miller, 1992(a)).¹ Acknowledging that what people know and can do is not an innate and fixed quality to be 'discovered' but rather the product of what they have learned or been taught, an assessment of future learning potential must assess engagement in the **process of learning** as opposed to what is known or already mastered. This is imperative where people have been denied opportunities to learn both the appropriate content and form that is expected of university entrants. Such an approach to selection is, therefore, inextricably tied to educational intervention and 'prediction' is dependent not on obtaining a fixed and reliable score, but on "the extent to which the educational process intervenes between the learners and the nature of university learning tasks" (Griesel 1992: 1).

This learning-teaching process is conceived of in Vygotskian terms as 'mediation' or other regulation (as opposed to the direct transfer of knowledge and skills) and necessitates analyses of the nature of underpreparedness (or what students bring to the situation) and

¹ See Appendix 1, The Paradigm Statement of the TTT Programme.

the nature of university tasks (Bradbury, 1995; Craig, 1989; Griesel & Bradbury 1994; Miller, 1989). It is this dual analysis and, by corollary, the design of appropriate mediational tasks, that formed the TTT Programme's developmental approach to the problem of student selection. Potential can only be retrospectively recognised once it is translated into manifest ability (which is of course of little informative educational value) or alternatively, must be assessed in the process of becoming, that is, in the learning actions of students. "Any attempt to identify potential academic ability must, therefore, translate into an attempt to provoke individuals to realise abilities that are not manifest in their previous academic performance" (Griesel 1992: 2 - 3). Such an approach to assessment is accommodated by the recognition of universal human mental capacity and the socially constituted and changing nature of cognition:

"Between universal human competence and the performance demands imposed by tasks at a particular time and in a particular historical context, is a zone that we could refer to as a Zone of Human Potential. How people operate within this zone is largely a function of education in the broadest sense of the word" (Miller 1989(b): 158).

Assessment from this perspective firmly incorporates the principle of change by measuring not just a single final product, but rather the development of the individual over time, and assumes that education will effect change or movement in the "zone of human potential". In Feuerstein's terms, "The central issue for assessment is whether to measure stability or change and, accordingly, to construct instruments with the purpose of reflecting predictability or modifiability" (1981: 203). In 1988 the first Teach-Test-Teach Programme was run at the University of Natal in order to select, on the basis of potential

academic ability, students to degree studies in 1989.² In line with the focus on the learning process as opposed to the products or manifest ability, a two-week programme of learning and teaching was designed. Through the construction of detailed performance profiles of each student over a two-week period, the TTT programme provided opportunity for an assessment of the student's modifiability or propensity to benefit from and contribute to an academic education. In this framework, unexpected high-quality responses (Feuerstein, 1981) provide an indicator of what might be possible given further learning opportunities to consolidate mental processes which are as yet embryonic (Vygotsky, 1978).³ The two-week programme was repeated in 1989 and 1990 and it is from these latter two programmes that the subjects for the first phase of this study are drawn.⁴ The two-week selection programmes were specifically designed to capture the essential nature of studies in the Human Sciences.⁵ Recognising the substantial disjuncture between students' past learning and the demands of university studies, the programme aimed to deliberately defamiliarise students (Craig 1992) in order to provoke new learning. New content-knowledge and new ways of operating on that content were developed through a programme designed to develop not only skills and knowledge at the first level of cognition, but also the appropriate epistemic assumptions and meta-cognitive controls.

² The TTT Programme was originally designed by A.P. Craig, on the basis of her task analyses conducted in academic departments (inter alia, English, Music, Mathematics and Physiology) at the University of Natal. The programme was co-ordinated by H. Griesel. I am deeply indebted to this wider research programme for the challenging context in which the first phase of this study was nested.

³ See Appendix 2 for graphic representations of student performance profiles on the two-week TTT selection programme.

⁴ The timetables for the three two-week selection programmes are included in Appendix 3.

⁵ The term "Human Sciences" is used inclusively to mean studies in the faculties traditionally referred to as Arts and Social Science.

These different analytic levels, (Ströhm-Kitchener 1983) informed the structure of the programme, to include:

- a) first level content and skills (primarily through the lectures of academics from the different disciplines);
- b) an introduction to the epistemic nature of degree studies (the 'Knowledge Production' component originally developed by Craig, 1989); and
- c) consolidation sessions that modelled appropriate meta-level controls for students.

The focus, therefore, was not solely on how to solve particular problems, but on developing the cognitive actions appropriate to solving such problems. Assessment mirrored these same analytic categories.

Each cohort included a small number of students who were evidently well prepared for university study despite the fact that their poor matriculation results did not reflect this; and a larger group of students who demonstrated potential academic ability but were underprepared to meet the demands of university study independently. This latter group was required to attend weekly educational development sessions with the TTT programme staff. These sessions provided the context in which to further our research into the nature of underpreparedness, university task demands, and appropriate mediation and instructional design.⁶ The data were drawn from tasks completed by students during these educational development sessions. Three types of tasks provided different perspectives on students' questioning engagement and the nature of academic enquiry:

- 1) tasks that required students to generate their own questions in relation to a given text;
- 2) tasks that modelled an appropriate questioning process; and

⁶ The second phase of the TTT Programme's operations (1991 - 1993) further extended the educational development emphasis in the form of 1) distance education prior to assessment (now in the form of an entrance examination) and 2) a credit-bearing foundation course for students in their first year of study.

3) tasks that required students to analyse and respond to questions typical of the Human Sciences.

The first phase of this study was, therefore, located within a larger research project investigating appropriate forms of assessment and instruction where the target group of students is underprepared in relation to the task demands of university study.

The labelling of students as 'underprepared' is contentious where there is a political imperative for valuing different cultural and knowledge bases in an equal way. Some would argue that it is not the students but the institution that is underprepared (for example, Molobi, 1994) and that students from traditionally privileged schooling systems are also underprepared for critical study. While this may be true, the nature of such underpreparedness differs in kind and demands various responses. The particular interest of this study is in the lack of preparation afforded by poor schooling and in the tension between past and present learning histories. It is argued that it is precisely through this focus that radical curriculum change will become possible. These transformatory possibilities begin to be evident in the shifts in institutional practices in the subsequent phase of the project.

1.3 Phase Two: Discipline-based Curriculum Development.

Although initiatives such as the academic development sessions offered through the Teach-Test-Teach programme constituted a recognition by the institution of its educational responsibilities towards students, practices of teaching-learning within disciplines remained largely unaltered by these concurrent offerings. Courses such as Psychology I taken by very large numbers of students, continued to be offered in the conventional way, primarily relying on the transmission of information through lectures and assuming independent learning through reading on the part of individual students.

This mode is highly ineffective where students' prior learning opportunities have developed neither the epistemic assumptions appropriate for the textual construction of knowledge nor sufficient meta-cognitive controls for independent study.

In 1995, the department of Psychology at the University of Natal in Durban embarked on a radical restructuring of the first year programme. This was prompted by a growing realisation on the part of academics that it was no longer a select group of students who required educational development but, rather, that regular mainstream activities should change to meet the changing needs of all students. Although the course aimed to provide a discipline-specific foundation in psychology, content for the course was selected to provide a mix of psychology-specific content, and modules with broader interdisciplinary relevance to studies in the human sciences. The modules comprising the course were; An Introduction to Psychology, Evolution, Intelligence and Forms of knowledge. The form demands common to psychology and other cognate disciplines in the human sciences were highlighted in the design of the course. The conventional emphasis on lectures was shifted and, instead, recognising the centrality of textuality and learning through reading (Bradbury & Griesel, 1994; Luckett, 1995), information usually transmitted in lectures was developed in the form of module texts. A tutorial programme consisting of structured tasks to guide students in the reading of these texts, became the primary learning-teaching vehicle. Weekly tasks and written feedback⁷ emphasise the conceptualisation of the course as a process with which students must constantly engage. Tasks conducted during the course of the semester were mirrored in the structure of the examination assessment. The data for the second phase of the project are drawn from students' responses to examination questions and provide the opportunity for differentiating the kinds of questions typically used to assess students. The refinement of task demands in this way demonstrates the interactive construction of task parameters and cognitive

⁷ See examples of these tasks and feedback in Appendix 4.

functioning (Miller, 1992(b)). In addition, the mainstream nature of the first year psychology course makes it possible to include comparative data for first- and second-language users of English or, students from different educational backgrounds under the Apartheid system. The analysis of the different forms of engagement of these two groups, hence, makes it possible to distinguish the phenomenon of underpreparedness from other possible sources of academic difficulties.

1.4 A Focus on Questioning.

At the start of the TTT educational development sessions, students were asked to reflect on their tasks and notes from the selection programme and to raise questions about problem areas that they identified. It was soon patently clear that students experienced enormous difficulties in constructing suitable questions that would further drive the learning-teaching process. This problem became the research focus of the present study: the questioning process in the development of knowledge. In addition to this immediate and empirical impetus, the focus on questioning is germane in terms of broader theoretical concerns with the nature of knowledge construction and learning. The possibilities for learning through questioning seem self-evident. However, not all contexts of learning are inevitably characterised by a discourse of questioning and the pragmatic constraints defined by relations of authority may severely curtail the possibilities for questioning (E.N. Goody 1978). Moll and Slonimsky (1989) suggest that practices of Apartheid classrooms discouraged enquiry and promoted rote learning that conformed to the presented knowledge of the teacher or textbook. The focus on questioning was thus defined in terms of contextual interests in instruction, development, and change with a deliberate commitment to engage in a research process that would also have explicit educational goals.

The study, therefore, aims to construct an understanding of 1) the questioning epistemology of the Human Sciences; 2) the epistemology of students with respect to questions and 3) the nature of mediational tasks that would provoke the learning of appropriate questioning. Three types of tasks were conducted with students in the first phase:

1. Tasks that require students to generate their own questions in relation to a given text;
2. Tasks that model for students an appropriate questioning process in the development and construction of knowledge; and
3. Tasks that require students to analyse and respond to questions typical of the Human Sciences.

The focus for analysis varies with the nature of the tasks:

- 1) Where students were asked to generate their own questions the focus is on **what the task demands** and the degree to which such demands are met;
- 2) Where questions are presented as a **model** for students' engagement, their answers have been conventionally scored against model answers in terms of the extent to which the appropriate model has been adopted; and
- 3) Where tasks focus on the relationship between a particular question and answer, the emphasis of analysis is on the nature of **students' responses**, that is, on the way in which they interpret and construct the task for themselves.

In each case, criteria for analysis are developed, drawing on the categories of mediated cognitive functioning of Feuerstein (1980 & 1981). These categories are quantitatively scored and then qualitatively interpreted, demonstrating the nature of students' responses with illustrative data. The explanatory frameworks which provide an overarching theoretical structure for the interpretation of these products, are provided by:

- 1) An analysis of the demands of the process of knowledge construction in relation to text (Gadamer 1975, Ricoeur 1981 and Ong 1982); and
- 2) An analysis of common sense or indigenous epistemologies (Geertz 1973 and Craig 1991).

Findings from this first phase of investigation provided the framework for the subsequent analysis of the questioning process in relation to more conventional academic tasks in phase two. In the second phase, the project focuses on the proto-typical use of questioning in the academic context, in examinations that establish whether students have sufficiently mastered the content and form of a particular course in order to proceed with their studies and finally, to graduate. A taxonomy of kinds of questions provided by Miller, Bradbury & Wessels (1997) offers a framework for differentiating particular forms of appropriate engagement. The analysis suggests that different kinds of questions may have the effect of provoking particular inappropriate lines of enquiry where students are underprepared. The notion of underpreparedness is, thus, further elaborated by establishing different grounds for failure in relation to these task demands. The evidently constitutive relationship between tasks and the cognitive action of learners, is interpreted in relation to theories of mediation particularly as provided by Vygotsky, 1978 and Miller, 1992(b), 1994(b).

The study concludes that the process of questioning in the development of academic knowledge is inextricably tied to the nature of text, the cognitive demands that textuality creates, and the possibilities for new understanding that text reveals. This approach to questioning is central to the epistemic openness of the Human Sciences whereas data collected in this study indicate that underprepared students tend to use questions in a simple dialogical manner to close the process of enquiry by grounding it in experience or some other final authority. This epistemic disjuncture makes itself evident in students'

inability to apply the requisite cognitive skills in questioning text and in generating appropriate textual answers to the frame provided by particular questions.

Finally, the study shows that students' engagement with specific task demands is constrained by variations in the form and content of questioning tasks, establishing the mediated nature of cognition and the dialectical construction of the phenomenon of underpreparedness. It is argued that effective epistemological access to the nature of texts and questioning is best achieved, not by emphasising the content of particular texts or particular questions for assessment, nor by an exclusive focus on the cognitive functioning of underprepared students. Appropriate intervention will recognise the mutually constitutive relation between the task and learners' actions. The educational challenge is, therefore, to provoke engagement with the peculiar question-answer relation of open-ended problems and model appropriate questioning strategies to regulate students' cognitive processes.

CHAPTER 2

A QUESTIONING EPISTEMOLOGY

2. A QUESTIONING EPISTEMOLOGY.

2.1 A Socio-Cognitive framework.

The tasks and problems of the Human Sciences have been socio-historically constituted within a particular understanding of the nature of knowledge. These epistemic underpinnings have, however, become "fossilised" (Vygotsky 1978) over time to the extent that the socially constructed nature of these forms is obscured and seldom reflected on by those within the academic tradition (Gordon 1988). This implicit understanding (or set of epistemic assumptions) shapes the nature of academic tasks and necessitates certain appropriate (cognitive) responses from students. Where the historical trajectory of academic knowledge is not shared by students who enter this domain, that which is implicit will need to be explicated and problematised. This process of explication will not only provide access for those previously excluded from the terrain of academic knowledge, but may also contribute reflexively to the reconstitution of the enterprise of knowledge itself.

Ströhm-Kitchener's (1973) three-tiered model of cognition provides an analytic framework through which to examine the cognitive demands of university study. She defines three levels of cognition: first-level, meta-level, and epistemic cognition. First-level cognition includes those cognitive operations that are required to meet the content specific demands of particular tasks. However, effective engagement at this level cannot be isolated from the effects of processes at the other two levels, particularly in relation to the kinds of texts (spoken or written) that constitute the academic tasks of university learning. It is the recognition of the pivotal contribution of development at the meta and, more significantly, epistemic levels of cognition, that separates this project from a study skills approach to questioning which focuses exclusively on questions as strategies or tools for learners and teachers. Questioning strategies from such a study-skills approach

will not fully facilitate effective engagement with the particular demands of university knowledge and texts, because they fail to illuminate the particular epistemic constraints that determine the choice of such strategies. (See for example, Tizzard et al 1981; Reynolds & Anderson 1982; Reusser 1988; Kendrick and Darling 1990; Heese 1994.)

The cognitive strategies that shape and regulate a learner's engagement in the process of learning, as distinct from the specific content or object of learning, contribute a meta-cognitive level or aspect of cognition. As indicated above, this process of meta-control and regulation of learning must be informed by the appropriate epistemic assumptions that underpin various domains of knowledge.⁸ Epistemic cognition involves knowledge about knowledge, reflection "on the limits of knowing, the certainty of knowing, and criteria of knowing. Epistemic assumptions influence how individuals understand the nature of problems and decide what kinds of strategies are appropriate for solving them" (Ströhm-Kitchener 1973: 222). What Ströhm-Kitchener refers to as "adult" epistemic assumptions constitute the assumed underpinnings of the problems typical of the human sciences, and require that students:

- 1) "allow knowledge to be understood in relationship to the system or context in which it is embedded, ... [i.e.] contextual relativism"; and
- 2) "understand knowledge as encompassing antithetical perspectives while allowing for the progress of knowledge via integration and synthesis". (1973: 229)

This conceptualisation of knowledge develops through an individual's involvement in a social context that is characterised by fluidity and relativity, necessitating increasing levels of synthesis and integration. It has been argued that this complexity is intrinsic to late twentieth century living that involves the adoption of multiple perspectives and roles that do not allow for a single, exclusionary perspective of reality. The impact of

⁸ The role of questioning in developing this meta-engagement is dealt with in detail in chapter 4.

technology in our contemporary world is such that "... when technics becomes the universal form of material production, it circumscribes an entire culture; it projects a historical totality - a 'world' " (Marcuse, in Habermas 1971: 90). In other words, the way of operating in, and constructing an understanding of, the world is constrained by this very complexity, where the domains of work and social interaction become transfused by the advent of modernisation. Such transfusion, in turn, undermines the singularity of technical impact that Marcuse argues for, resulting in a social reality which is multifarious in nature, constituted by multiple roles and perspectives.

This conceptualisation of reality necessarily entails the meta-level control of deciding the nature of a particular problem encountered. In these terms, failure to adequately perform on a particular task may be more fundamental than a matter of skill or ability. Perhaps learners may engage inappropriately because they "simply do not understand what it is that they are being asked to do" (Berg and Sternberg 1985: 349). Pascual-Leone suggests that the definition of what it is that one is expected to do in regard to any given task is determined by its "objectively and culturally defined consequence" (1987: 550). Miller (1994(b)) refers to any task thus constituted as posing a question, which enjoins a search for a solution, or understanding. In order to embark on this search for understanding, it is first necessary that the enquirer constitute or construct the task or formulate the question that it poses for him/herself. In this regard, the enquirer needs to know the "rules of the game", or constitute the "aboutness" of a particular situation, that constitute it in that particular way and not in some other way. Only with this recognition of the epistemic dimensions of the task is it possible to ensure correspondence between the task requirements and the chosen method(s) of solving the task.

The development of knowledge at university is characterised by a predominant reliance on the textual form. It is the socio-historical "rules of the game" appropriate to this form that constrain the writer in the production of the text and which are pertinent to the

development of an appropriate (cognitive) response by the reader (or student). More specifically, the nature of enquiry, or the process of questioning that is the concern of this study, is shaped by this textual nature of knowledge construction. A text manifests as an answer to a hidden process of enquiry on the part of the writer and, simultaneously, requires of the subject who reads it, questioning "in front of the text" (Ricoeur, 1981). Further analysis of the appropriate form of such questioning is, therefore, dependent on the conceptualisation of a specifically textual epistemology.

2.2 The Epistemology of Text.

Academic study is inextricably linked with the process of reading and interpreting written texts, and it is in the act of interpreting texts that the particular significance of the epistemology discussed above becomes manifest. The effective and appropriate interpretation of texts (or of the task posed by a text), requires an understanding of the text as a source of knowledge bound by the epistemic constraints outlined above. Despite the apparent fixity of text, understanding textual knowledge entails the recognition that knowledge is a process always under construction and incomplete, and that any answer/text is only a partial response to a question/problem. Ricoeur (1981, 1985) characterises the text as mediating between the worlds of author and reader; and reading as the active construction of meaning on the part of the reader, in interaction with the text. The critical point that Ricoeur (1981, 1985) makes is that the act of reading requires different mental operations to those characteristic of dialogue or conversation, taking into account of the history of developing ideas of which a particular text is part, and an understanding of how meaning is made in writing (Duchain & Mealey 1993). Complementing the original process of generating the text, is the role of the reader who brings a "historical consciousness" to bear on the text, that determines and colours his/her interpretation (Gadamer 1975).

Ricoeur's notion of distanciation explains speech and writing as the "intentional exteriorization" (1981: 13) of thinking. This "detachment of meaning from the event" is only partially attained in speech, and then more fully, in writing. The more complete process of distanciation in writing is what "objectifies" thought, abstracting it from an actual context, or from the intention of the author, so that it can signify meaning in an autonomous sense. In Vygotsky's words:

"The motives for writing are more abstract, more intellectualised, further removed from immediate needs. In written speech, we are obliged to create the situation, to represent it to ourselves. This demands detachment from the actual situation. Writing also requires deliberate analytical action on the part of the [writer]"
(1986: 99).

Ricoeur conceptualises this process of constructing meaning from text as countering the "distanciation" which characterises writing through the act of "appropriation", making one's own that which is alien, rescuing and constructing the meaning objectified in the text. It is only possible to perform this interpretive act of appropriation through an understanding of what the text is neither a final, independent authority, nor a source for the recovery of the meaning of the author, but the impetus for the reader's construction of meaning. "The act of appropriation does not seek to rejoin the original intentions of the author, but rather to expand the conscious horizons of the reader by actualising the meaning of the text" (Ricoeur 1981: 18). An appreciation of writing as 'distanced' from the author is the necessary basis for appropriation to occur and, in this sense, "distanciation is the condition of understanding" (Ibid.: 144).

The complementary task of the reader is, therefore, not to recover the intended meaning of the author behind the text, in an effort to ground the text in an original and single, original authority. Rather, the reader must follow the direction of the text as it points to a new world that unfolds in front of the text. "The autonomy of the text already contains the

possibility that what Gadamer calls the 'matter' of the text may escape from the finite intentional horizon of its author; in other words, thanks to writing, the 'world' of the *text* may explode the world of the *author*' (Ricoeur 1981: 139). However, appropriation entails distancing not only from the world of the author but also from the world of the reader, involving a willingness to abandon that which is already known and familiar in order to appropriate the meaning of the text. Interpretation involves an openness to the instruction or directives of the text, out from the text into other texts, into the presented world(s). Ricoeur variously describes this attitude of openness as a "relinquishment of the self" (Ibid.: 191) or as the "dispossession of the ego" (Ibid.: 193). Thus, reading requires the meta-level self-consciousness that Ong refers to as a "demolition of situational thinking" (1982: 54); the abandonment of the known, and an opening of the self towards what the text offers (Hyde, 1995). Segal argues, drawing from Heidegger, that "to question is to be in question, that is, it is the way that we ourselves are in question which shall generate the fact that we do ask questions and the kinds of questions that we ask" (1995: 265). It is this 'being-in-question', the deconstruction of the self, that text both provokes and demands of us as readers. The text is not tied to the world of the author *or* that of the reader, but refers to "possible modes of being, possible symbolic dimensions of our being-in-the-world" (Ricoeur 1981: 177).

The exchange between the reader and the text is not dialogical; the transaction of meaning is quite different to that between two interlocutors who jointly develop meaning through a series of exchanges, the 'exchange' occurring rather between the writer and text, and then again between the reader and text:

"It is not a relation of interlocution, not an instance of dialogue. ... Dialogue is an exchange of questions and answers; there is no exchange of this sort between the writer and the reader. ... the book divides the act of reading into two sides, between which there is no communication. The reader is absent

from the act of writing; the writer is absent from the act of reading. The text thus produces a double eclipse of the reader and the writer"

(Ricoeur 1981: 146-147).

The effect of impersonal distance thus created in the literate mode may contribute to a new kind of enquiry in separating "questioning as a device for the seeking the truth from questioning as a vehicle for demonstrating authority" (E.N. Goody 1978). However, the loss of the conversational context generates new demands for both writer and reader in the construction of meaning. The distinct enquiry processes of the writer and reader must work in a complementary way to bring the world of the text into being. Where there are no possibilities for direct exchange between the writer and reader, the text has no substance at all without the actions of each. In other words, the writing of a text must assume an audience who will, outside of the control of the author, appropriate the text and create its meaning. "The process of writing, however, includes as a dialectical correlative the process of reading, and these two interdependent acts require two differently active people. The combined efforts of author and reader bring into being the concrete and imaginary object which is the work of the mind" (Iser 1978: 108). Because of this separation the reader's development of meaning is his/her own and cannot be checked against the intentions of the author:

"A text cannot adapt itself to each new reader with whom it comes in contact.

The partners in dyadic interaction can ask each other questions in order to ascertain how far their views have controlled contingency, or their images have bridged the gap of inexperienceability of one another's experiences.

The reader, however, can never learn from the text how accurate or inaccurate are his views of it" (Ibid.: 166).

Reference to a questioning mode or attitude towards the text does, therefore, not suggest a dialogical or conversational sense of interlocution. The question of the text

occurs at two distinct sites: 1) the question(s) or impetus for enquiry that prompts the writing of the text, and 2) the question(s) that the text points to in terms of the possible world(s) that it reveals.

In these terms, the text must be viewed as part of a process of enquiry, as simultaneously question and answer, but always requiring the openness characteristic of a question. It is this sense of the text as part of the process of enquiry that Gadamer emphasises: "Thus a person who seeks to understand must question what lies behind what is said. He must understand it as an answer to a question" (1975: 333). Gadamer is here not arguing for the recovery of the author's original meaning, but for the appreciation of the constructed nature of the text, for interpretation that recognises the constraints that circumscribe any particular text. The individual reader must understand him/herself as part of this process of developing meaning. In other words, the reader must appreciate that s/he is a participant in, and contributor to, the textual world of knowledge. This process is not idiosyncratic (or 'subjective' in the common sense use of that term), but constrained by the text itself, and by the reading process, in a way which is intersubjectively consistent (Iser 1978). "... 'Making the text speak', [or yield up its meaning] is not an arbitrary procedure that we take on our own initiative but, as a question, it is related to the answer that is expected in the text. ... The anticipation of an answer itself presumes that the person asking is part of the tradition and regards himself as addressed by it" (Gadamer 1975: 340). The openness of Ricoeur's conceptualisation of reading is thus the essence of the questioning epistemology of the social sciences: "The essence of the question is the opening up, and keeping open, of possibilities" (Ibid.: 266). Iser (1978) likewise characterises text as a process of *opening* or stimulating questions as opposed to offering a vicarious fulfilment of 'wishes', or closure.

Iser's exploration of the nature of text focuses primarily on fictional or literary texts, and part of his thesis is to indicate the particularity of these texts as opposed to expository

texts. He argues that whereas an expository text attempts to 'narrow' or bring about convergence in the possibilities for interpretation, a literary work opens the interpretive process as widely as possible. It is this opening up which allows for the contribution and meaning of a work of literature to shift and develop across the boundaries of time and space. It is also this experience of literature that underpins claims for the validity of varied subjective and individual interpretations, or towards the relativism typical of the atheoretical approach to literature that held sway for a substantial period of time. (For example, the approach of literary critics such as Leavis of the 'Great Tradition' or the idea of a 'poetic sensibility' championed by the Romantics.) However, this personal or idiosyncratic approach to reading is rejected by Iser who claims that this multifarious nature, or the possibility for multiple and changing interpretations, is constrained or limited by the text and the reading process. The reader may impose his/her schema or frames of reference on the text (Tannen 1979; Ricoeur 1985) but the text likewise structures and frames the possibilities for developing meaning.

The construction of an understanding, or the shaping of the process of interpretation, is a function of the text itself in the following way:

"Each new correlate, then, will answer expectations (either positively or negatively) and, at the same time, will arouse new expectations. As far as the sequence of sentences is concerned there are two fundamentally different possibilities. If the new correlate begins to confirm the expectations aroused by its predecessor, the range of possible semantic horizons will be correspondingly narrowed. This is normally the case with texts that are to describe a particular object, for their concern is to narrow the range in order to bring out the individuality of that object. In most literary texts, however, the sequence of sentences is so structured that the correlates serve to modify and even frustrate the expectations they have aroused. In so doing, they

automatically have a retroactive effect on what has already been read, which now appears quite different" (Iser 1978: 111).

Despite the different emphasis in the structuring of information between expository and literary texts which Iser identifies, the development of meaning from any text involves an interplay between the demands for opening possibilities, and then closing or narrowing these again. Readers need to be able to open themselves to the instructions or conventions that the text offers and the new meaning which these make possible. Without this attitude of openness, the narrow confines of the reader's own boundaries will frustrate the new horizons asserted by the text. The openness of the literary text and its reliance on "negativity" or the unsaid in the structuring of meaning is, therefore, a matter of degree rather than entirely oppositional to the structure of an expository text. Expository text too, requires the refinement or even rejection of earlier meanings in terms of the later developments of the text, thwarting any attempt at linear processing. Questions may be particularly provoked when the unfolding direction of the text counters the reader's expectations, necessitating revisions and reconstructions of developing understanding (Graesser & McMahan 1993).

These constraints exerted by the text are matched by the (cognitive) actions of the reader that Iser claims are likewise commonly identifiable and, therefore, subject to confirmation or dispute. "...[O]ne should conceive of meaning as something that happens, for only then can one become aware of those factors that precondition the composition of meaning. However individual may be the meaning realised in each case, the act of composing it will always have intersubjectively verifiable characteristics" (Ibid.: 22).

In this process of developing the meaning of the text for oneself, Iser emphasises that the reader uses not just the stated meaning of the text, but crucially draws on the

unstated or 'negatives' of the text. Through a process of intertwining both what is said and unsaid, the reader constructs an understanding. A text, therefore, is a source not of self-contained representational or referential meaning, but rather contains the *potential* for meaning, and conveys 'directives' for the required mental action on the part of the reader to release this potential. In other words, the text does no more than establish the "conditions which bring about its effects" (Ibid.:18) or "designate *instructions* for the *production* of the signified" (Ibid.:65). Reading is thus a *process* which 'happens' as opposed to the recovery of an existent, finished product. This 'happening', or actualisation process, occurs at the horizons or fringes of known reality, drawing the reader into an exploration of the unknown and activating previously excluded possibilities. Iser conceives of this possible movement into previously unexplored territory in terms of the negative or open structure of the text. The structure of the text is such that it does not present finished answers for recovery, but leads the reader through a problematised terrain of questioning and answering in the development of meaning:

"Negativity brings about the deformations which are the basic question posed by the text - a question that sets the text in the context of reality. Actualisation of the virtual cause then opens up the possibility of finding the answer (which is potentially present in the formulated problems of the text). Negativity, then, embraces both the question and the answer, and is the condition that enables the reader to construct the meaning of the text on a question-and-answer basis" (Ibid.: 228).

Most importantly then, texts are able to shift us from the world of the familiar into new and previously unknown territory. "In reading we are able to experience things that no longer exist and to understand things that are totally unfamiliar to us" (Ibid.:19). Iser further observes that the remarkable potency of reading not only engages us in new and entirely unfamiliar worlds, but also creates critical distance from our own world so as to extend and change our understanding thereof:

"Suddenly we find ourselves detached from our world, to which we are inextricably tied, and able to perceive it as an object. And even if this detachment is only momentary, it may enable us to apply the knowledge we have gained by figuring out the multiple references of the linguistic signs, so that we can view our own world as a thing 'freshly understood' " (Ibid.:140).

Conventions of reality become reorganised so that they become subjects of reflection themselves, open to question in a way that they are not when we 'live' them: "If the reader is made to formulate the cause underlying the questioning of the world, it implies that he must transcend that world, in order to be able to observe it from outside" (Ibid.:230). It is this power to disrupt the known, to present the reader with a new perspective that creates the **questioning** epistemology of the text; the text raises questions about reality, and calls the reader to further question the world that it presents. The disruptive power of the text is, however, confined by the reader's own horizons and the development of new understandings occurs through subtle, shifting interfaces between these horizons rather than as an immediate replacement of old understandings. Gadamer, therefore, argues that the 'best' reader is one who is open to the text and the questions that it raises, but further, is characterised by self-awareness:

"The hermeneutical task becomes automatically a questioning of things and is always in part determined by this. ... That is why a hermeneutically trained mind must be, from the start, sensitive to the text's quality of newness. But this kind of sensitivity involves neither 'neutrality' in the matter of the object nor the extinction of one's self, but the conscious assimilation of one's own fore-meanings and prejudices. The important thing is to be aware of one's own bias, so that the text may present itself in all its newness and thus be able to assert its own truth against one's own fore-meanings" (1975: 238).

The process of interpretation will thus "... set in motion the hermeneutical circle, which encompasses in its spiral both the apprehension of projected worlds and the advance of self-understanding in the presence of these new worlds" (Ricoeur 1981: 171). The text that the author has constructed in response to a question (or process of enquiry) now confronts the reader, questioning his/her world, and requiring a questioning response:

"Thus the relation of question and answer is, in fact, reversed. The voice that speaks to us from the past - be it text, work, trace - itself poses a question and places our meaning in openness. In order to answer this question, we, of whom the question is asked, must ourselves begin to ask questions. We must attempt to reconstruct the question to which the transmitted text is the answer" (Gadamer 1975: 337).

2.3 The questioning structure of knowledge.

Without the appropriate epistemic assumptions, in particular with regard to text and the process of reading, students will not be able to determine possible and effective strategies for solving a problem or answering a question in the academic context. The tasks of the Human Sciences can be described as ill-structured problems, that is those for which there is no "single, unequivocal solution which can be effectively determined at the present moment by employing a particular decision making procedure" [or asking a particular question to obtain a particular answer] (Ströhm-Kitchener 1973: 224). In Gadamer's terms, quite simply: "The logic of the human sciences is ... a logic of the question" (1975: 333).

This plurivocity of the ill-structured problem is what Gadamer refers to as "the logical structure of openness, which characterises hermeneutical consciousness" (Ibid.: 325), and he claims that "every true question achieves this openness" (Ibid.: 327). A question

that is conceived of as a moment in a perpetual process of constructing knowledge, must create scope for contestation, rather than bring closure in the form of a fixed and final answer. Gadamer further states that the very possibility of knowledge necessarily entails the open form of questioning, and encompasses the antithetical perspectives to which Ströhm-Kitchener refers:

"Knowledge always means, precisely looking at opposites. Its superiority over preconceived opinion consists in the fact that it is able to conceive of possibilities as possibilities. Knowledge is dialectical from the ground up. Only a person who has questions can have knowledge, but questions include the antithesis of yes and no, of being like this and being like that" (Gadamer 1975: 328).

Meyer (1980(a), 1980(b), 1988) describes the process of construction of scientific knowledge as a progression through a series of questions and answers. However, the apparent stasis conveyed by 'statements of fact', belies this developmental process: "The aim of raising problems is to find their solution; they are, therefore, never mentioned and disappear at the level of what is explicit" (Meyer 1980(b): 59). However, it is precisely that which is not explicit, the epistemic assumptions that constrain the tasks of the Human Sciences that students must (implicitly) share and understand. It is this 'unsaid' questioning process that enables stated answers and their limits to be correctly interpreted, that underscores the partial nature of answers given and sustains the openness or suspension of closure that Gadamer emphasises. In Carr & Kemmis's (1986) terms, the process of research or the development of knowledge is analogous to a spiral, the impetus for which is a question, and which self-reflectively moves through successive stages of increasingly refined and reconstructed questioning. In other words, the aim of a question is not the closure of a final answer, but an answer that will evoke further levels of interesting and appropriate questioning, so sustaining the process of enquiry.

Posing a question, or the possibility of posing particular questions, forms the initial pivot of any attempt to search for answers or solutions.⁹ The way in which the question is posed or the task is conceptualised, will create the parameters within which answers become possible. Bronowski states it even more strongly: "In many scientific problems the difficulty is to state the question rightly; once that is done, it may almost answer itself" (1951: 62). Miller argues in a similar vein that "To ask a question is already to impose understanding on a situation" (1992(b): 10). The significance of a new conceptualisation of a problem, or the formulation of a new question, is that it generates previously unexplored routes of investigation, framing and directing this process in two ways:

"(a) It determines the limits within which possible propositions become relevant to the inquiry. It thus creates the realm of the scientific subject matter within which all concepts must be compatible.

(b) The simple fact that a problem is raised creates a scheme of reference for the construction of all ideal types which may be utilised as relevant" (Schutz 1964: 83).

The true question is thus more than simply a linguistic convention and is better conceived of as a 'problem for enquiry' that may or may not present itself in the interrogative form.¹⁰ This is apparent in the formulation of examination questions that more often than not take the form of a statement for discussion, a statement that opens up an arena for debate and enquiry. It is anticipated that any acceptable answer will

⁹ Vygotsky, in his investigation of the relationship between thought and language, points out that this relationship had not previously been the subject of enquiry. Although the unity and interdependence of psychological functions was commonplace, it was assumed that the connections between disparate functions was constant and, therefore, irrelevant to an understanding of the component parts. Posing a question about this relationship, therefore, unleashes a new and hence unexplored terrain for study. (Thought and Language 1986.)

¹⁰ A study by Robinson and Rackstraw (1972) examined differences in working class and middle class American children in responding to questions, in terms of Bernstein's elaborated and restricted linguistic codes. For the purposes of their study, they specifically narrowed their focus to include only those questions stated in the interrogative form, arguing that unless this approach is adopted any and all statements could be conceived of as 'questions'. Further, they argue that a question is defined by the identification of a 'gap' in knowledge which is to be closed through answering. In contrast, this study widens the conception of questioning beyond a mere linguistic convention, viewing the questioning process as opening rather than closing 'gaps' in knowledge.

engage with this implicit terrain of debate. Further, the answer should be restricted to the field of enquiry that is framed by the question, and to the issues that are highlighted as pertinent in terms of the particular question posed. While the possibilities for enquiry are boundless, a particular question will select for attention certain aspects of a situation and not others, creating a perspective from which to view the issue and the response must be constrained by these same limits. A different question would provoke a different path of investigation:

"It is easy to understand that a shift in the main topic - that is, in the problem - automatically involves a modification in the fringes of each concept revolving about it. And, as a shift in the problem means a modification in the scope of relevance too, we can explain, for the same reason, why new facts emerge with the shift in the point of view, whereas others that were formerly in the centre of our question disappear" (Schutz 1964: 84).

In Gadamer's terms, a truly dialectical conception of questioning, the attitude which is the immanent form of tasks in the Human Sciences, must embrace an open-endedness that dialogue, (or an interactive question and answer framework), seeks to close.

*"Dialectic, as the art of asking questions, proves itself only because the person who knows **how to** ask questions is able to persist in his questioning, which involves being able to preserve his orientation towards openness. The art of questioning is that of being able to go on asking questions, i.e. the art of thinking" (Gadamer 1975: 330, emphasis added).*

This "persistence" is reminiscent of play, which embodies this same openness or lack of specificity as regards its goals, and the same independence of particular protagonists. A central defining quality of a game, (and hence by analogy, of the process of enquiry), is the engagement in a to-and-fro movement without envisaging a particular end point. However, the nature of this movement and the activities within the game are governed by

a set of rules within which such activity must be taken seriously, and the contravention of which has significant consequences. "Play is an experience which transforms those who participate in it. ... Whoever plays is also played: the rules of the game impose themselves upon the player, prescribing the to and fro and delimiting the field where everything 'is played' " (Ricoeur 1981: 186). In this sense, the player (reader/enquirer) relinquishes control to the process in which s/he engages and becomes subject to its regulatory parameters:

"Even when it is a case of games in which one seeks to accomplish tasks that one has set oneself, there is a risk whether or not it will 'work', 'succeed', and 'succeed again', which is the attraction of the game. Whoever 'tries' is in fact the one who is tried. The real subject of the game (this is shown in precisely those experiences in which there is only a single player) is not the player, but instead the game itself" (Gadamer 1975: 95-96).

If the game of constructing knowledge from text has no specific aim, it does indeed have a general orientation, towards openness and change (Potts, 1989; Hyde, 1995). Although the already constituted horizon of understanding that the learner brings to a task limits the openness of the text and the process of enquiry, Gadamer points out that these boundaries are not static, but ever-shifting: "The historical movement of human life consists in the fact that it is never utterly bound to one standpoint, and hence can never have a truly closed horizon. The horizon is, rather, something into which we move and that moves with us" (Ibid.: 271).

The very notion of a "horizon" involves a sense of distance and perspective, and as we move within a given landscape (or terrain of knowledge), the horizon moves too, always marking the limits of what we can perceive, but also always expanding. Within these shifting horizons, we are able to encompass not only increasing quantities of knowledge

but, more crucially, changing perspectives. Iser explains the process of change in knowledge through the interaction of horizons established by, and altered by text:

"... the reader's task is to assemble for himself that which is to be accepted. The manner in which he assembles it is dictated by the continual switching of perspectives during the time-flow of his reading, and this in turn, provides a theme-horizon structure which enables him gradually to take over the author's unfamiliar view of the world on the terms laid down by the author. The structure of theme and horizon constitutes the vital link between the text and reader, because it actively involves the reader in the process of synthesising an assembly of constantly shifting viewpoints, which not only modify one another but also influence past and future syntheses"

(Iser 1978: 97).

2.4 Concluding Comments.

The horizons of knowledge in the Human Sciences, both the horizons of the individual reader/learner, and the boundaries of our current collective knowledge, are not fixed. It is this implicit open structure of knowledge that inheres so firmly in the questioning paradigm. This questioning framework entails:

1. Understanding all knowledge (and texts) as providing answers to (unstated) questions;
2. Allowing new and unfamiliar knowledge to question and challenge the previously established horizons of our own knowledge; and
3. Adopting a questioning stance that extends the process of enquiry.

The apparent fixedness of text can thus be the impetus for change and development:

"Understanding begins, ... when something addresses us. This is the primary hermeneutical condition. ... this requires ... the fundamental suspension of our own prejudices. But all suspension of judgements and hence, a fortiori, of prejudices, has logically the structure of a question. The essence of the question is the opening up, and keeping open, of possibilities" (Gadamer 1975: 266).

CHAPTER 3

THE EPISTEMOLOGY OF STUDENTS

3. THE EPISTEMOLOGY OF STUDENTS

There is a stark contrast between the demands of textual knowledge that are reflected in the epistemology of the Human Sciences, and the epistemology that students bring to learning tasks. As is evident from the argument in chapter 2, the textuality of academic knowledge creates particular parameters for the process of knowledge construction demanding a form of engagement ordinarily referred to as a 'critical approach'. The discussion above examined the corresponding constraints of an appropriate epistemic framework, or a particular way of understanding the nature of knowledge and its development. In essence, text and the interpretive act of reading are characterised by openness, or a propensity for new and unfamiliar possibilities. This chapter counterposes this questioning epistemology, with the assumptions and approach that students (in particular, underprepared students) bring to the task of meaning construction. The present study draws on three analytic frameworks that offer similar yet complementary means for explaining students' approach to academic tasks:

1. Orality and Literacy (Ong 1982; J. Goody 1987; Olson 1996);
2. A Common Sense Epistemology (Geertz 1973; Craig 1991); and
3. Mediated Cognitive Functioning (Vygotsky 1978; Feuerstein 1980; Miller 1989, 1992, 1994).

These interrelated frameworks provide both the basis for the development of appropriate analytic categories (particularly, Feuerstein, 1980) and the theoretical structure for interpreting and explaining students' engagement. The articulation of cognitive engagement, in particular, students' approach to questioning, is explored through the presentation of various tasks that entail the questioning epistemology of the Human Sciences. By analysing student responses, the study aims to contribute

to an understanding of (underprepared) students' cognition and, hence, also to inform the instructional process.

The fecundity for education of this focus on the learning actions of students lies in the observation that students hold a kind of "veto power" in the learning-teaching situation as reflected in the old proverb: 'You can lead a horse to water but you can't make it drink.' Learning is properly the domain of the learner. The proper interest of educators, therefore, should be to construct an understanding of what Rothkopf (1970: 325) calls the mathemagenic cognitive functions ("from *mathemain* that which is learnt; *gignesthai* to be born"). The development of knowledge is dependent on the mental actions of students that are open to modification by the teacher, by directions and questions. In other words, new understandings can be conveyed only through this modifying function of teaching (what Vygotsky refers to as mediation), not through a direct transfer of knowledge.

Tasks need to be designed in such a way that they exemplify the epistemic character of the Human Sciences and have the potential to elicit either appropriate or inappropriate responses. The focus on questioning was chosen because of its capacity to heighten the epistemic demands of academic tasks, and to provoke a consequent disjuncture when different epistemic assumptions are applied in problem-solving (Bradbury, 1997). Pascual-Leone refers to such tasks as constituting "misleading" situations where over-learned or habitual schemes that have been developed in other situations for which they were appropriate are then inappropriately elicited by "misleading" cues in the new situation. Interpretation of students' performance will thus entail an analysis of their learning histories or their existing "repertoire(s) of relevant, irrelevant and misleading schemes which the task in question can elicit" (1987: 545). The task for instruction then becomes to create the alternative and appropriate schema and to inhibit or interrupt previously learned

habitual responses, or to enable students to "overcome pre-understandings that attach inappropriate questions to the answers that constitute the situation" (Miller 1994(b): 3).

3.1 Orality and literacy.

Complementing Ricoeur's paradigm of the text, a comparative analysis of literacy and orality, leads to the assertion that writing has implications for cognition and the construction of knowledge, rather than entailing a mere extension of the drive to communicate expressed in speech (Ong 1982; J. Goody 1987; Olson 1996). In other words, the epistemology of literacy is markedly distinct from that of oral knowledge.

*"By contrast with natural, oral speech, writing is completely artificial. There is no way to write 'naturally'. ... Writing or script differs as such from speech in that it does not well up out of the unconscious. ... To say writing is artificial is not to condemn it but to praise it. Like other artificial creations and indeed more than any other, it is utterly invaluable and indeed essential for the realisation of fuller, interior, human potentials. Technologies are not mere exterior aids but also interior transformations of consciousness, and never more than when they affect the word. ... Writing heightens consciousness"*¹¹ (Ong 1982: 82).

Speech and writing are often treated simply as variants of the human drive to communicate, and observations made as regards speech are extended unqualified to writing. Vygotsky's (1978, 1986) notion of mediation emphasises that all higher mental processes are in fact not 'natural' in the sense of being the result of spontaneous biological development or direct exposure to the natural environment but are culturally mediated ways of operating. In Vygotsky's (1978, 1986) view the critical role of language (speech) lies in its function as a "symbolic tool" to transform

¹¹In Miller's terms (1992 (b), 1994(b)) writing alters consciousness, creating a different understanding of the "aboutness" of things or in the nature of knowledge of the situation.

the world that the child encounters from a natural to socio-historically constructed one. This transformation entails the internalisation of the regulative function of language so that the child cognises the world through the meanings and understandings of others. However, despite the remarkable and uniquely human cognitive consequences of spoken language, the conceptualisation of writing as simply the “transcription of speech” (Olson, 1996: 143) is misleading. Rather, the process of becoming literate alters the way in which spoken language is understood, creating a meta-linguistic perspective that Olson presents as the basis for the analytic form of thinking most often associated with ‘scientific’ thinking: “[T]he history of writing is not one of learning to transcribe speech, but rather of learning to ‘hear’ and think of language in terms of the categories and distinctions provided by the writing system. The history of writing is, in large part, the history of bringing speech into consciousness” (Ibid.: 144).

Ricoeur (1981) conceptualises text as a ‘work’ which necessitates particular kinds of hermeneutic action on the part of the reader. The construction of meaning in text (as opposed to recording speech) thus constrains the interpretive task of the reader. The tasks of both writer and reader and therefore differentiated from those of speaker and listener in the natural, spontaneous mode of speech and dialogue or conversation. Although the artificiality of the process of becoming literate is evident even at the basic level of mastering reading and writing skills, **academic** reading and writing represents the most extreme form of this process. Becoming fully literate in this sense means coming to grips with a complex way of thinking in relation to text, both in developing meaning from what is read and in constructing a meaningful academic argument in writing (Brice-Heath, 1984; Connor, 1987).

Literacy is, therefore, seen as the key, not only to written records of knowledge, but also to unlocking a new ‘mind-set’ or new ways of cognising the world (Ong, 1982;

Olson, 1996). The historical instantiation of particular trajectories of thought in the construction of texts consequently demands commensurate forms of engagement on the part of the reader. In terms of the context of this study, the constraints of academic texts confronted by students must be met by the appropriate literate epistemology. By contrast, Ong (1982) offers a classification of 'oral thought' or the form of thinking that has its origins in oral communication.

It is essential to note that Ong's classification refers to a form of thinking as opposed to the apparent nature of a particular task. In this sense, it is possible to approach a verbal task in a 'literate way' and, vice versa, a written task in an 'oral way' (See also Tannen, 1982; Michaels & Collins, 1984). Obviously, completely non-literate people (such as Luria's subjects (1976) or the ancient oral communities to which Ong (1982) refers) have no reference at all to the literate mode and, in this sense, are more accurately operating in an 'oral' mode, as opposed to illiterates or semi-literates who operate within a context of literacy. Literacy in all but the solely oral opposition of a 'non-literate' state, should, therefore, be seen as a continuum. The most extreme end of this continuum is represented by academic, formal knowledge where tasks are almost entirely dependent on literacy and in which context the conventions that govern the interlocution of question and answer in dialogical conversation are inappropriate.

3.1.1 Analysing the oral mode of thought.

Ong's classification of oral thought includes nine primary characteristics. These categories have been ordered and combined into three broad bands of analysis for the purposes of this study as it seems that Ong is himself guilty of failing to impose the hierarchical ordering which he identifies as the essential structure of literate

thought! The three key features of oral thought discussed here incorporate Ong's original categories as follows¹²:

1. **Situation bound:** close to the human life-world; agonistically toned; empathetic and participatory rather than objectively distanced; situational rather than abstract.
2. **Conservative:** conservative or traditionalist; homeostatic.
3. **Lacking in hierarchical structure:** additive rather than subordinate; redundant or copious; aggregative rather than analytic.

3.1.1.1 Situation Bound.

The oral mode tends to be **situation bound** in that it has no external reference or resource for the construction of knowledge other than the immediate experience of individuals, or that which can be remembered and communicated through the limited channel of speech. Abstract or hypothetical possibilities are of less significance in a socio-historical context that is self-sustaining and self-referential. Knowledge is, therefore, empathetic and participatory, based on actual events as experienced by individuals, and verified with reference to these same real-world sources. The boundaries of the context of knowledge construction are, therefore, mirrored and constrained by real world spatial and temporal boundaries, both of which writing is able to overcome.

3.1.1.2 Conservative.

Because of the necessary reliance on a given situation or limited context, oral knowledge is **conservative** in nature. Traditional knowledge must be conserved and preserved for future generations and because of the practical limits of memory, new

¹² I acknowledge a collaborative process with H. Griesel in the initial restructuring of Ong's categories which was undertaken during the teaching of the TTT Programme's foundation course, **The Development and Production of Knowledge** 1993.

knowledge which would replace existing tried and tested understandings, is treated with suspicion. The meaning of particular words tends to be homeostatic, retaining a single and readily identifiable meaning as opposed to the multifarious meanings attached to the literate tradition. Dictionary referencing makes it possible to 'store' multiple meanings, including those that may not be immediately relevant. The openness of textual knowledge cannot be tolerated in a finite memory-based system.

3.1.1.3 Lacking Hierarchical Structure.

The **structuring** of knowledge is also constrained by this need to preserve what is known, and the inflexibility of reliance on memory. As opposed to text, which allows for movement back and forth and a circular layering of meaning construction by the reader, speech is constructed linearly in time. This uni-directionality of speech makes the impositions of hierarchical ordering of information impossible and information, therefore, tends to be additive and aggregative as opposed to analytic or hierarchically structured. There is further a tendency to repetition or to the inclusion of redundancies in order to support the memory.

3.1.2 A 'Great Divide' or a continuum: the cognitive consequences of literacy.

The analysis of literacy and its cognitive consequences offered by Ong and similar theorists, is highly contentious. Others (e.g. Cole & Scribner, 1974; Finnegan, 1988; Scribner & Cole, 1981; Street, 1984) have argued that it is not possible to isolate literacy from other socio-historical factors as a generative factor in effecting cognitive shifts. Scribner and Cole describe the locus for changes towards a rational or modern way of cognising the world as 'schooling' rather than literacy per se. Their historical analysis of Vai script, while revealing interesting nuances in the cognitive consequences of traditional indigenous literacy as opposed to literacy within the frame of western schooling, represents a somewhat unusual context of contact between conflicting literate systems. In most contexts (including Southern Africa), the

absence of schooling can be equated with the absence of literacy (Lyster, 1992). Schooling is nothing if not an extended induction into literacy, producing access to the content of knowledge stored in literate forms and creating opportunities for students to practise literate forms in their own actions. The very technological (industrialising) changes that Scribner and Cole (1981) point to as impacting so dramatically on remnants of traditional (non-literate) societies are generated from within a literate tradition. The objection seems to be phrased in terms of an emphasis on material (as opposed to cognitive) forces. However, this conceptualisation of material and cognitive realities in an oppositional way, fails to recognise that the tool of literacy is in itself a "technology" (Ong 1982; J. Goody; 1987; Preissen & Kozulin 1992) that transforms our action in the world. Any view of cognition as socially constructed must, in turn, recognise the impact of changing action on thought.

Street's critique (1984 and elsewhere) is misdirected in that he reads far more into Ong's position than Ong himself claims, in particular, that literacy will have direct transformatory effects on the social conditions of people's lives. This conflation of the thought and actions of individuals with structural changes and individual socio-economic and political benefits is clearly an over simplification and one that Ong certainly does not entertain.¹³ Street (1984) argues that an autonomous view of literacy as in and of itself a tool that effects changes in action and thought, neglects the ideological content of literacy. Literacy patently does not necessarily lead to 'progress' or development at either the individual or societal level. Herein Street makes very clear his extension of Ong's claims, that the transformation of thinking from an oral to a literate mode is necessarily 'good' (in a moral sense). By analogy,

¹³ The Freirean approach to literacy teaching explicitly links 'learning to read' with learning to 'read' the world and, hence, transform (in a socio-political sense) it (1972, 1973 and elsewhere). While Freire links literacy to the question of social power, the locus of change is most certainly in individual action (which may be provoked through a process conscientisation in literacy classes). In this way, Freire is not claiming that literacy transforms thought in the radical and fundamental way proposed by Ong, but he is claiming that it provides a way to conscientise people into political action that will transform the world.

certainly a hammer might be used for constructing different types of building, some of which we might judge as pretty or ugly, some of which may house activities which we might judge as good or bad. This does not, however, detract from the fact that a hammer makes certain action (which was previously impossible) possible. This is the point that Ong makes; the tool of literacy makes new forms of (mental) action possible. Goody refers to writing as a “cultural tool that enables the possessor to perform certain tasks in a revolutionary manner” (1987: 186). In this sense, far from an 'autonomous' view, the framework adopted in this study asserts the socio-historical nature of writing as a human invention that, in turn, makes it possible for us to invent ourselves in new ways. To argue, in contrast, that the invention and practice of writing has no impact on thought at all seems to be ahistorical in the extreme.

Most current literature in the field of literacy learning and teaching argues for the notion of 'literacies' for different purposes and in different degrees, or a continuum of literacy rather than the simple oppositions of literacy and illiteracy. What all literacies have in common is the transformation of language to a visual form of representation and it is this simple fact that is the basis of Ong's assertion of the power of literacy in releasing the mental burden of memory and enabling a new structuring of thought. Ong's framework opposes the most extreme ends of a continuum defined at the one end as orality or the complete absence of writing, and at the other, by literacy that includes the technological transformations of print and computerisation. His interest is not in the varying degrees of literacy (and hence degrees of access to literate forms of thought and knowledge) that might be possessed by particular individuals at a particular moment. Among those who *are* interested in such individual development and change, such as literacy teachers and agencies, there has been an increasing tendency to emphasise the value of the oral tradition within which their clients (literacy learners) are embedded. However, this recognition creates a paradoxical position: how is it possible to simultaneously contend that orality and literacy are

equally valuable, and yet continue to assert the need for literacy learning? Recognising the transformative impact of literacy need not negate the notion of universally shared cognitive capacity and, conversely, assertions of an inherent common humanity need not negate the evident differences effected in human action through technologies. Goody cautions that “we need to steer a line between those views asserting that all men have the same abilities and those others that, implicitly or explicitly, pose some great divide between ‘them’ and ‘us’ ” (1987: 185).

The social context of this study includes, among the multiple transitions of South African society, a transition from entirely oral to fully literate modes of knowledge production. While the study occurs in the most extremely literate context of academia, many of the subjects in this study are first generation literates and, with few exceptions, first generation university students. It is, therefore, argued that an analysis of the remnants of orality and its impact on thought and the structuring of knowledge offers one productive and pertinent framework for analysis.

3.2 A Common Sense Epistemology.

In the absence of the formal schooling system providing adequate and appropriate mediational opportunities, students' epistemic framework is still substantially shaped by an oral, non-formal educational context in which the socio-historical knowledge or common sense understandings of the group are verbally handed down to subsequent generations. On the basis of anthropological comparative work, Geertz (1973) proposes that, regardless of the particular content of such understandings, all common sense interpretations of the world are characterised by a particular common form. The immanent nature of common sense is that it gives the appearance of adherence to a direct and truthful representation of reality. The necessarily

interpretive ('man-made') character of all knowledge is masked by fidelity to experience, where experience (through the senses) is equated with unequivocal truth. The primary features that Geertz identifies can be outlined as follows:

1. Common Sense is authoritative; that is, it begs no evidence, and is unquestionable.
2. It is 'natural' in the sense that it presumes to directly represent reality.
3. Common sense is of practical import, and is judged in these terms rather than on the requirement of sound argument.
4. It is simple and literal.
5. It is not characterised by a methodical approach; there is no method necessary to deduce common sense as 'truth' is self-evident.
6. It is accessible to all; in other words, it is non-specialist or 'common' knowledge.
7. Contradictions are easily tolerated. The lack of organisation or systematisation is taken as indicative of its fidelity to the unsystematic experience of real life and, therefore, to the truth.

Of course the fact that the **content** of common sense differs between societies (and even within a system contradictory 'truths' are held) belies the constructed nature of this knowledge. However, the interpretive nature of common sense is concealed and never acknowledged, creating an orientation towards knowledge that asserts the authority of inherited wisdoms and grounds enquiry in experience.

Work conducted by Craig (1989-1990) with underprepared students from the same target group as the present study, indicates that students approach their studies with a set of epistemic assumptions that reflect both the influence of orality and a prevailing application of common sense ways of understanding the academic task. The contested nature of knowledge in the Human Sciences and, hence, the

necessary form thereof, is either absent or weak in the 'indigenous epistemology' within which these students operate. The idea that knowledge in the Human Sciences is essentially contested is foreign to the common-sense epistemology within which these students construct their understanding of the disciplines they study. Drawing on Geertz's general description of "common sense" and on empirical work with underprepared African students, Craig has constructed the primary parameters of what she refers to as a 'common sense theory of knowledge':

"1. There is a 'right' and 'true' and 'proper' because God (and the bible or some other unquestionable authority) made it so, or because nature constitutes it as such (and in no other way);

2. The 'I' of being or living or daily interaction has only one access to this 'true' and 'right' and 'proper' and that is through 'on the spot reporting', or personal, immediate, first person accounts of experience;

3. If the experience of 'I' has any revelation (or conversion?) to the 'truth', etc. then that revelation has (of necessity) a linear (story) line where the events which are presented are presented - sequentially - and make (produce) the last event as the 'truth' etc.

4. The revealed 'truth' etc. (or last event) begs no resolution of paradoxes (horizontally or vertically) or an appreciation that this claim may beg evidence, or an appreciation of logical, epistemic and moral consequences"

(Craig, 1991: 137).

There is little sense in this framework of openness or appreciation of the partial nature of any answer, or of the constraining "contextual relativism" of a possible solution. The ill-structured problems of the Human Sciences are those for which "there is no single, unequivocal solution which can be determined at the present moment by employing a particular decision-making procedure" (Ströhm-Kitchener

1983: 224). Such problems cannot be resolved by a linearly sequenced solution; any answer will need to be argued for in terms of the best evidence available and will need to recognise the limits and necessarily tentative nature of any claim.

At odds with the epistemic demands of university studies in the Human Sciences, is the persistent searching for grounding or closure of the question; the demand for an answer, for a singular 'truth' that will eradicate doubt. Experience rather than reason is paramount in the evaluation of an answer or statement. Where direct personal experience cannot account for something, there is a search for a "first and final author" (Ibid.: 140), God or nature itself as the origin of all observed effects. Such a notion of an original volitional source cannot accommodate a view of text (knowledge) as distanced from a possible author and placed in a new relation with the reader. (See the discussion of textuality and references to Ricoeur and Iser in particular in chapter 2.)

While texts (or new tasks) are able to open new worlds for the reader, this effect is qualified or restrained by the ideological grounding which is effected by the imposition of the parameters of a powerful experiential world:

"The more committed the reader is to an ideological position, the less inclined he will be to accept the basic theme-and-horizon structure of comprehension which regulates the reader-text interaction. He will not allow his norms to become a theme, because as such they are automatically open to the critical view inherent in the virtualised positions that form the background. And if he is induced to participate in the events of the text, only to find that he is then supposed to adopt a negative attitude towards values he does not wish to question, the result will often be open rejection of the book and its author. Even this reaction still

testifies to the undiminished validity of this structure, which brings about an involuntary self-diagnosis in its irritated recipients" (Iser 1978: 202).

3.3 Mediated Cognitive functioning.

Feuerstein et al (1980) propose a set of cognitive functions, the development of which depend on effective and sufficient mediated learning experiences. The absence or lack of such mediation will lead to deficient cognitive functioning. Feuerstein is at pains to point out the distinction between culturally **different** and culturally **deficient** cognitive functioning, the latter being due to a lack of mediation. Whereas cultural difference may manifest in different kinds of abilities and performance, cognitive functioning is not impaired or 'deficient' and there is no need to attribute such differences to a lack of mediated learning experience. However, in those situations in which learners are deprived of adequate mediated learning, the consequence is not merely differences in performance, but differences in the cognitive operations that underlie and generate performance.

The tasks that confront students at university assume the establishment of a common mediated base through formal schooling that provides access to this dominant, text-based form of knowledge. Therefore, underprepared students may not only have to cope with cultural difference or unfamiliarity with the content of the tasks they confront, but also with a lack of appropriate cognitive tools (operations) due to inappropriate kinds of mediated learning experience relative to the demands of the task. Due to the socio-economic inequalities of the Apartheid era, in particular as regards African education, it can be argued that the approach of underprepared students to the tasks of university study are not merely culturally different but may also be conceived of as "deficient" in Feuerstein's terms. This does not mean that the

expected cognitive functions are entirely absent but that they "... do not appear spontaneously, regularly, and predictably" (1980: 72) that is, they do not "characterise a general and pervasive mode of functioning" (Ibid.: 77). If the root of the problems which underprepared students face at university is located as primarily a result of inadequate learning opportunities, this means that "the problem falls squarely within the educator's domain" (Feuerstein 1981(a): 273). Given that any current mode of cognitive functioning is the result of previous mediation,

Feuerstein's term "deficient" should, therefore, not be confused with a deficit view that posits an innate and fixed notion of cognition, often termed a 'cognitivist' view. In contrast, Feuerstein's conceptualisation of "deficient cognitive functioning" clearly has a social base in the mediational process and, therefore, entails the view that human thought is characterised by extreme plasticity (Preissen & Kozulin, 1992). Neither should the appropriation and adaptation of Feuerstein's categories of cognitive functioning that were developed in the context of assessing children with learning difficulties be understood to imply any notion of disability or individual deficit in the current context of analysis. Rather, the usefulness of Feuerstein's approach in a context where the social institution of education is extremely dysfunctional lies in the construction of categories for describing and explaining cognitive functioning as mediated by previous learning, and as operational in relation to particular tasks.¹⁴

In essence, deficient cognitive functioning is characterised by an "episodic grasp of reality" and a failure to integrate relevant information, whereby "... each object or event is experienced in isolation without any attempt to relate or link it to previous or anticipated experiences in space and time" (Feuerstein 1980: 102). This

¹⁴ This chapter focuses on generating an appropriate discourse for describing the cognitive functioning of underprepared students and primarily achieves this by re-interpreting Feuerstein's categories. Feuerstein's theory is, however, located in the broader theoretical framework of Vygotsky that is fully elaborated in Chapter 4.

disconnected view of reality is accompanied by a passive attitude towards the world and a failure to conceive of oneself as an active agent in the world and, consequently, as an active participant in the construction of understandings. In this sense, it is not simply that the individual lacks particular cognitive strategies, but also lacks meta-awareness of and control over both the nature of the task and the self as learner. More particularly, this cognitive mode can be characterised by the following broad categories¹⁵:

1. Defining a problem.¹⁶
2. Comprehensiveness.¹⁷
3. Precision.¹⁸
4. Passivity.¹⁹

3.3.1 Defining a problem.

The identification of a problem or task and, hence, the definition of its boundaries or concerns, is prerequisite to any attempt to solve it. The nature of the task or the formulation of the question is what drives forward any further process of questioning and answering. Failure to appreciate that a situation does indeed pose such a 'question' will mean that it remains closed to such a process of enquiry. (See also Miller 1994 (b).) What makes it possible to discern the question posed by any given task / situation, is the recognition or grasping of "... the disequilibrium existing in a given situation" (Feuerstein 1980: 90). This disequilibrium may exist between the

¹⁵ Again, as with Ong's classification, Feuerstein's categories have been combined and re-ordered, in accordance with their relevance for the terms of reference of this study. In each case, Feuerstein's subsumed categories are noted.

¹⁶ The category "defining a problem" includes Feuerstein's sub-categories of "experiencing the existence of a problem" and "relevant and irrelevant cues".

¹⁷ The category "comprehensiveness" includes Feuerstein's sub-categories of "completeness"; "impulsivity" and "use of two or more sources of information".

¹⁸ The category "precision" includes Feuerstein's sub-categories of "precision and accuracy", "blurred and sweeping perception" and "egocentrism in communication".

¹⁹ The category "passivity" includes Feuerstein's sub-categories of "narrowness of mental field"; "summative behaviour"; "pursuing logical evidence" and "planning".

situation and previous knowledge or the situation may itself contain discrepancies or incongruities.

The ill-structured problems typical of the Human Sciences will inherently contain such anomalies or oppositions. However, such oppositions or tensions may not be overtly stated or apparent, as questions are typically posed in the form of a statement which begs evidence in its support. In order to answer such a question, it is first imperative that the statement is perceived as questionable rather than self-evident. Secondly, this perceived disequilibrium would need to be matched by experiencing a "... need to change the situation in order to restore the disrupted equilibrium [through] ... a storm of questions and search for answers" (Ibid.: 95).

Constituting the task thus creates the parameters or constraints for any process of enquiry and directs the attention of the questioner to certain aspects of the situation as opposed to others. Any given task/situation will present a number of different cues, not all of which will be relevant to a given goal or the particular resolution of a problem. The way in which the task is conceptualised determines which of these cues are of consequence. For example, Feuerstein notes the "... failure of the child to compare spontaneously. ... because the necessity for comparison, in order to solve a problem, was not explicitly stated" (Ibid.: 93). Invariably, the tasks that confront students will implicitly demand attention to hidden oppositions or tensions. Unless the student shares the epistemic assumption of dialectical oppositions (see Ströhm-Kitchener, 1983), the implicit demand for 'comparison' will be missed altogether. Feuerstein isolates this comparative approach as the essential framing device for enquiry: "... certain dimensions and relationships become salient and relevant only when they gain a specific meaning through comparison" (Feuerstein 1980: 87).

This anticipated comparative structuring of information concurs with the process of developing connections between the parts of the text and a sense of the overall meaning that the text presents. Understanding the task of reading in this way will enable the reader to move constantly back-and-forth between the different levels of meaning construction, modifying each in relation to the other. As Ricoeur (1981: 211) points out, "the whole appears as a hierarchy of topics, or primary and subordinate topics. The reconstruction of the text as a whole necessarily has a circular character, in the sense that the presupposition of a certain kind of whole is implied in the recognition of the parts. ... The judgement of importance is a guess."

3.3.2 Comprehensiveness.

The acceptable resolution of any given task will necessarily entail a comprehensive and thorough engagement with the relevant terrain. Failure to ascertain the full scope of an enquiry will lead to only a partial resolution or, perhaps, even result in a wholly inadequate answer. One of the factors that may lead to such a partial engagement with the problem lies in the tendency to impulsivity. The impulse for an immediate response may lead to "... a lack of awareness ... that certain dimensions, other than those that he has already considered, will have to be used to reach a final solution" (Feuerstein 1980: 78). In particular, where there are conflicting demands for both rapidity and accuracy, the urgency of acceleration may over-ride the requirement for precision, and result in an incomplete response, excluding further pertinent data.

As indicated above, the conceptualisation of a problem necessarily entails the recognition of oppositions and tensions or need for comparative analysis. A lack of recognition that any solution to a problem requires the consultation of at least two sources of information will mean that the search for answers will be truncated and incomplete. This acknowledgement of several sources of information necessitates a

dislocation from one's own, single perspective on a given issue, and a recognition that other possible views exist.

3.3.3 Precision.

Related to the above requirement of comprehensiveness, the effective and acceptable solution to any problem will be based on the precise identification of relevant data. Where the "internalised, intrinsic need to be exhaustive and precise" (Ibid.: 87) is absent, answers will be "blurred and sweeping" in nature, reflecting a "poverty of details or their lack of clarity, a poor quality of sharpness, an imprecise definition of borders, and an incompleteness of the data necessary for proper distinction and description" (Ibid.: 76).

Precision in the development of knowledge from text will only be possible if the reader's attention is directed by an understanding of the nature of textual knowledge which concurs with the hierarchical structure which Ong describes (see discussion under 3.1 above). In a study conducted by Reynolds and Anderson (1982) structured questions were given to students to guide their engagement with text. These questions created appropriate patterns of differential attention to aspects of the text. Findings were that the use of the questions increased the time which students spent on the reading process and resulted in selective attention allocation. By questioning students on aspects of the text not highlighted by the structured questions, it was found that there was no general heightening of attention. In other words, the questioning model enabled these students to read in a focused way, patterning or structuring the text in a way that is consistent with that typical of a more experienced reader, and revealing the hidden structure of the text as opposed to a "blurred and sweeping" tendency to accord equal weighting to all parts of the text.

The failure to accurately and completely respond to a problem may also reflect an egocentrism whereby the respondent assumes that knowledge on the part of the other (teacher / examiner) absolves him/her of the need for precision.

3.3.4 Passivity.

Finally, deficient cognitive functioning will be characterised by a passive mode of operating or a failure to appreciate oneself as a cognising agent who actively generates and constructs understanding. This passive reception of information, as opposed to the active processing of information, results in "an inability to combine and co-ordinate units of information, [and] produces a narrow and restricted mental field" (Feuerstein 1980: 94). A passive notion of knowledge development reduces the need for planning or structuring in attempting to construct answers. This may reflect the lack of control that some individuals may feel concerning the unpredictability of life, in particular in situations of poverty. A lack of planning or the interior representation of events (and hence the possibility for meta-control thereof), will severely restrict the quality of responses.

3.4 Concluding comments.

The conflict between the demands of the tasks and the epistemic assumptions of students must be creatively confronted and will define the requisite nature of instruction. Miller's assertion that "cultural relativism is a luxury the third world cannot afford" (1990: 1), is clearly shared by Ong: "There is hardly an oral culture or predominantly oral culture left in the world today that is not somehow aware of the vast complex of powers forever inaccessible without literacy" (1982: 15). Price dismisses the call for relevance as an insidious means of avoiding the educational task that confronts us and insulting to those whom we teach: "It is simply patronising

to romanticise popular culture or say that kids' preoccupations should constitute a 'relevant curriculum' [Educators need to develop]... a variety of teaching-learning methods which will enable people from different starting points to arrive at the same standards. ... culture-specific rules of discourse, particularly as expressed in writing essays and answering examination questions" (1986: 216).

This position is in contrast with work done by researchers such as Scollon & Scollon (1984) who emphasise the value and viability of oral 'literature' and the need for its preservation. The focus in such cross-cultural studies is on understanding 'the other' rather than providing access to the global shared conventions of literacy and the associated "powers" to which Ong refers; or what Gadamer, almost awe-struck, describes as "a magic that looses and binds us" (1975: 145), by making present the past, and opening up the future in making known that which was unknown.

The methodological framework of this study has explicitly incorporated the objective of change, the intention to impact on the educational process. (See chapter 5 below.) The above theoretical frameworks provide the basis for further investigation and explanation of students' epistemic assumptions as manifest in their approach to university tasks. However, it is essential to acknowledge that the epistemic framework thus identified and described for analytic purposes is not a fixed product but, rather, a mediated process. A Vygotskian theory of mediation that is implicit in the analyses offered here is further elaborated in the following chapter. Through the tension created between the demands of particular socio-historically constituted tasks and students' mediated engagement with these tasks, it is possible to explore the potential for mediated change between these antonymous poles.

CHAPTER 4

QUESTIONS FOR MEDIATION

4. QUESTIONS FOR MEDIATION

4.1 Instruction in the zone of proximal development.

The domain of instruction is what Vygotsky refers to as the Zone of Proximal Development (ZPD), which "characterises mental action prospectively" (1978: 87). In other words, the zone of proximal development is created in advance of the learner's independent level of performance or mastery, through instruction/mediation or other-regulation. In this instructional zone, the individual's action is no longer dependent on understanding that s/he has previously developed, rather, the guidance and direction of an-other's understanding generates new possibilities for action. It is in this sense of movement beyond the inevitable, spontaneous development of mind, that questions present themselves as useful tools for both teachers and learners to probe those "functions which have not yet matured but are currently in an embryonic state. These functions could be termed the 'buds' or 'flowers' of development rather than the 'fruits' of development" (1978: 86). The role of instruction is, therefore, to provoke and accelerate cognitive change.

In broad terms, the theoretical framework for this investigation of the questioning process in the development of knowledge proceeds from an analysis of the implicit epistemic assumptions of the textual world of the Human Sciences, and those of (underprepared) students (see chapters 2 and 3 respectively). The distinct focus on each of these knowledge systems reveals the mediated nature of both tasks and cognitive functioning and indicates the possibilities for mutual transformation and reconstruction through the educational process. This chapter elaborates a theory of mediation in the domain of learning-teaching with particular reference to Vygotsky (1978) and Miller (1992, 1994) and extends the notion of mediated cognitive functioning and task engagement provided by Feuerstein in the previous chapter.

Vygotsky's view of learning is distinctly 'social' in nature, that is, based on interaction between the learner and 'an-other', a care-giver or a teacher (Vygotsky 1978; Wertsch 1985(a), 1985(b); Van der Veer 1994). In this mediational exchange, a learner's question is an indicator both of what is known (or perhaps misunderstood) and what it is possible for the learner to come to know. The teacher's role is to mediate the nature of the task for the student but in order that the new and unknown can be appropriately introduced, s/he must also be able to enter the student's conception of the task. The task of the teacher becomes to "generate hypotheses about the learner's hypotheses and often to converge on the learner's interpretation" (Wood et al 1976: 97). Questioning is an important tool towards this end, and allows the teacher to create specific "scaffolding" (Ibid. 1976: 90) for the student, whereby the unknown or unfamiliar is controlled by the teacher until such time as the student can assume this control. The risky nature of this educational interaction is recognised by Erickson: "To learn is to entertain risk, since learning involves moving just past the level of competence, what is already mastered, to the nearest region of incompetence, what has not yet been mastered. As learning takes place, the leading edge of the region of incompetence is continually moving" (1987: 344).

Mediation, as opposed on the one hand to conventional transfer modes of teaching, and on the other, to experiential learner-centred or learner-directed processes, assumes the interpenetration of social and individual realities. While the individual is an active agent in the world, what the child learns is not arbitrary but filtered through an-other, providing access to *"... the network of meanings and rules that obtain between people. What is acquired through mediation is not the private intellectual property of individual learners (or teachers) but the collective and cumulative intellectual tools of historical others"* (Miller 1989(b): 156). However, this regulation does not remain externally located in the other, but is internalised as the child/learner

develops, so as to perform the function of an internal cognitive tool which directs independent action. This internal direction and control or self-regulation enables the independent action of the cognitive subject. However, it is evident that the source of self-regulation is not innate, but socially constructed in the interactive antecedents of other-regulation. In other words, through language and the mediation which adults provide, the child's cognition is constructed as a **social** product (Wertsch 1985(a)). While the social and material realities can thus be seen to penetrate individual cognition, the role of 'mind' is conversely restored in world of action through the interpretive practices of the individual (Miller 1984). Two socially constructed domains of knowledge meet in the particular instructional process that is the interest of this study: the knowledge of the Human Sciences that students must enter and the knowledge that students themselves bring to the tasks that confront them. The analyses of the nature of knowledge and knowing within each of these frameworks (see chapters 2 and 3 respectively), provide the basis for understanding more specifically how the questioning process operates within each of these knowledge domains, and importantly, in the interface between the two.

4.2 Questioning and Meta-cognitive control.

Luria focuses on the relationship between language and cognition, describing language as a coding system for "signifying objects, attributes, actions and relationships. On the basis of these entities, it is possible to carry on the complex functions of coding and transferring of information and the mediation of highly complex systems" (1956: 29). Questions are only possible within this complex system of signification; by contrast animals may 'learn' new behaviours but cannot question the process.

Luria describes the phenomenon, well known in children, of egocentric speech or overt 'talking aloud' as a mechanism for problem-solving, where the child alternately adopts the conversational functions/roles of questioning and answering. This process is later internalised in thought. When adults are puzzling over a particularly difficult problem, this internalised process often becomes externalised (conscious) again, verbalising the problem, for example, "I wonder what this means? Why is that the case?" Vygotsky notes that in the course of development, speech begins to take on an "intellectual function as well as a behavioural regulative function" (quoted in Luria 1956: 105). According to Vygotsky, internal speech takes on a 'meta' function, monitoring cognition and behaviour. Vygotsky (1986) describes this emergent function in terms of the development of the self as both the subject and object of thought and action. The subject that thinks and acts is regulated by the internalised 'other' of the self, which objectifies and monitors such action and thought (Miller 1994(b)).

The regulative function of language is extended in literacy in that reading opens up the possibility for regulation by historical others with whom dialogue is impossible due to the constraints of time and space. However, the regulative power of literacy lies not only in this capacity to extend the sources of other-regulation, but also, importantly, in the way that reading and writing transforms the possibilities for self-regulation. Ong (1982) indicates that the particular notion of meta-cognition that applies to the critical thought of academic study may have its roots in the distancing that literacy allows us from the objects of knowledge in our world and, then, by extension, even from ourselves as thinking beings. Ong refers to Luria's study (conducted in 1931-1932, first published in 1974) of Uzbekistan illiterate subjects in which he found that his subjects had difficulty with articulate self-analysis. In Ong's terms, this lack of meta-awareness reflects an absence of critical distance from the self, or a failure to think of oneself 'objectively', as the object rather than the

subject of thought: "Self-analysis requires a certain demolition of situational thinking. It calls for isolation of the self, around which the entire living world swirls for each individual person, removal of the centre of every situation from that situation enough to allow the centre, the self, to be examined and described" (Ong 1982: 54).

The contribution of literacy to this meta-cognising ability has been noted elsewhere in support of Ong's thesis; Olson argues "... that the ability to distance oneself from language in order to reflect on it and to treat it as an object comes about as a consequence of learning to read and write. Written language provides a form that can be inspected, dissected and talked about" (in Antaki and Lewis 1986: 74).

Pinnard (1986) distinguishes between meta-cognitive control over the nature of the task, (including epistemic knowledge) and self-regulatory processes or meta-control over the self in performing a particular task. The application of appropriate cognitive strategies entails a process of correlating these two dimensions of task engagement. He postulates:

"...a double movement of cognitive activity ... a movement of interiorization, leading to a prise de conscience of her [the learner's] actions, that is, their conceptualization, which is expressed through analysis of the means employed, their raison d'être and their relative effectiveness; [and] a movement of exteriorization leading to a prise de connaissance or conizance of objects - that is, the understanding of their composition or deep structure and of the interactions between objects"
(1986: 343).

Meta-cognitive control involves being able to make knowledge explicit and then consciously and deliberately to regulate oneself in this process of knowledge construction. With reference to the process of developing meaning from texts, Iser

comments: "This category of reader, then, must not only possess the necessary competence, but must also observe his own reactions during the process of actualisation, in order to control them" (1978: 31). Questioning is a highly effective strategy in the facilitation of this conscious deliberateness in the reading process (Yaden 1984). Pinnard describes this process of self-regulation in terms of "facilitating or debilitating 'internal dialogues' " (1986: 346), or the problem-solving speech which Luria's or Vygotsky's child subjects internalised. In other words, in the absence of an external interlocutor, the individual imposes a questioning-answering structure on the process of knowledge construction, internally.

In the context of university learning, students must be able to ask questions²⁰ not only about the specific content of a particular text but, also, about the structure of the text and the way in which it conveys its meaning. In addition, they need to question and monitor their own engagement in the process of constructing meaning from the text (Yaden 1984; Driver 1987). These last two forms of questions are both at the meta-level; first, in relation to control over the form of the task and thus the possibilities for critically engaging with the knowledge of others and second, in terms of reflection on, and regulation of, one's own mental action. Questioning, therefore, can be viewed as occurring on two cognitive planes each the mutually informative converse of the other: as a demand of the task, and as an action of the mind. Effective questioning entails inferential reference to the epistemic framework within which the enquiry occurs. In the case of the ill-structured terrain of the Human Sciences, this entails recognising the open nature of the system of knowledge and, hence, the questioning process itself. These task constraints must be mirrored by a meta-awareness on the part of the learner of the cognitive operations appropriate to this epistemic domain of enquiry.

²⁰ As noted earlier, questions need not be expressed in an interrogative form but may appear as presentations of problems or a conflict in learning.

The Meno Paradox which suggests that "communication is either impossible or unnecessary" (Bhaskar, 1979: 196), highlights the peculiar moment of the question and underlines its significance in the process of mediated/instructional learning or cognitive change. A learner's question may serve as a window into the process of learning for the teacher but the possibility of posing a question presents a paradoxical problem.

"A man cannot inquire either about that which he knows, or about that which he does not know; for assuming that he knows he has no need to inquire; nor can he inquire about that which he does not know, for he does not know about that which he has to inquire" (in Bhaskar 1979: 196).

Miller has argued (1989(a), 1989(b)) that the way out of this paradox is provided by mediation. At the juncture of the impossible and the unnecessary, the teacher must intervene to provoke movement from what is known to that which is not yet known. However, a simple attempt to impart or 'teach' new knowledge cannot break the communicative impasse as the two systems of what is known to the teacher and what is known to the learner will remain distinct. Rather, the task of the teacher is to create the opportunity for the learner to act in an unfamiliar or new way, and through such action to develop new understandings. Miller has referred to this as the need for learners to "practice what they do not know" (1989(a): 13).

By posing questions, as opposed to providing answers, the teacher invites the learner to act in new ways, in advance of developed understandings. A question skillfully posed will open a unique space for the individual to tentatively explore what is not as yet known, but only hinted at or suspected, and for the teacher to draw the student across existing boundaries into unknown territory. In other words, a question

becomes a tool of other-regulation to direct the thinking and task engagement of the learner.

Dillon claims that "[n]o event better portends learning than a question arising to the mind. Few educational events offer as perfect an opening for teaching to enter as a student question that displays for pedagogical appreciation and action a complex of propensities disposing the individual to welcome teaching as well as learning" (1986: 333). But, to follow the line of Miller's proposition, such a question is unlikely without mediation that creates the moment of cognitive imbalance or disequilibrium (Piaget 1977 and elsewhere) where what is known is recognised as inadequate. The task of the teacher is, therefore, to introduce the necessary conflict into the learning situation, perhaps, by posing questions that direct the learner's attention and actions to certain aspects of the task. In this way, the learner may be encouraged to arrive at the question for which the task is an answer.

4.3 Mediating Questions.

4.3.1 Classroom interaction: questions and answers.

Studies focused on the role of questioning in the classroom context have traditionally adopted a linguistic or, more particularly, a pragmatic framework of analysis, investigating the interactive dialogue that occurs between teachers and students. (Kendrick and Darling (1990) investigated the questioning routines which students use in the classroom situation in order to probe the teacher/text/knowledge that confronts them. Questions may be used to elicit new information or to check for confirmation of an understanding that is in the process of forming. Such 'checking' questions may manifest as requests for repetition or elaboration. So while questions

may appear as indicators of "confusion and misunderstanding" (1990: 15), to the extent that students are able to formulate appropriate questions which successfully elicit further or correcting information from the teacher, they are also a pertinent indicator of understanding and mastery. Corno (1986) points to the role of understanding and self-consciousness which is prerequisite for asking any question, even the most simple clarificatory question in a verbal dialogical situation. Without a recognition of a misunderstanding (which involves the labelling of a previously held 'understanding' as such) or at least of confusion and uncertainty in knowing, it is not possible to ask a question and thereby to open oneself to the possibilities of change. "In the case of asking for clarification, the student also has to know he has failed to comprehend - to have been monitoring comprehension - and to feel free and unafraid to say so, rather than let the misunderstanding persist" (1986: 339).

The inability to formulate a relevant question or to pinpoint the area of confusion leaves the student out of control and far less likely to further his/her understanding on a particular topic. The burden thus is on the teacher, often-times his/her task "in dealing with understanding difficulties may entail attention to the fact that students will not always give any clear indication of whether they do understand" (Kendrick and Darling 1990: 28).

While a conversational model has been clearly demonstrated as inappropriate to the demands of developing knowledge from text (see chapter 2), what is evident from studies of classroom interaction (for example, Kendrick and Darling 1990, Dillon 1986, 1988) is that the mode of interaction between teachers and students (even when verbal) departs quite substantially from ordinary dialogue. The rules of interaction where a question must be met with an answer are placed in tension with another set of unspoken rules where questions serve the purpose of pushing the process of enquiry forward as opposed to closing it. A study by Reusser (1988)

specifically exemplifies how these classroom interactions begin to point toward the requirements of text and disrupt the dialogical conception of the role of questioning. Reusser's analysis of question-answer routines in classrooms leads him to argue that the 'best' (or most productive) response to a child's question is not necessarily an immediate answer; indeed he refers to the closure of questions as a "cognitive failure to understand what a question really means" (1988: 328). Questions should be treated as indicators of the child's understanding-misunderstanding, and read as cues to what further modification and restructuring of the child's understanding needs to take place. In other words, questions provide signposts in the mediational terrain rather than demanding particular answers. In this sense, a mediational style that provides immediate closure may be inappropriate.

Questioning is a socio-cognitive activity and crucially what the child learns is not so much specific answers to specific questions, but rather the 'rules' which govern the question and answer process whereby understanding is developed and extended. In the restricted school context, the task is formed and understood in terms of an unspoken contract between teachers (examiners) and students (examinees). In particular, Reusser points out that students learn the implicit characteristics of textbook problems as:

"... well-defined with one solution which the teacher already knows; the solution is obtainable with one's own resources; calculations working out evenly indicate being on the right track; confinement to relevance and non-ambiguity; everything that is relevant to the solution is stated in the text, and everything that is stated is relevant; the explicit problem question is always present and highly informative; all problems are solvable" (Ibid.: 333).

The task of solving such a problem is, therefore, shaped and directed by this understanding, and students apply these implicit rules in order to monitor their own progress towards an acceptable solution. Whereas this description highlights the nature of puzzle-type problems where all factual information is verifiable and will inevitably lead to a single solution, a similar process of learning the implicit rules must occur with regard to the ill-structured problems of the Human Sciences. One of the barriers to this learning of a new set of rules may, in fact, be presented by the attempt to apply the already learnt (and inappropriate) rules that Reusser outlines.

4.3.2 Developing Meta-cognitive control.

University education must constitute a process that develops independent learners who can continue to access information and critically evaluate such information without the direct guidance of a teacher. Whereas classroom interactions may provide some pointers towards the functions of questions in the development of knowledge, entering fully into the critical questioning epistemology outlined in chapter 2, clearly presents university learners (and hence teachers) with far greater challenges. Learner-centred tasks and increased learner-control over the learning process, has been one strategy adopted in the aim to develop learners' meta-control over both appropriate cognitive operations and a conscious manipulation of the epistemic demands of a given task.

Baljathy's research (1988) into the strengths and weaknesses of learner control in the educational process, through the use of computerised tasks, raises the question "... whether learners have sufficient understanding of internal learning processes to make adequate decisions about instruction" (1988: 15). Findings from the study indicate that while there may be increased motivation where students have greater control over what and how they learn, this may be at the expense of achievement, which in this study was lower in learner-centred approaches. In fact, Baljathy

suggests the very unpopular possibility that there may be an inverse relationship between learning and enjoyment, and that students' decisions about the learning process are likely to be based on the latter rather than the former. Miller (1994 (b)) distinguishes education, the purpose of which is change, from entertainment, which is premised on the familiar and aimed at sustaining and perpetuating it. Price dismisses the trend for relevance in education as "reducing education to therapy" (1986: 98) the implication being that the propensity for relevance is driven by a concern with healing or rejuvenation as opposed to provocation and challenge, or a concern with change and development.

The lack of correlation between student measures of enjoyment and achievement is, of course, cause for concern, as is the finding that "college-level developmental reading students are unable to accurately monitor the success or failure of their own vocabulary learning. The lack of difference in achievement between those who rated the instructional formats highly effective and less effective suggests that subjects are unable to estimate accurately the effectiveness of teaching devices" (Baljathy, 1988: 22). Baljathy, (perhaps rather optimistically) expects students who view a particular form of instruction as ineffective, to react by increased effort in relation to the task. Instead, where instruction is seen to be ineffective, this seems to relieve students of responsibility for success, or provide a rationale for failure: "Even when students estimated that they learned less from particular instructional formats, the students did not compensate by spending more time-on-task" (Ibid.: 22). This apparent lack of meta-cognitive control as reflected in inadequate monitoring of their own task engagement, may well be exacerbated by the current trend towards familiarity and

enjoyment as the panacea for the problems of learning-teaching.²¹ As already argued above, enjoyment may not necessarily mean corresponding increases in achievement (cognitive change) or enhanced control over the individual's ability to meet the task demands.

In this regard, the introduction of impedence in a process which otherwise is not consciously regulated, provides the metaphorical 'thorn-in-the-flesh', or in Piaget's terms (1977) the necessary conflict to focus the learner's attention and awareness on the nature of the process. Baljathy refers to this as "... the so-called law of awareness, which states that an impediment or disturbance in an automatic activity makes the actor aware of that activity" (1988: 16). Gadamer likewise claims that "every experience worthy of the name runs counter to our expectation" (1975: 319). Craig's strategy of defamiliarisation (1992), adopts a similar position, arguing that where previous learning experiences have been inadequate (as in the case of underprepared students), unfamiliar tasks serve to disrupt a reliance on past knowledge, and facilitate learning in the zone of proximal development. More specifically, Craig offers a matrix categorisation of tasks in terms of familiarity-unfamiliarity of both content and form. She highlights the particularly misleading nature of tasks which appear to be familiar due their familiar **content**, but which in fact require engagement with an unfamiliar and new **form**. In contrast, where tasks are unfamiliar both in terms of content and form, this provides the necessary disruption of previous schema and allows for the learning of new and appropriate form demands. She does, however, concede that this is a *strategy* which, in order to effectively bridge the Zone of Proximal Development, needs to be combined with

²¹ Particularly in the politically loaded context of South Africa in transition, there is a strong move towards 'relevant' content. The argument is that the disjuncture between university knowledge and students' knowledge could be bridged if tasks were constructed in terms of content that is familiar and in accord with students' cultural context. The Freirean paradigm of 'conscientisation' (1972, 1973) has in many instances been adopted wholesale, with little attention to important differences in the context and purposes under which it evolved. This approach does little to tackle the most glaring disjuncture of all, that of the **form** (not the content) of tasks. (See the discussion of chapters 2 and 3).

tasks which reflect other possible combinations of familiarity and unfamiliarity; for example, unfamiliar content and familiar form, or familiar content and familiar form.

Zueli (1986) highlights Vygotsky's concept of "learning in advance of development" and argues that formal schooling by its very nature is about enabling students to deal with decontextualised and unfamiliar knowledge. His view is that "connections to students' everyday knowledge come later" (1986: 3), or in Craig's terms, a new, previously unfamiliar (academic) form can be imposed on familiar content. It is this decontextualised learning, captured in Vygotsky's notion of "scientific concepts", (1986) which **structures** thought, enabling learning to move beyond spontaneous development to deliberate and conscious control, through a process of "changing their psychological structure from the top-down" (Vygotsky, in Zueli 1986: 110). Awareness, or consciousness, of otherwise automatic cognitive activity, specifically allows for the development of meta-cognitive control and for the development of genuine learner-centred and independent study.

4.3.3 Mediating meaning.

Applying Lacan's (Freudian) terms (1979) from a therapeutic situation to the learning-teaching situation, a learner's question is presented for 'naming' or signification through the assignment of meaning by the teacher. It is a moment of "surrender" (Miller 1992(b); 1994(b)) in which previous understandings are relinquished and the learner opens him/herself towards the teacher, and towards the possibilities of change. A question represents an invitation to the teacher to intervene in the reality of the student, providing insight into the nature of the learner's already developed understanding, so that teaching and learning can move beyond this. Questions are statements of the learner's pre-understanding, inviting the teaching that can lead to new understanding.

Dillon emphasises that it is not an answer as such that will move the student along the path of learning. Rather the role of the teacher may be to "help the student reformulate the question" and thereby "perforce re-form the world of his possible knowledge" (1986: 335). This opportunity for 're-forming' the problem has strong parallels with the therapeutic situation where the problem or 'knot' in the psyche is "handed over to the analyst for reconstruction" (Lacan 1979: 129). All students' questions should be interpreted as 'knots' to be unravelled, rather than questions in the narrow sense that require answers and closure. Through the question in the instructional context, the student expresses trust (or transference), and places confidence in the 'other' (teacher) to facilitate resolution, movement, change and learning. It is a moment that parallels the requisite openness towards the text with the student revealing him/herself as a 'text' to be read and interpreted by the teacher.

Dillon (1986) identifies the following phases of questioning in the learning process from the perspective of the learner: perplexity, asking, answering, learning. The role of teachers is to sustain the act of asking rather than rushing to that of answering, and to use students' questions as windows into the nature of the 'zone of proximal development', in the sense that they reveal what is known and must be known, (and the gap between these,) in order for the learner to learn. "To begin by answering the question may be a pedagogical blunder" (Dillon 1986: 337). The questioning and answering process in the classroom needs to move through cycles of certainty and uncertainty; or in Piaget's terms to involve both conflict and the means to surmount the conflict (1977). Questions can be viewed as an explication or exteriorization of the 'conflict', so that the teacher can supply the appropriate resources for the student to move through the Zone of Proximal Development. It is crucial to recognise that this is an essentially active process, engaging the learner in tasks which provoke such

conflict, as we can only know the world through "practical activities which mediate its nature" (Rubenstein 1981: 166).

Meta-cognitive control and self-directed learning has been referred to as the "essence of adulthood" (Caffarella & O'Donnell 1987). The orientation of the adult learner is problem-centred, and through experience with similar problems, the individual develops the cognitive basis for monitoring and changing his/her mode of engagement with particular types of problems. The essence of this problem-centred approach is a mode of self-regulated action developed through an awareness of the relationship between one's strategies and outcomes. (Zimmerman 1986). The aim is to produce "insight and understanding of one's own thought processes, in particular those processes that produce success and are responsible for failure; [resulting in] ... a change in orientation towards oneself from passive recipient and reproducer to active generator of information" (Feuerstein 1981(a): 275).

Trollip and Lippert (1987) explore the potential for developing situations where the student must take on the roles of both learner and teacher through the construction of computer 'knowledge-bases'. The strength of this approach is that the student is forced to engage not just with the content of the course but with the conditions and constraints surrounding particular facts, by adopting the reciprocal and mutually critical positions of teacher and student:

"It seems that the old adage holds true that the best way to learn something is to teach it. In this case, the process forces each participant to be both teacher (in the sense of the product) and student (during the construction process), with each role critiquing the other's performance. This is a novel situation, and one that holds great promise for instruction" (1987: 48).

Students engaged in the open-ended questions of the Human Sciences must develop meta-control over not only their own actions, but also an awareness of, and control over, the epistemic demands of the tasks which confront them, or to quote Pinnard again, they need to develop a "prise de connaissance or conizance of objects - that is, the understanding of their composition or deep structure and of the interactions between objects" (1986: 343). Cognitive strategies or operations need to be activated and applied in accordance with this meta-understanding of the nature of particular tasks. Reusser indicates the critical contribution of this control over the nature of the task in enabling students to test and evaluate their own problem-solving strategies: "Most of our subjects showed very weak schemata or epistemological standards of comprehension quality, of truth, and of coherence. ... [Students need to learn] how to *control* - while working on their own - the adequacy of a solution in some demanding, intersubjective way" (1988: 335). Without an understanding of, and meta-control over the questioning epistemology outlined in chapter 2, students will be unable to appropriately conceptualise tasks typical of the Human Sciences.

The task for mediation is, therefore, to represent tasks to students in such a way that this epistemic character, which is usually implicit or covert, is heightened or made salient. If students are able to conceive of the task in a new way, they will be able to begin to master the appropriate anticipated actions. "A new way of seeing things opens up new possibilities for handling them" (Vygotsky 1986: 91). In terms of this approach the locus of the problem which must be overcome, is neither the learner nor the teacher; rather our attention should be focused on innovation within the curriculum, or the mediated interaction which occurs between learner and task. The learning-teaching process needs to be constructed in such a way as to modify and change, not just the content of what the learner knows, but rather to create the conditions for restructuring and reorganising information that will produce a new way of cognising reality. According to Pascual- Leone, the role of the mediator is to

"invent the objects, praxis, etc. (i.e. the mediational situation) that will permit the learner to actually infer or understand better the idea in question" (1987: 548).

"The situation [text] itself is an answer that begs a question or poses a problem. In the most general terms, the question is why or how the events belong together, what they are about, and the problem is to discover the design inherent in the structure of the situation; a structure constituted by the outer world of objects and events and an inner world of experience or understanding. The task of mediation or other regulation is to reveal the design that is inherent in a situation, not by providing answers to questions but by providing answers that beg questions" (Miller 1994: 9).

More than simply presenting the learner with an appropriate task, it is the task of the mediator to re-present the intrinsic character of the task. The student needs to learn not only to solve a particular task, but to develop the mental schema, (or cognitive repertoire) appropriate for independently solving like tasks in the future.

*" The essence of a mediated interaction is that in the process of mediating information, a transformation occurs that **facilitates the transmission of meaning not inherent in the raw stimulus or sensory information impinging on the organism.** ... [The mediator] frames, filters, schedules, and provides a sequence ... In addition to transmitting all kinds of specific information that is simply not available via direct exposure, such as a knowledge of the past, mediated learning provides the kind of experience necessary for building of cognitive structure" (Feuerstein 1981(a): 271, emphasis added).*

4.4 Concluding comments.

A question indicates a moment of openness on the part of the learner or enquirer and, hence, presents a unique mediational opportunity. Moreover, the demand for critical enquiry and for openness, is perhaps the pivotal demand of studies in the Human Sciences. A focus on questioning is, therefore, doubly promising; in explicating the epistemic parameters of the task, and in developing mental models for appropriate engagement that will open up further routes of enquiry. "By directing others to act in a particular way, we direct them to act as we do in order to experience something we experience or in order to place themselves where we are placed when we understand. ... [A]ctions that are mediated by an alien consciousness produce a new experience" (Miller 1992(b): 2). This study aims to examine the possibilities for creating a new consciousness of the open, questioning structure of knowledge, and of equipping students with the questioning strategies that will enable them to participate fully in the development of knowledge.

CHAPTER 5

METHODOLOGY

5. METHODOLOGY

A monolithic notion of 'scientific method' is no longer possible in a postmodern context and is losing centrality even in the natural sciences. This lack of consensus as regards appropriate methods of enquiry necessitates a rigorous establishment of the theoretical framework and epistemological basis of a particular investigation. The discourse of methodological developments in the human sciences has extended beyond early debates that polarised the objective, quantitative approach on the one hand, and the subjective, qualitative approach on the other. However, a brief delineation of these alternatives and their historical development, serves to locate the particular combination of methods advocated in this study. The discussion below articulates the contestation surrounding the development of appropriate methods for the social sciences by briefly tracing the historical shifts in methodological thinking, in the following way:

- 1) the beginnings of a 'science' that could be distinguished from its antecedent philosophical roots by an emphasis on explanation through quantification and objectivity;
- 2) the recognition of the limitations of methods which had evolved in the study of physical reality, in application to meaningful and changeable human phenomena;
and
- 3) the search for a possible synthesis between these apparently oppositional frameworks.

5.1 Scientific method: explanation, quantification and objectivity.

The field of studies referred to as 'social science' encapsulates in its name the hybrid of interests and methods that define the epistemological terrain: while its interests (or problems posed) are social, its methods are proclaimed as 'scientific'. The historical juncture at which these disciplines came into being is not irrelevant. The status and value of traditional forms of knowledge (in particular, theology and philosophy) was eroded and challenged by the powerful possibilities of the application of natural scientific laws (in particular, of physics in engineering) in a rapidly industrialising Europe (Habermas, 1971; Morrow, 1994). The impact of this sense of 'science' was nowhere more evident than in the newly developing discipline of psychology, particularly (but not only) in the behaviourist trajectory of the discipline's development. Initial attempts to create parameters for scientific enquiry into human/social phenomena involved little more than importing the methods and criteria of the natural sciences, inter alia, the demands for objectivity, quantification, and all-encompassing lawlike explanation. Despite the fact that few researchers (even in the natural sciences) would today, unreservedly embrace this entire cluster of criteria and values, the 'scientific tradition' continues to influence new routes of enquiry.

Perhaps the quintessential defining feature of scientific claims (as opposed to spontaneous reasoning about reality) is the emphatic requirement for evidence. Researchers are called upon to establish the nature of the relationship between an explanation offered and the empirical data used to reach this conclusion. In order to argue for a particular explanation rather than another, it must be shown to explain all known cases of a phenomenon, that is, to provide an extensive nomothetic account that covers all possibilities. Such an account not only provides a causal explanation of why

events occur in the way in which they do, but also enables predictions about what will occur under similar conditions in the future. If it is possible to formulate an understanding of a phenomenon precisely, no future instance will fall outside of this formulation, that is, it is possible to construct a 'covering-all' law which accounts for all instances, past, present and future. (The term 'covering all' was originally Hempel's (1956) but has become widely used in the literature, for example, Toulmin, 1960; Suppe, 1977; Pratt, 1978; D'Andrade, 1986; Gergen, 1994). The laws of physics are prototypical of such predictive accounts of reality and entail (even if mostly implicitly) the ultimate purpose of producing a single, universal explanation which would incorporate all of physical reality within its ambit.

With this goal in mind, the empirical data supporting any claim must be extensive, including as many cases as possible, resolving any and all anomalies. The question of anomalies is particularly pertinent and problematic in the social sciences. Aside from very simple, low-level behaviours or activities, any social phenomenon occurs in the nexus of multiple factors, the single and specific effects of which it is impossible to isolate (Sayer, 1992; Gergen, 1994). The complementary purposes of causal explanation and prediction are rejected as elusive ideals, inappropriate to social phenomena. The "probabilistic modification" (Pratt 1978: 70) of the covering-all law reconstitutes the aim of social science in terms of the correlation of factors. Claims about the co-existence and mutual effects of particular factors, although not allowing for precise causal explanation or complete predictive control, enable an explanation of what occurs in the majority of cases. To this end, the quantification of data and tests of their statistical significance play a crucial role, enabling extrapolation of particular findings to all (or at least, most) other cases.

In addition to the concern with explanation based on quantification, traditional scientific models placed great emphasis on the need for objectivity and the grounding of theoretical claims in empirical observation. Research was conceived of as hypothesis-driven enquiry under controlled conditions that could be replicated. Although Popper, arguably the most central figure in this tradition, rejected the notion that observation could be entirely 'value-free' (1992), he nonetheless claimed that this did not necessitate an absence of objectivity in the methods of social science. He argued for the possibility of the "objective content" of scientific knowledge (1985) through controlling for the interference of questions of value in the enquiry process and delineating scientific questions of "truth, relevance and simplicity and so forth from extra-scientific questions" (1992: 74). In this tradition, scientific objectivity is to be found in the 'null-hypothesis' approach, searching for evidence to refute or counter hypothetical explanation. Again, the laboratory of psychological experimentation offers the prototypical application of this approach in the social domain. However, the behaviourist laboratory has been abandoned by most as it creates an environment so unlike the 'real world' that little of interest about human life can be revealed within its walls. Furthermore, the notion of 'objectivity' has been questioned in a more fundamental sense (Toulmin, 1960; Atkinson, 1978; Gergen, 1986, 1994; Heese, 1991). Atkinson notes that the energy of researchers is most often focused on addressing "the second, practical question of eliminating partiality and bias, whilst neglecting or sliding away from the prior logical question of whether objectivity is possible in principle" (1978: 72). In every instance, observation is conducted by an observer who must, necessarily, select what to study, how to conduct the observation and the procedures for recording the process. Atkinson offers a metaphorical analogy of this selection process:

“... neither history or science is a matter of dredging up facts by the bucketful. A better image is that of a searchlight playing upon areas of reality; the point about the searchlight being of course, that it is inevitably from a point of view and that what it illuminates is determined as much by this as by what is there for it to shine upon” (1978: 79).

In other words, the involvement of the researcher and his/her perspective is an inevitable fact rather than an error to be eliminated:

“At the risk of belabouring the obvious, it is important to remember that one cannot actually ‘lay aside’ one’s views, values, or self. In the first place, the effort to do so would itself reflect a value; that is, one would be choosing a behaviour because it was viewed as preferable or somehow better than its alternatives. Moreover, the organism making that choice would clearly be functioning as a self, a locus of intentionality” (Stewart, 1983: 380).

The strongly relativist connotations of such a position, the recognition that “realities are not independent of our representations of them” (Shweder 1991: 107), has enormous implications not just for the answers generated and evaluated, but more crucially for the process of questioning. From the outset, the process of enquiry “is no innocent act” (Ibid.: 107). The “theory ladenness” (Pratt, 1978; Sayer, 1992) of all claims, therefore, needs to be acknowledged. In other words, the theoretical approach adopted affects not just the way in which facts are explained, but also the process of selecting and even defining what counts as fact.

5.2 Social Science: interpretation, qualitative data and subjectivity.

Instead of attempting to minimise or escape from the effects of the subjective positioning of the researcher in the process of enquiry by instituting experimental controls, an alternative approach would be to embrace the inevitability of subjectivity, and seek to harness it in the delivery of qualitative, interpretive work. This paradigm is of particular relevance in the social or human sciences. While the theoretical stance of any researcher will make certain observations possible, exclude others, and circumscribe the descriptions and explanations generated, the effects of the subjective relation between the researcher and the researched is of greater impact with respect to investigations concerned with human phenomena. The key distinguishing factor is the centrality of meaning in the worlds which social scientists both inhabit and study. We “study things that have meaning to meaning-imposing human beings” (Shweder 1991:20).

The impact of this meaningful ontology is significant. Our attention must be directed not to the isolation of prior events which produce causal effects or to the discovery of laws which will predict future events but to the ways in which meaningful systems operate. Consequently, the aim of the social sciences would be construed as a search for “contingent generalisations about the regularities that make it possible for people to communicate with each other, with special attention to the learned content - the symbols and meanings - that guide human action” (Ibid.: 20). Ricoeur's metaphor of “action as text” (1981) captures this semiotic characterisation of social reality and highlights the implied emphasis on *interpretation* as the appropriate research task. The meaning which events and actions have for participants and the meaning that the researcher is able (in terms of a particular theoretical framework), to ascribe, provides us with an *understanding* of the way things are. Shweder argues that semiotic systems allow for ...

... no pure psychological laws, just as there are no unreconstructed or unmediated events. There are intentional persons reacting to, and directing their behaviour with respect to their own descriptions and mental representations of things; and there are intentional worlds, which are the realities we constitute, embody, materialise out of our descriptions and representations of things (1991: 99).

The quality of intentionality, therefore, circumscribes not only all social events, but also the representation of these events by both participants and researchers (Winch, 1958; Petit, 1979; Ingold, 1986; Secord, 1986). The inherently mediated quality of social reality has important epistemological implications for the kinds of goals that are both possible and appropriate to the endeavours of social scientists. Recognising the “concept-dependent” nature of social reality means that the “kind of understanding require(d) (is) not the amassing of empirical data but a conceptual or philosophical analysis of the action and the rules implicit in it” (Sayer, 1992: 31). The task of social science is thus conceived of as the explication of meaningful and systematic rules that guide action.

Geertz (1973) develops the particular techniques of the central anthropological method of participant observation in response to this conception of human reality as a meaningful, rule-based system. Rather than trying to objectively describe events, the researcher deliberately enters the world of those whom s/he is studying in an attempt to reconstruct the meanings that they attach to events and relationships. This approach embraces a plenitude of data (Pascual-Leone, 1987) as opposed to the restriction of focus necessitated by concerns with objectivity and control. The fullness of the data collection process and the particular attention to the meaning of events allows for what

Geertz refers to as “thick description” (1973) or the construction of interpretive narratives which further our understanding of events (e.g. Flammer & Kintsch, 1982). Rather than quantifying data and attempting to find statistical correlations between identifiable factors, effective enquiry in this framework entails the construction of a qualitative account that further develops the meanings already perceived by participants themselves.

The diminishing value placed on borrowed quantitative techniques and the consequent attention to systems of meaning (especially language) might be considered the defining feature which properly distinguishes the field of study known as the social / human sciences:

But it is not in its relation to mathematics that biology acquired its autonomy and defined its particular positivity. And the same is true for the human sciences: it was the retreat of the matheis, and not the advance of mathematics, that made it possible for man to constitute himself as an object of knowledge; it was the involution of labour, life, and language upon themselves that determined the appearance of this new domain of knowledge from outside; and it was the appearance of that empirico-transcendental being, of that being whose thought is constantly interwoven with the unthought, of that being always cut off from an origin which is promised to him in the immediacy of the return - it was this appearance that gave the human sciences their particular form (Foucault, 1970: 350).

5.3 A Hybrid²² Approach: reconceptualising the terrain of social science.

Despite the broad antithesis typically established between quantitative and qualitative approaches, many studies (including this current one) incorporate both types of analyses. Morrow (1994) argues rather for a distinction between extensive and intensive designs: extensive projects are primarily quantitative, where particular variables are identified and studied across as many different cases and conditions as possible. By contrast, an intensive project aims to develop an in-depth qualitative analysis based on a particular case or restricted number of cases. Very often these intensive studies (sometimes even called 'case studies') are viewed as a kind of pilot phase; the findings of which would need to be subjected to a quantitative analysis for verification. However, a hermeneutic framework points to the poverty of broad, survey type methods and their lack of account to the meaning of the phenomena thus described and quantified (Connolly & Keutner 1988). Morrow (1994), therefore, claims that the proper relation between quantitative and qualitative work is that quantification of general trends or patterns in the data might provide a heuristic basis for further interpretive analysis. It is this reversal of the typical combination of quantitative and qualitative techniques that has been adopted in this study.

The hermeneutic framework does not simply belong to a particular school of research or exclusively to the social sciences but rather points to a common mood of postmodern

²² This notion of a hybrid is borrowed from Latour (1993) who argues that modernity has been characterised by a drive to 'purify' the natural and social domains, each of the influence of the other. The methods of the natural sciences have concentrated on eliminating social ('subjective') effects, whereas social (cultural) studies have increasingly isolated discourse (representations) as the proper subject of analysis, from the dimension of 'real' (natural) things. Latour suggests instead that reality is not divisible in this way but rather, is "hybrid" in nature.

uncertainty and disenchantment with 'science' (Latour, 1993; Morrow, 1994; Bertens, 1995):

"Like several other late twentieth-century intellectual programs, e.g. general Systems Theory and Post-Newtonian physics, hermeneutics argues against the possibility of objective, positive knowledge. From the hermeneutic perspective, verifiable certainty is unattainable in the human sciences, and that recognition is not the cause for epistemological despair but simply a reaffirmation of the inherently contextual, historically situated nature of human knowledge" (Stewart 1983: 382).

Thus, the elaboration of the limitations of traditional scientific models in their application to the social sciences has generated alternative conceptualisations that have had a reflexive effect on epistemological parameters for all knowledge. The dominance of quantification and objectivity in extensive projects designed in pursuit of nomothetic explanations has decreased and the value of qualitative and subjective interpretation in intensive, focused projects has been established.

Prioritising the meaningful nature of human reality and adopting the semiotic model has had the effect of privileging the meaning which participants themselves accord to events. The subjective process of interpretation is placed in opposition to the objective explanation of events and, by implication, multiple interpretations are tolerated with little evaluative basis for distinguishing between them. Atkinson (1978) points out that there are two antonyms for the term 'objective' which are often erroneously conflated:

'subjective' and 'arbitrary'. In particular, the arbitrary assignment of linguistic or conceptual signs and symbols is often taken to entail an equally arbitrary and idiosyncratic process of interpretation. However, signs and symbols are combined in conventionally recognisable and regular patterns in particular systems of meaning which allow for communication between members of a community (Fleck, 1979; Shweder, 1991; Sayer, 1992; Latour, 1993). In this sense, a subjective response is far from idiosyncratic or arbitrary and interpretations are able to be evaluated in the terms of the intersubjective judgements of a community of meaning (Sayer, 1992), that is, those who share a common system of rules. Similarly, social scientists themselves form such a 'community of meaning' in which the any particular claim can be evaluated with reference to the claims of others.

Given the intersubjective nature of interpretive claims, the established dichotomy between interpretation, as local and subjective, and explanation, as generalisable and objectively verifiable, begins to appear less fixed. While the meaningful nature of social phenomena clearly requires an interpretive mode of enquiry, this may not necessitate the outright rejection of the aim of explanation. Indeed, Ricoeur's notion of textuality is inclusive of this possibility, asserting that that "explanation is not only possible for the human sciences, but that a valid interpretation must include an explanatory moment" (Aylesworth, 1991: 66). Bourdieu & Wacquant argue that, "the "opposition between the universal and the unique, between nomothetic analysis and idiographic description is a false antinomy" (1992: 75).

However, the achievement of this methodological synthesis is rather more than an eclectic compromise. The affirmation of a role for explanation in social enquiry, requires

a reconceptualisation of explanation in the light of interpretive activity: “Conversely, however, textual explanation is bound to understanding, which is complete only in reference to a human self and its life-world” (Aylesworth, 1991: 66). Thus, adopting text as a model for social phenomena and the activity of reading and interpretation as the consequent task of research, entails the construction of a new appropriate form of explanation, defined and constrained by the meaningful nature of that which is being investigated. Rather than two opposing aims or even two distinct moments in a process, interpretation and explanation in the social sciences entails the *construction* of appropriate methods through the conceptualisation of the objects under investigation.

5.4 Methodological implications for the current study.

Posing the primary methodological task as the conceptualisation of the object of study (Sayer, 1992) requires, in this study, a theoretical engagement with the nature of textuality and cognitive processing, as has been undertaken in chapters three and four above. At this juncture in the discussion it is worth highlighting the following key theoretical assumptions:

- a) Textuality makes particular cognitive demands (Gadamer, 1978; Iser, 1980; Ricoeur, 1981);
- b) Literacy changes the structures and processes of thought (Ong, 1982; Goody, 1987; Olson, 1996);
- c) The South African context is one of conflicting learning histories and consequent epistemological frameworks (Geertz, 1973, 1983; Craig, 1990);

- d) Cognition is a mediated process that is social in origin rather than a static biological entity (Luria, 1956, 1976; Vygotsky, 1978, 1986; Miller, 1989, 1992, 1994).

In terms of Morrow's (1994) argument that the ontological status of the object of enquiry constrains the epistemological parameters of investigation, the particular conceptualisation of cognition and textuality adopted has important methodological consequences. The hermeneutic framework is clearly appropriate in two senses: 1) the process of interpretation is evidently far from incidental in a study of textuality; 2) conceptualising cognitive development as inherently social (as opposed to essentially biological) requires an interpretive engagement with the meaningful processes of education that shape it.

However, the emphasis placed on the meaningful, social nature of cognition, requires a counterbalancing recognition of the material basis for such social phenomena: "...though cognitive processes are not reducible to material structures, they are set within them, and are constrained and enabled by them" (Sayer 1992, 48). Moll (1989, 1991, 1994) attempts to recapture 'the natural line' in Vygotsky's theory of cognition, convincingly arguing that the fully Marxist character of Vygotsky's theory means that social reality is not entirely separable from its material base. This reassertion of a material (or in philosophical terms, 'real') base for social phenomena does not imply a simple determinism, nor does it negate the distinctiveness of social as opposed to 'natural' phenomena. Rather, the constitutive effects of social actions are recognised as reconstructing the parameters of the material world. The social construction of our worlds entails processes of structuring (and restructuring) reality in ways that precede particular individual actors (Bhaskar, 1979; Miller, 1984) and, therefore, the 'material'

world encountered by individuals is always socio-historical in character. "The semiotic sciences imagine a differentiated universe made up of words and categories and presuppositions and propositional attitudes in which different systems of meaning are created, promoted, and become differentially institutionalised in different regions of time and space" (Shweder, 1994: 20). This intertwining of material and social realities is based on Marx's claim for action in defining human nature, that is, 'work' (acting on and transforming the environment) is viewed as a constitutive, as opposed to expressive, dimension of humanity. In these terms, it is not possible for a social action to occur without the attachment of meaning by both the actor and 'observer'. Conversely any 'purely cognitive' meaning, divorced from a context of action, is an impossibility; meaning must be instantiated in action. The important methodological corollary of this view of the social *and* material basis for cognition, is the recognition that the possibilities for cognitive action are not infinitely variable, nor simply the fiction of various, equal interpretive *narratives*:

"It is because nature and its material processes (including human activity) have particular structures and properties which exist independently of our understanding of them, that not just any understanding will serve as a basis for activity. Through intersubjectively monitoring our interventions in nature we try to develop our language and knowledge in accordance with those activities which seem practically possible" (Sayer, 1992: 21).

The conceptualisation of human activity as socio-historically constituted, and this socio-historical process as materially based, restores the role of explanation in a psychological investigation: "As a romantic discipline cultural psychology is a hybrid form of semiotic science and natural science. For it assumes that human consciousness is a complex

contingent mechanism whose dynamic functioning is mediated by the system of meaning within which it is embedded" (Shweder, 1994:20). However, it is a kind of explanation which little resembles the predictive laws of the natural sciences and even the probabilistic type of arguments typical of much of social science. Instead of attempting to find quantifiable generalities, this form of explanation is addressed to the question of generative processes. In other words, a distinction is drawn between "(1a) the nomological or computational aspects of explanation which deal with correlations among phenomena, and (1b) the constitutional aspect of explanation which deals with the origins of phenomena" (Heelan 1991: 228). The origins and constitution of social phenomena are not understood in cause-and-effect terms, but rather in terms of the structural or relational system which brings events into being. Morrow labels this methodological approach "interpretive structuralism" seeking, in the term itself, to convey the essentially meaningful character of the structural bases for human action. He identifies the following key tenets as informing the approach:

"...that structural relations and social analysis always have an interpretive (hermeneutic) dimension; that meaning and language (hence discourses) are the basis of forms of reality construction that both reveal and conceal the experiences of subjects; that structures may be species-specific or historically constituted and sometimes consciously transformed even if they have a kind of objective facticity that appears independent of immediate actors; that social and cultural structures constrain human action as does a grammar language, hence not in the way implied by variables as probabilistic determinants; and that meaning and structures constantly are reproduced (statistically) and produced (dynamically) across space and time" (Morrow, 1994: 24).

The most useful analogy for the kinds of structures that are of interest in this approach is that of a 'grammar'. In other words, the structures which we attempt to identify as constitutive of human action, act as a rule based system which underlies and generates particular performances in much the same way that a linguistic grammatical competence ('langue') underlies and produces particular speech acts or performance ('parole'). The regularities of grammar are tacitly shared by participants of a particular speech community and, in this sense, are quite regular and definable and, yet, allow for the generation of multiple, various and unpredictable specific speech acts. In the same way, meaningful action is generated in an unpredictable and yet regular way. Research in the interpretive-structuralist paradigm, therefore, aims to "empirically lift () into view the underlying semantic, sociocultural, and structural relations that are constitutive of historically unique actors, mediations, and systems, respectively" (Shweder, 1991: 212). An engagement with the structures which underlie particular manifest performances entails the construction of generative accounts (Vygotsky, 1978).

However, this attempt to explicate the structural underpinnings of particular events should not be misread as a search for fundamentals. Here Bourdieu's notion of "habitus" is pertinent. He argues that the structuralist appeal to 'rules' as outlined above, tends to address the formal codification of practices in contrast to the more indeterminate enactment of events that are constrained not only structurally, but also, importantly, by the strategic choices and "'feel' for the game" (1990:108) possessed by the actors. The notion of habitus, a "system of dispositions to a certain practice" (Ibid.:77) precludes a static conception of the relation between individual actors and events and social structures, suggesting a more complex and more subtle "ontological complicity" entailing

"an intentionality without intention which functions as the principle of strategies devoid of strategic design" (Ibid.: 108).

Thus, while explanation involves structural analysis, social structures are not isolated from the interpretive actions of agents and are, therefore, themselves constantly being reconstituted. In these terms, the process of explanation is characterised by fluidity and open-endedness and "explanation is no longer just computational or derivational, but it is historical, social, artistic, and hermeneutical" (Heelan, 1991: 228). By addressing the structural dimensions of events in an historical and generative way, it is possible to construct explanations that are neither, merely local (and parochial) nor absolute and fixed. Morrow argues that this perspective "involves an attempt to mediate between totalising unification and anarchic fragmentation. The central claim of such a balancing act is that it is our historical understanding of social determination that allows us to envision alternative worlds" (Morrow, 1994: 320).

5.5 Change and intervention.

The aim of research, to understand and explain phenomena, is typically posed as removed from the immediate goals of good practice. While practitioners (teachers, in the case of this study) may gain insights from research to apply in their practice, the research process should remain unaffected by pragmatic or political interests. In other words, the researcher should adopt a disinterested stance in relation to that which is under investigation. This conventional position is expressed in an educational context, in the claim that an investigation of 'why minority children succeed or fail in school' cannot also focus on such questions as "what works' and, perhaps, 'What works best for

whom?' " (Trueba 1988: 272). However, the above discussion has clearly highlighted the impossibility of an entirely disinterested (objective) position and the artificiality of dichotomising the worlds of the actor and the observer. A generative explanatory account entails an engagement with relational and operative systems (in other words, understanding *how* things work) rather than the objective isolation of antecedent causes. Trueba offers the counter-claim that "... intervention and explanatory ethnography can go hand in hand" (Ibid.: 273). More than simply deeming such involvement 'possible' or permissible, it could be argued that it is essential where the focus of study is on changing processes (such as in education) rather than fixed and stable products. "The genuine genetic analysis of a process would be its systematic reproduction in a teaching experiment" where there is " ... the active intervention of the researcher into the psychological processes being studied" (Gal'perin, translated by Kerr in Davydov, 1995: 19). The argument is, therefore, for a research process that engages with the intervention process as opposed to objectifying it (Deutscher, 1983; Carr & Kemmis, 1986; Erickson, 1986; Moll & Diaz, 1987; Schratz & Walker, 1995).

The present study focuses on the process of instruction as the site for the convergence of students' questions and the questioning epistemology of university tasks, as each of these have been historically constituted. As the interest of the project is defined in terms of instruction, development and change, the process whereby such change is effected is the proper focus of enquiry. As Feuerstein expresses it:

"... the moment we attempt to produce a cognitive change, it becomes impossible to ignore the underlying processes that govern cognitive performance. To the extent that assessment is regarded as an integral part of intervention and

not as an end in itself, the necessity to understand the nature of the processes that produce cognitive change becomes imperative” (1981:202).

However, this emphasis on process may falsely imply that products are of no account in the course of analysis. On the contrary, it is precisely through the analysis of tasks, (socio-historical products of knowledge in the social sciences), and the work produced by students, written in response to these tasks, that the process will be opened up for analysis. It is the *treatment* of products that must differ in a process paradigm, the interest of which is change. The tasks which have become taken-for-granted or “fossilised” in form (Vygotsky 1978), must be unravelled, so that their deep structure, or what Bhaskar (1979) calls ‘generative mechanisms’, can be made evident, explicit and accessible to students and teachers alike. Student products must, likewise, be ‘read’ as indicators of, or pointers to, the cognitive structures and processes that generate performance.²³

Vygotsky’s focus is on the zone of proximal development, entailing a departure from the assumption that cognitive ability is a fixed or static state to be measured. Vygotsky argues that “what children [learners] can do with the assistance of others might be ... more indicative of their mental development than what they can do alone” (Vygotsky 1978: 85). The focus is, therefore, on learning rather than biological or maturational aspects of development. Vygotsky advocates an “experimental-developmental” approach which “artificially provokes or creates a process of psychological development” (Ibid.: 62). The use of unfamiliar tasks is one means to create the experimental

²³ Ricoeur’s notion of the text which opens up and points to a world, is relevant in the understanding of this notion of ‘reading’ students’ products in terms of the cognitive worlds they represent.

conditions that will display the process of change. Confronted with unfamiliarity, the struggle of the learner to meet the demands of the task, becomes apparent. In this way it becomes possible to focus on the essential elements of the developmental process in a concentrated time period.

This approach entails abstracting the cardinal character of the task (most broadly defined as 'university study') which confronts students and creating learning-teaching occasions which instantiate this essence. Vygotsky referred to micro-level tasks thus constructed as "cells", units which retain the properties of the whole and, therefore, provide moments for analysis. The biological analogy highlights the generative or process notion of explanation as developed above. In Catan's terms (1986) this procedure is called "microgenesis". This is not only a useful research technique, it is a necessary response to the discrepancy between what students do and know, and what they need to do and know in order to be successful at university. In other words, the action of this research, takes place within the zone of proximal development and must, through the experimental-developmental process, not only describe and explain, students' cognition and the 'fossils' of university tasks but must also provoke learning and provide indicators for further learning-teaching.

Miller highlights the difficulty of attempting to understand the genotype (or the cognitive generative origins) through the manifest performance of the phenotype. Rather than considering particular performances as the fixed product of dependent and independent variables, or as static variations across different systems, "in the developmental paradigm, each state or performance is regarded as a moment in the developmental history of an individual" (Miller 1984: 16). In this way, products become windows into the

development of the individual and into the transformational impact of social systems on one another.

The selection of the 'cells' that best encapsulate the character of university study or of the epistemic domain within which students must engage, are those in which the unfamiliar nature of university study is most salient. In the present study, tasks were designed in a manner which heightened the distinct epistemic nature of the approach to questioning in the humanities (see discussion in chapter 2: A questioning epistemology), rather than attempting to seek rapprochement between the approach of students and that instantiated by the tasks. This deliberate accentuation of unfamiliar task demands is diametrically opposed to the intuitive approach often adopted in education, to depart from the most familiar and least challenging, and move towards more difficult tasks. Vygotsky emphasises the importance of the "so-called law of awareness, which states that an impediment or disturbance in an automatic activity makes the actor aware of that activity" (1986: 30). Similarly, Piaget (1977) refers to conflict as providing the essential impetus for cognitive change. Craig (1992) has shown the strategy of "defamiliarisation" to be a particularly effective means of provoking accelerated learning, especially where previous learning has not prepared students for given tasks and may even have laid incorrect ground-rules which hinder their engagement with the demands of new tasks.

Where conflicting learning histories meet in an educational site, the implicit rules for task engagement that may have been opaque can, and must, be explicated. Students' actions in response to these task demands provide the opportunity for analysing the generative bases for particular ways of operating and, thus, informing appropriate transformational intervention. In this way, the approach adopted is not only appropriate,

given the changing nature of the reality that interests us, but also actively contributes to that very process of change: “In the world of cultural psychology transcendence and self-transformation are possible but only through *a dialectical process of moving from one intentional world into the next, or by changing one intentional world into another*” (Shweder, 1994: 99, emphasis added).

5.6 Conclusions.

In summary, the central tenets which have informed the design of this investigation are in line with the interpretive-structuralist approach advocated by Morrow (1994) and implied by critical realist assumptions about the nature of social reality (Harré and Secord, 1972; von Cranach and Harré, 1982; Sayer, 1992; Bhaskar, 1979; Sheperdson, 1994).

- Methodological choices and the implementation of particular techniques, are dependent on the theoretical framework adopted and the conceptualisation of the nature of the object under investigation.
- In all social scientific enquiry, a “double-hermeneutic” is operative in that social structures are constituted by human agents.
- Research can never be ideologically neutral or objective (in the sense of ‘impartial’) and, therefore, particular interests (for example, in this project, in educational change) must be explicated.
- The project adopts an intensive design (Morrow, 1994) as most appropriate for enquiring into the semiotic system of educational processes.

- The intensive focus allows for the construction of interpretive understandings and a kind of explanation that recognises the inherently meaningful nature of the object under investigation, that is, a generative rather than predictive account.

The methodological approach adopted entails more than simply the sum of a structuralist explanation and hermeneutic interpretation; rather the *integration* of these interests reflects the integration of meaning and structure in social reality. Hence, the aim is to construct "*mediational analyses* that reveal the simultaneous operation of agency and structure" (Morrow, 1994: 276).

Given the focus of this research project on the role of questioning in the development of knowledge, it is pertinent to conclude this discussion of methodology by conceiving of research as quintessentially a process of *enquiry*. Perhaps the value of a particular project could be said to lie more in the "quality of the problem" (Du Preez 1990: 60) that it seeks to address, rather than in the statistical significance of its findings. In addition to providing some answers, research should provoke further questioning, opening new routes of enquiry. Foucault epistemises this openness in his reflections on his own theoretical enquiry into the nature of the human sciences: "Of course, these are not affirmations: they are at most questions to which it is not possible to reply; they must be left in suspense, where they pose themselves, only with the knowledge that the possibility of posing them may well open the way to a future thought" (1970: 386). The best research must ask and pursue the questions posed by our context (both place and time), and in this sense, encapsulate the theoretical concerns of an era. To draw again from Foucault, late twentieth century (postmodern) thinking is distinguishable from its

nineteenth century antecedents in terms of the questions that it raises rather than the answers which it has produced:

"...is one carrying to its conclusion a thought which is that of the nineteenth century, or is one pursuing forms that are already incompatible with it? ... I do not know what to reply to such questions. ... I cannot even guess at whether I shall ever be able to answer them, or whether the day will come when I shall have reasons enough to make any such choice. Nevertheless, I now know why I am able, like everyone else, to ask them - and I am unable not to ask them today"
(1970:307).

CHAPTER 6

RESEARCH DESIGN

6. RESEARCH DESIGN

The project was conducted in two phases, each engaging with the questioning process from a different perspective. The methodological considerations of chapter five are here translated into the specific design and procedures followed in the implementation of each phase of the project.

6.1 Subjects.

6.1.1 Phase One.

The subjects for phase one of the present study were two groups of second language speakers of English (L2)²⁴ students admitted to the University of Natal in 1990 and 1991 through the Student Selection Research Programme, known as the Teach-Test-Teach Programme.²⁵ These students were all selected for extended curriculum studies as, although the selection assessment indicated potential for successful university study, they were underprepared to meet the demands of degree studies independently. The two groups of students were judged to be cognitively similar and there was no basis to assume differences in task engagement. Initial analyses of their work supported this assumption, with very similar patterns of response being found in both groups. The two cohorts are, therefore, treated as a single group for the purposes of this study. All results and examples of data are recorded separately for each cohort and are available

²⁴ All students identified as second language speakers of English in this study are African Black students whose mother tongue is an indigenous African language.

²⁵ The Teach-Test-Teach Programme is described in detail in Chapter One.

Table 2: Subjects for Phase Two.

	L2 ALL STUDENTS			L1 FAILS		
	Women	Men	Total	Women	Men	Total
Gender	194	80		64	24	
Origin	Urban 162	Rural 112	274	Urban 81	Rural 7	88
Age	Range = Mean =	17 - 55 years 23 years		Range = Mean =	18 - 26 years 19 years	
Matric Points Score	Range = Mean =	5 - 40 25		Range = Mean =	16 - 41 29	

6.2 Instruments.

The case for explanation and intervention as mutually compatible goals has been argued in chapter five. In accordance with this approach, the data for both phases of the project were generated in the course of the regular educational programme. In Phase One, tasks performed in weekly educational development sessions with students; in Phase Two, students' responses to examination questions. The academic development sessions in Phase One (1992-1993) focused on the (re)construction of cognitive operations/skills to enable independent modes of engagement in first-year studies. It is this independent task engagement that is subject to assessment in regular first-year examinations such as those that provide the focus for Phase Two (1996).

The investigation focused on both highly unfamiliar instructional tasks (Phase One) and more conventional formal academic tasks for assessment (Phase Two). The deliberate design of unfamiliar tasks for instruction presents students with an opportunity to act prospectively in the zone of proximal development, that is, to act on material and tasks

which move learners beyond the known and provoke the development of new understandings. The learning situation is created by the "... human mediator [who] *invents* the objects, praxis, etc. (i.e. the mediational situation) that will permit the learner to actually infer or understand better the idea in question" (Pascual-Leone 1987: 548). Delineating the nature of these tasks, and the rationale for their design is, hence, a pivotal theoretical task in such a mediational project. Further, the deconstruction and elaboration of the task demands entailed by conventional academic assessment, is necessitated. Sayer's (1992) argument for the conceptualisation of the object of study is again pertinent.

6.2.1 Phase One.

A set of 8 tasks²⁸ was devised which epitomise and make explicit the questioning epistemology which students must enter. In a Piagetian sense, the tasks were designed to provoke conflict or to elicit the disjuncture between the task and the subjects' actions.

Three **types** of tasks were designed and are briefly described below:

- A. Tasks that require students to generate their own questions in relation to a given text: Task 1, Task 2, Task 3.
- B. Tasks that model for students an appropriate questioning process in the development and construction of knowledge: Task 4, Task 5.
- C. Tasks that require students to analyse and respond to questions typical of the Humanities: Task 6, Task 7, Task 8.

²⁸ Where possible, texts on which the tasks are based are reproduced as part of this description of tasks. However, in many instances the length of the tasks precludes their inclusion. In these cases, a summary description of the task is given here, while the full tasks are included in Appendices 6 - 12. Specific references to each task are included in the presentation of results for this first phase in chapter 7.

Task 1: Generating questions (Type A).

Students were shown a video, Poetry of the People, and asked to write down questions while they watched. These questions were to form the basis of group discussion with their peers. They were instructed to be as exhaustive as possible in their construction of questions. The video was produced by SACHED²⁹ and presents an exploration of the relationship between art and reality. The video-text investigates this topic through two types of footage:

1. Interviews/inserts of artists or critics presenting poetry and their analysis of their role as artists in relation to the world; and
2. Vivid imagery of the social context (often scenes of violence) in which these artists are at work, namely, the South African socio-political reality of the eighties.

The video-text was selected for its peculiar blend of familiarity (the socio-political context of the discussion) and unfamiliarity (theorising the role of art in society). Comment on the importance and value of art in society is forged through an interplay between the words of artists and strong visual images of the events of a world of violent political turmoil. While a range of positions is presented, in essence, the film asserts the view that the interpretive art of poetry is not isolated from and must engage with socio-political realities. However, it simultaneously argues for the peculiar position of the artist in society and resists the view that the poet's voice can be reduced to that of a mere record-keeper or political mouth-piece.

²⁹ SACHED (South African Committee of Higher Education) was a non-governmental organisation which was established to provide a resource base, initially for university students registered with the University of London and later UNISA, and then, particularly in the mid-seventies, in response to the crisis in secondary schooling.

Task 2: Interrogating text (Type A).

A short dense excerpt from Sarup, (1988) on Gramsci's theory of change was presented to students for 'interrogation'. The metaphor of interrogation is used to highlight the demand for active reading, and the struggle to construct meaning from the given, where this meaning is not readily revealed to the enquirer.

*For Gramsci the needs of the masses were primary; **they** defined the problems. Nevertheless, he was critical of folklore, - the superstitious elements within common sense. Common sense, though based on experience, was limited. It was simple, fragmentary, contradictory; unlike "good sense", it was not worked out critically or systematically. He argued that there was a need for a new type of intellectual, for persons who made an already existing activity coherent, critical and systematic. "Common sense" should be transformed into "good sense", but this can only be done by people who have the relevant skills and who have an "organic" relationship with the masses. Gramsci argued that intellectuals "know" but do not feel while workers feel but do not "know"; hence the need for a synthesis of intellectual knowledge and working-class experience for the production of a socialist culture.*

Sarup, 1986:84

This text may, at first reading, appear to deal with realities quite familiar to students in the highly politicised South African context of the late eighties/early nineties. The language of analysis, (e.g. "the masses"; "workers" and "socialism"), is intuitively familiar but conveys a new and quite unfamiliar interpretation of how this process of change

process will occur, by problematising the nature of the relationship between the intellectual elite and the working-class. Detailed questioning of the text makes evident this disjuncture between the general impression of familiarity and the specific claims of Gramsci.

Task 3: Questioning extended text (Type A).

Students were presented with an extended text, extracted from the first-year Sociology text, *Sociology: Themes and Perspectives* (Haralambos, 1980), chapter one, *The Sociological Perspective*. The text offers a general introduction to the content area of sociological study, distinguishing it both from the natural sciences and from other similar social disciplines, as well as introducing the reader to the approach and foci of this particular text. The critical nature of sociological concepts, e.g. status and role, norm and value, socialisation are illustrated with reference to the ordinary phenomena of everyday life. Finally, the text gives a brief overview of different theoretical frameworks, namely, functionalism, Marxism and interactionism.

The task required students to read through the whole text but they were not given sufficient time to allow for a complete linear, sequential reading. They were instructed to write questions in response to the text, but to move through the text as fast as possible, the aim being to cover the entire text in the time given. The aim, therefore, of the questioning process was to push the reader through the text, so developing an overall sense of the main ideas of the text.

Task 4: Modelled questioning of text (Type B).

Students were presented with an extended text (an adaptation of Geertz's (1983) discussion of common sense) and as in Task 3, they were first instructed to read the entire text under a strict time limit, writing down questions as they proceeded through the text. The students were then given a set of questions (to which they responded in writing) to guide their detailed re-reading of the text, without any strict time limit being imposed. The text presents Geertz's framework, opposing the characteristic forms of common sense and 'good sense' (scientific knowledge). The questions posed create a modelled process to guide students in engaging with and establishing these oppositions.

Task 5: Non-sequential reading (Type B).

A short text dealing with the non-sequential characteristic of reading was presented to students.

When one writes one starts on the left-hand side of the page and jots down, letter after letter - forming word after word and sentence after sentence - until one gets to the right-hand-side, then one stops there only to start again at the left, and so on and so on until the page is full or until one has finished. The mechanical act of reading also happens sequentially, that is, from a beginning to an end; and is temporal, that is, it has a start and a finish in real time.

That which one writes about, and the meaning which one gets from that which one reads, is something else again.

The meaning events, people, animals and things have for us, accumulates over time. Meaning is, therefore, not something fixed and absolute. We 'get' and 'make' meaning through the interpretation of those events, people, animals and things we encounter in our daily living. The act of interpretation "must inevitably do violence to the sequential nature of reading. Patterning is, by definition, a process of pulling some things out of their sequential position.

Craig, 1990.

Questions in relation to this text focused students on the nature of texts and reading, both through the content that the text presents, and through the demand to deal with this text itself in a non-sequential way in order to develop meaning. In other words, the text itself offers a meta-level comment on the very process of reading with which students need to become familiar and over which they need to gain reflective meta-control.

Task 6: The Essential question of Enquiry (Type C).

Before watching the video *"Poetry of the People"* (see Task 1) for a second time, students were instructed to watch with this question in mind: *"What was the question which led to the production of this video?"* In other words, their task was to identify the essential (core or central) question that drove the process of enquiry, resulting in this film-text as an 'answer'.

Task 7: The circle of knowledge (Type C).

The 'circle of knowledge' (from Craig 1989, **Production of Knowledge**), was presented to students as a model of the knowledge construction process. In this model, (similar to that presented by Sigel & Kelley 1986) the different stages of constructing knowledge are presented as questioning, planning, acting, observing and reflecting. Each stage leads to the next and through this process, new understandings are formed. The process is described as circular as the final stage of reflection leads again to further possible questions and, hence, in turn to each of the subsequent stages. Students were then asked to represent any knowledge of their own choosing, in terms of this staged model.

Task 8: Analysing academic questions (Type C).

Students were presented with typical academic questions, (taken from past examination papers,) and asked to analyse these questions in terms of a given set of steps that would lead them towards the identification of the 'issue for debate' that is raised by a particular question.

1. *"All whites are born racist." Critically discuss this statement.*
2. *Describe the nature of adaptation to the environment typical of subsistence pastoralism in Africa and analyse why many pastoralists have experienced difficulty in the face both of socio-political change and various forms of development planning done on their behalf by government and international agencies.*

6.2.1.1 Feedback to Tasks.

In many instances, formal written feedback was given to students on their task performance,³⁰ providing students with an interpretation of their actions. Importantly, these tasks focus on the process of making meaning from texts, and are unfamiliar in both form and content to provoke learning in the zone of proximal development. Through tasks that necessitate, in a focused and explicit way, the mental actions that are implicitly demanded by all university tasks, new ways of operating can be learnt/taught, and mastered. These 'new ways of operating' include the adoption of the questioning assumptions which constrain knowledge in the humanities, a questioning mode of reading or textual interpretation, and questions that enable students to regulate their own learning actions.

6.2.2 Phase Two.

The second phase of the research focused on the performance of students on examination questions. These questions were of the same form as tasks conducted in tutorials throughout the psychology course and typical of academic questions in the Human Sciences in general. The programme of tutorial work aimed to enable students to consolidate a conceptual foundation in the discipline of psychology, to develop critical textual enquiry and independent engagement with typical academic questions.³¹ Model answers for the examination questions followed the same format as that adopted for all tasks, marks being awarded for various levels of engagement with the question, namely,

³⁰ See Appendices 8, 9, 10 & 12.

³¹ Examples of tutorial tasks for Phase Two of the study are available for reference in Appendix 4.

defining, describing, illustrating and linking.³² These hidden demands that underpin any general academic instruction such as 'discuss', 'critically discuss', 'argue for', 'compare' were made explicit for students in written feedback to tutorial tasks.³³ This feedback served to model appropriate forms of engagement for students and also provided the framework for assessment. Tasks conducted during class contributed one third of the final mark awarded. The questions that are the focus of this study formed one half of the final examination and were supplemented by multiple choice questions covering the same content areas; Introduction to Psychology, Evolution, Intelligence and Forms of Knowledge. Final performance on the course is, therefore, a composite score across these different kinds of assessment. The research focused on the open-ended questions of the examination paper but also evaluates this engagement in relation to students' final success or failure on the course. The examination questions were as follows:

1. Discuss the relationship between the content and form of the discipline of psychology. (10 marks)
2. Give two reasons why the natural process of adaptive change does not lead to perfection. Illustrate each of these reasons with an example. (5 marks)
3. Compare Darwin's theory of evolution through natural selection with the earlier theories of Cuvier and Lamarck. (10 marks)
4. Define the concept of g and explain its significance in the construction of models of intelligence. (5 marks)

³² Copies of the model answers for the examination are available for reference in Appendix 13.

³³ Copies of feedback to tutorial tasks are available for reference in Appendix 4.

5. EITHER: draw a diagram that summarises Piaget's theory of intelligence. OR: Write a summary discussion of Piaget's theory of intelligence. (10 marks)
6. Discuss the constructed nature of knowledge in the social sciences in terms of the concepts of intertextuality, conceptual frameworks and theory-laden facts. (10 marks)

6.3 Analysis of Data.

The analysis of students' work draws on the hermeneutic tradition of interpretation, using the textual responses that students produce as windows into the thinking that generated these products. The focus is on attempting to understand and interpret these responses in terms of their generative cognitive processes in order to inform further development of instructional materials and curricula. The tasks were designed to provoke learning in the Zone of Proximal Development. Students' written products can, therefore, be understood to 'fix in time' a moment in the process of learning, which can then be subjected to critical analysis. In other words, the interpretive approach is augmented by a structural analysis that makes a generative explanation possible. As discussed in chapter two, the theoretical frameworks that guide the interpretation of these products, are provided by:

- 1) Analysis of the demands of the process of knowledge construction in relation to text (Gadamer 1975, Ricoeur 1981 and Ong 1982); and
- 2) Analysis of common sense or indigenous epistemologies (Geertz 1975 and Craig 1991).

In drawing on the hermeneutic tradition as a means of analysis, the focus shifts from the individual student as the unit of analysis, to the 'texts' (questions) that they produce. The extent to which the kinds of questions generated by students are indicative of either their cognitive repertoire or of a 'population' of which they are representative, is a separate question. There are sound reasons to assume that the kind of questions students produce in response to academic tasks are, at least partly, a reflection of their academic preparedness, and that the students participating in the study do represent, at least in some respects, an academically underprepared population. The extent to which this is the case, is elaborated in the comparative analysis of the kinds of questioning engagement that underlie the inadequate answers to academic questions produced by first and second language students in Phase Two of the study.

6.3.1 Quantitative Analysis.

In each phase, the patterns of response are initially established in terms of frequency of response against the particular criteria delineated below. These frequency scores are tabulated and, where appropriate, also presented graphically. Comparison of performance data across different tasks provides some pointers regarding, 1) the development of students' abilities; and 2) the distinct demands of particular tasks. The types of tasks, and the various forms of analysis, allow for different perspectives on the development of an understanding of students' engagement with the questioning (critical) epistemology of the knowledge construction process in the Human Sciences. The frequency scores can, however, merely point to important common trends or patterns that need further explication. Erickson argues for the complementary roles of quantitative or "synoptic description" and "interpretive description" (1986: 151), an empirical (though not empiricist) method for the social sciences. The study, therefore,

does not aim to produce statistically predictive conclusions but, rather, uses the general trends that are quantitatively established as the basis for further qualitative interpretation.

6.3.2 Qualitative Analysis.

In order to provide this further explication, the data are subjected to "thick description" (Geertz 1973). In other words, the analysis involves the construction of "a coherent story of the data" (Craig 1988: 99). It is acknowledged that this construction must be constrained by both the imposition of meaning by the analyst and an openness to the data. Craig notes: "it is not the data which immediately and in richness equal a potential story. The data, of course, may reveal (and may even conceal) the potential story that the analysts, in the process of analysis, must construct in its fullness". (Ibid.: 99-100) The emphasis on completeness and fullness and almost narrative detail in interpretation makes it possible to "concretise universals in particulars" (Erickson 1986: 130).

This thick description provides the basis for the development of an explanatory account of students' questioning actions. This explanation involves the explication of the quantitative trends in the data, an interpretive or phenomenological account of students' actions, and finally, an attempt to explain the generative mechanisms for the questioning process that is captured in the form of the products analysed. The researcher offers meta-subjective task analyses (Pascual-Leone 1980), explicating both the nature of the task and the cognitive actions of the subject in relation to these task demands. It is recognised that the researcher/teacher occupies a particular position in the research process and that the critical reflection of this study is constrained by this position. However, this is an inherent constraint of the social sciences and the theoretical

challenge, therefore, becomes to explicate not only 'the other' (in this instance, the students) but also the self (in this instance, university knowledge of which the researcher and, indeed, this research project, are part). Erickson argues: "From this point of view the task of fieldwork is to become more and more reflectively aware of the frames of interpretation of those we observe, and of our own culturally learned frames of interpretation we brought with us to the setting. This is to develop a distinctive view of both sides of the fence, what Bohannon has characterised as the '*stereoscopic social vision*' of the ethnographer' " (1986: 140).

It is hoped that this approach will result in an understanding of questioning, not only in terms of the particular process adopted by these subjects, but further offer indicators towards the construction of possible models of the generative processes of questioning in the development of knowledge.

6.3.3 Criteria for assessment.

Although the tasks are not unusual in an academic context, the criteria for their assessment could not be assumed, as in regular academic practice the evaluation of students' work is carried out in terms of implicit criteria that are not usually explicated beyond the demand for a 'critical approach'. In particular, Phase Two of the project focused on typical university tasks, assessed in the usual way for students' official performance record. While experienced academics may have a highly developed intuition for what constitutes a good response to a given question, they do not readily explicate the basis for their intuition and are also not easily able to articulate why a particular response falls short of the expected approach to the problem. The process of engaging with academic text and academic questioning has become fossilised

(Vygotsky, 1978) to such an extent that a key issue in the research process was the explication of these hidden processes through the development of criteria for the interpretation of students' work.

6.3.3.1 Phase One.

The role of questioning was explored by focusing analysis at different moments in the process of knowledge construction: the demands of the task itself, learners' cognitive processing and possible mediational models. The construction of criteria³⁴ for analysis drew on the descriptive categories of cognitive functioning offered by Feuerstein et al (1980). In open-ended tasks, where students are required to generate their own sets of questions, criteria are applied to the questions as a whole, in order to assess the appropriateness of the entire questioning process in terms of its 'usefulness' for furthering students' knowledge construction in relation to text. This analysis focuses on **what the task demands** of students and gives a measure of whether or not they meet

³⁴ Perhaps the most famous of all attempts at a classification of psychological-educational action, is Bloom's Taxonomy, developed as an educational guide in the 1950's. Bloom and his colleagues constructed a classificatory system of educational goals or outcomes, which they claimed was "neutral" and comprehensive, incorporating in a hierarchical structure, all possible educational objectives. The primary departures from this framework lie in:

1) A rejection of Bloom et al.'s concern with 'behaviours' (as opposed to mental operations). While the construction of such categories as "knowledge, comprehension, analysis" may well have been unacceptable in strict early behaviourist terms, the taxonomy implies a direct correlation between these (mental) processes and observable performance (Rohwer & Sloane, 1994). Further, while the term 'behaviours' has latterly been extended to include 'covert' as well as overt action (Furst, 1994) this extension only serves to underscore and complicate the stated concern of the taxonomy with observable and measurable behaviours which might structure curriculum design and assessment. Here, the focus is on developing a psychological analysis as opposed to producing a set of guidelines for instructors and testers. The translation of this understanding of learning actions into instructional practice is recognised as rather more complex than a drilling and quantification of certain behaviours.

2) A recognition that any claim for neutrality is hardly tenable in the highly politicised context of South African education in which this project was conducted, nor indeed in the post-modern complexities of global education at the end of the 20th century. Furst (1994) comments on the epistemological implications of attempts to separate content and process in assessment as one outcome of this concern with neutrality; i.e. regardless of the content of a problem, certain hierarchically related processes must be learnt (and tested). The contrasting approach adopted here considers the partiality of educational goals as inevitable and entails the methodological implications of this inevitability. A corollary of this recognition is the treatment of both content and process as integral to the construction of any task and formative of its analysis or assessment.

these demands. In this regard, responses were assessed in terms of the criteria: *exhaustive, precise, essential, and complex*.³⁵

In tasks that provide questions as a **model** for students' engagement, their answers have been conventionally scored against model answers in terms of the extent to which they have been able to adopt the appropriate model provided, in their engagement with the task. Patterns of difficulty provide indicators of where the mediation of appropriate questioning strategies or approaches to academic questions still have not effected the anticipated change in students' approach.

Where tasks focus on the relationship between a particular question and answer, the emphasis of analysis is on the nature of **students' responses**, that is on the way in which they interpret and construct the task for themselves. Here students' responses are assessed as: *appropriate, grappling, peripheral, grounded, or closed*.

6.3.3.2 Phase Two.

In Phase Two, the data were students' responses to questions in the final June examination for Psychology IA 1996. Model answers for the examination questions followed the same format as that adopted for all tasks in the tutorial programme. The allocation of marks for these examination papers was conducted in the usual way: model answers were constructed (see Appendix 13) with the majority of marks allocated for the re-presentation of particular appropriate content. In each instance, a few marks were also allocated for appropriate engagement with the critical form of the question.

³⁵ The presentation of results for this phase (chapter 7) includes detailed definitions of all assessment criteria.

This phase of the research aimed to refine the analysis of the questioning process in the construction of knowledge in the following ways:

- 1) to describe and evaluate a large group of mainstream students' answers in terms of the questioning process that may underlie these products and to relate these processes to examination performance;
- 2) to compare the patterns of questioning evident among failing L2 students with that found among their L1 counterparts in order to better understand the phenomenon of underpreparedness and its cognitive consequences; and
- 3) to explore the possibility that different kinds of academic questions provoke various sorts of questioning and answering processes on the part of underprepared students.

Students' answers in the examination were analysed to determine whether they appeared to be constructed in relation to the given question or whether their engagement with the question entailed cognitive transformation of the questioning parameters and, therefore, the reconstruction of an alternative question. Responses were categorised as either *engaging appropriately with the given question* or adopting a number of other possible questioning approaches to the topic suggested by the given question: *flattening the parameters of a given question; truncating the enquiry; substituting another academic question; grounding the enquiry in an authoritative source*.³⁶

The analysis of questioning responses in terms of the categories above, seemed to suggest that variations of response may be due not only to the degree of students'

³⁶ Detailed definitions of these categories of response and illustrative examples are provided in the presentation of results in chapter 9.

preparedness (or cognitive readiness) but also may be elicited by different kinds of questions. The questions in the examination paper differed not only in terms of the content area addressed (namely, introduction to psychology, evolution, intelligence, forms of knowledge) but also in terms of the particular form demands made. The questions were found to be of three kinds³⁷ typifying different levels of engagement: factual, relational and conceptual.³⁸

³⁷ These question types were identified and developed for a research project on kinds of assessment conducted in the department of Psychology with this same cohort of students (Miller, Bradbury and Wessels, 1997).

³⁸ Detailed descriptions of these question types and illustrative examples are provided in the presentation of results for this phase of the research in chapter 9.

CHAPTER 7

RESULTS: PHASE ONE

7. RESULTS: PHASE ONE.

7.1 Task Analysis.

A range of educational tasks that variously demanded and developed appropriate questioning engagement provide the data for the first phase of the study. The data are presented and analysed in terms of the three types of tasks described in chapter 6 as follows:

- A. Tasks which require students to generate their own questions in relation to a given text;
- B. Tasks which model for students an appropriate questioning process in the development and construction of knowledge; and
- C. Tasks which require students to engage with the process of enquiry (as manifest in question-answers relations) typical of the Human Sciences.

Further, the data are presented in the general chronology of the instructional process within each of these categories of tasks, although there was some minor variation in the learning-teaching schedule for the two cohorts. The analysis applied varies with the type of task in the following way:

- a) Where students were required to generate their own set of questions, criteria are applied to the whole set in order to assess the appropriateness of the entire questioning process for furthering students' knowledge construction in relation to text. This analysis focuses on **what the task demands** of students and gives a measure of whether or not students meet these demands (Tasks 1, 2 & 3);
- b) In relation to tasks that provide questions as a **model** for students' engagement, their answers have been conventionally scored against strict model answers as percentages (Tasks 4 & 5.);

- c) Where tasks focus on the relationship between a particular question and answer, the emphasis of analysis has been on the nature of **students' responses**, in terms of the way in which they interpret and (re)construct the task for themselves (Tasks 6, 7 & 8).

7.2 Generating Questions.

The first type of task required students to generate their own questions in response to texts provided. A particular understanding of text and the interpretive or hermeneutic process (see chapter 2) creates the implicit demands of these tasks. The analysis and interpretation of students' responses thus indicates the extent to which these assumptions about text and the critical process of knowledge construction are shared and operative for these students. Further, the qualitative analysis of students' engagement offers an elaboration of the epistemic framework of questioning that is applied by these students.

7.2.1 Task 1: questioning text (Type A).

Students were shown the video, Poetry of the People, and asked to write down questions while they watched. These questions were to form the basis of group discussion with their peers. For the purposes of jointly constructing the meaning of the film-text, it was expected that these generated questions would be **exhaustive, essential, precise and complex**. These criteria were applied in the analysis of the data, and are each more fully described below.

7.2.1.1 Criteria for Analysis.

1) Exhaustive

Has the student produced an exhaustive and comprehensive set of questions covering all aspects of the text? In the limited time at their disposal, some students produced as few as three questions, whereas others produced more than twenty. As a rough guide, students who produced eight or more questions tended to cover the issues of the text quite comprehensively, but as the complexity of questions varied between individuals, the extent and variety of questions was assessed in detail as opposed to a simple count.

2) Essential

Is there at least one question that addresses the central issue of the (film) text, in this case, the relationship between art and society? Meeting this criterion entails distancing oneself from the detail of the presented text, and engaging with the enquiry process that has led to the production of the text. This essential question demarcates the field of enquiry within which the textual answer has been constructed, and within which the reader/viewer is called upon to enquire further. (Task 2 below focuses specifically on this demand to view the text as an answer to a pivotal question.)

3) Precise

Are **specific** components of the text identified for questioning, for example, the primary concepts, definition of key terms, etc.? Accurately identifying the important elements of the text in this way, indicates an approach which problematises the process of meaning construction. It indicates an openness to the meaning of the text itself, and assumes the possibility of new and unfamiliar meanings, which may even dislodge preconceived notions.

4) Complex

Does the composition of questions indicate that the student has dealt with the task of constructing meaning in terms of the **whole** of the text (as compared with only the component parts of criterion 3 above)? Do the questions engage with the **implications** of statements in the text and show an engagement with the issues to which the text points, rather than just with what is overtly stated in the text?

7.2.1.2 Quantitative Analysis.

The responses of each student were scored against each of the above criteria. However, a cumulative score for each student ($n = 73$) reveals only that none of the students met all of the criteria for appropriate engagement and the majority of them ($n=41$, 56%) met none of the criteria at all. In order to further explore the trends in the engagement of the group as a whole, the frequency of different kinds of responses are recorded and presented in Table 3 below. For each criterion, the frequencies of responses are recorded as a percentage of the whole group of students in order to make comparisons across cohorts and across different tasks possible.³⁹

Table 3: Task One: Generating Question Sets.

	Kinds of Questioning engagement					
	Exhaustive	Essential	Precise	Complex	ALL	NONE
f	9	23	11	7	41	0
% of the total group (n=73)	12%	24%	15%	10%	56%	0%

³⁹ It should be noted that the percentages do not total 100. Not all students met even one of the criteria, and some students may have met more than one criterion and, hence, be scored twice. Each category must, therefore, be read as independent.

7.2.1.2.1 Most comprehensive responses.

Overall, Table 3 indicates that very few students were able to meet each of the criteria, the lowest frequency recorded being 10% and the highest only 24%. The best question sets were **exhaustive** in approach, including **essential** and **precise** questions. The examples below provide illustration of the best responses from the group.⁴⁰

Example 1.

1. *What is the first part of the video about?*
2. *Is it a music video?*
3. *What about long queues in the street?*
4. *Are poets part of the struggle?*
5. *What is meant when saying "All propaganda is not art but all art is not propaganda."*
6. *"Eyes of my eyes are opened" whats the meaning of this expression?*
7. *Is political and love poems the same?*
8. *Why should people read or write poems?*
9. *How could one become a poet?*

Example 2.

1. *Why SA is suffering as the first speaker said?*
2. *Why Blacks only, why it is in township only?*
3. *What cause killing?*
4. *Why government enjoy to enforce unpopular rules?*
5. *"Now is the time" said Mzwakhe Mbuli. When the time will come? Why people will violate 10 commandments?*
6. *This kingdom will not reign forever why?*

⁴⁰ All examples are reproduced exactly without correcting linguistic errors in order to preserve the authenticity of the data.

7. *Which kingdom and what kind of kingdom will reign forever?*
8. *Is the poetry one of ways of showing realities?*
9. *If it does what poetry is?*
10. *Poet of love, people, society - what differences are there?*
11. *Poet of nature - what is it?*
12. *Does it possible theoretically that South Africa will change from where it stands and practically apply that change?*

7.2.1.2.2 Complex responses.

In other cases, while responses did not indicate this same range of engagement with the video-text, more **complex** questions indicated an attempt to combine different aspects of the text, and to grapple with the implications of what was stated. The examples below illustrate this process of complex engagement.

1. *South African poets usually writes about political condition in this country. Do their poems have a significant role in influencing the SA government to make some reforms or changes?*
2. *What can cause the poetry to mainly emphasise on one sphere of life leaving other dimension of life aspect?*
3. *What can be the difference between the role played by poetry to that played by painting?*
4. *Can poetry not arouse human brutality?*

7.2.1.2.3 Tangential Questioning.

Although the "essential" criterion was most successfully handled by the group, even this criterion was met by only 24% of students and this demand, therefore, still clearly constitutes substantial difficulties for students. This failure to engage with or question the

essential issue will critically impede the reader's ability to appropriate the meaning of the text.

It is further important to note the very large number of students (56%) who failed to meet any of the criteria at all. In most instances, these responses became distracted by and fixed on irrelevant details of the text, and followed a meandering track of enquiry away from the text and into issues of concern in a more direct experiential sense. It is evident that students are not using questions to probe the surface of textual meaning, but rather use the text as a loose reference point from which to think about other issues. Thus, the exploration that the text precipitates remains in the realm of the reader's already familiar reality, while the unfamiliar world of the text remains opaque to the reader. The following examples from the data illustrate this tangential questioning process and the closure that this kind of questioning effects.

Example 1.

1. *If poetry is the case of suffering why then whites write poems since they are capitalist?*
2. *What is the theme of the video?*
3. *How do you view SA after togetherness?*
4. *Do you think suffering poem can be distinguished after democratic situation in SA?*

Example 2.

- *Why did the poet make use of images in saying his poem?*
- *What had caused the death for many people (why police are killing one another?)*
- *Why did the poet emphasise the words "It is time to go home".*
- *Which kingdom does she says will not reign forever.*

Example 3.

1. *Why is that person sleeping there?*
2. *Why is black township have violence?*
3. *Why these white men seem to be aggressive towards Blacks?*
4. *Where was this took place?*
5. *Is the way of gaining the new Africa?*
6. *Which kingdom that poetry is talking about?*
7. *Why is the way of education not the same in all races?*
8. *What is the poem?*

Example 4.

1. *Now is the time to violate the 11th commandment. Why does the poet say this?*
2. *What can be the remedy to situation in SA?*
3. *Will poetry be able to stop suffering in SA?*
4. *The film is about people's poets" Who are these people?*

7.2.2 Task 2: interrogating text (Type A).

A short dense excerpt from Sarup 1988, on Gramsci's theory of change⁴¹ was presented to students for "interrogation". Students were instructed to ask as many questions as possible about this text. The metaphor of interrogation is used to highlight the demand for active reading and the struggle to construct meaning from the given, where this meaning is not readily revealed or 'given-up' to the enquirer. The task for the reader is to reveal or extract meaning from the closed entity of the text.

⁴¹ See Appendix 6.

7.2.2.1 Quantitative Analysis.

Here the focus is once again on the demands of the task, and the same set of criteria were used to assess students' responses as those outlined in Task one above. Table 4 presents the data for students' engagement in the task of interrogating the text. Again the frequency of responses and the proportion of total responses recorded for each of kind of engagement are presented.

Table 4: Task Two: Interrogating Text.

	Kinds of Questioning Engagement					
	Exhaustive	Essential	Precise	Complex	ALL	NONE
f	45	52	31	18	12	31
% of the total group (n=94)	48%	55%	33%	19%	13%	33%

The pattern of engagement on this task is similar to that recorded for Task 1 (Table 3 above) in that the criterion of **complexity** again seems to present the greatest level of difficulty for students with only 19% of the group meeting this requirement. However, while a substantial number of students again met none of the criteria (n=31, 33%), a small number of students (n=12, 13%) did in fact meet all the criteria. The examples given below are illustrative of the best and worst responses to this task.

7.2.2.2 Illustrative Data.

7.2.2.2.1 Examples of responses meeting all criteria.

Example 1.

1. *Why Gramsci consider the masses as primary?*
2. *What type of masses does he need?*
3. *What are the elements of common sense?*
4. *Account for common sense as opposed to good sense in the passage.*
5. *Why should common sense be transformed into good sense?*

6. *What are relevant skills in relation to this passage?*
7. *What is the theme of this passage?*
8. *Critically analyse this passage in your own words.*
9. *What type of people who can make transformation of both senses possible?*
10. *Account for their weakness.*
11. *What is the recommendation / resolution thereafter?*
12. *What type of experiences would be selected, by intellectuals or the working class and why?*
13. *What is the argument all about in this passage?*
14. *Does this argument help you in approaching your essay; how?*

Example 2.

1. *Who are the masses and why are their needs primary?*
2. *What problems do the masses needs define?*
3. *What limits common sense, because it is based on experience, then why is it limited?*
4. *He talks of common sense and good sense. Is what is common not good?*
5. *Gramsci says common sense should be transformed into good sense by people who have the relevant skills and who have an organic relationship with the masses. Is this not going to create dictatorship of some sort or won't those people acquire a certain status than those that they represent?*
6. *Gramsci also talks of intellectuals as "knowing" and workers as "feeling" but not "knowing". How can the intellectuals know how much the workers feel?*
Doesn't the feeling show that you know hardship?
If no what is to be known?
7. *Is the intellectual knowledge synthesise with working class experience not going to cause clashes of differences in feeling?*

7.2.2.2 Examples of responses meeting none of the criteria.

Example 1.

1. *What are the masses?*
2. *What does the word primary mean?*
3. *Masses, do they really define problems?*
4. *Is Gramsci aware of the situation?*
5. *Does common sense really need experience?*

Example 2.

1. *Why did Gramsci says need of masses were primary?*
2. *Is the whole passage describing masses problem in accordance with Gramsci argument?*
3. *I don't know where critical folklore link with the passage?*
4. *What is the meaning of the word fragmentary?*
5. *Is that true that Gramsci is trying to argue about his ideal leader?*
6. *Can I say Gramsci support a leader which is from working class and have skills in leading people?*
7. *I really cannot understand the meaning of masses was he meaning majority or large number?*

Example 3.

1. *What is this reading all about?*
2. *Who is Gramsci?*
3. *Why was there a need for a new type of intellectual?*
4. *In what way do intellectuals know?*
5. *What causes them not to feel?*
6. *Why is there a need for intellectual knowledge?*

7. Working class experience for production.

8. Why is there a need for synthesis?

7.2.3 Task 3: questioning extended text (Type A).

Students were presented with an extended text, extracted from the first year Sociology text, Sociology: Themes and Perspectives (M. Haralambos. 1980), chapter one: The sociological perspective.⁴² In this task students were asked to read through the text under a strict time constraint and to generate as many different questions as possible as they worked through the text. Note that the time allocated for reading was insufficient for a thorough linear reading of the text, and the aim, therefore, of the questioning process was to push the reader through the text, thereby developing an overall sense of the main ideas of the text.

7.2.3.1 Quantitative Analysis.

The criteria outlined in the presentation of results for Task 1 above were used to analyse the sets of questions which students produced and these results are presented in Table 5.

Table 5: Task Three: Questioning Extended Text.

	Kinds of Questioning Engagement					
	Exhaustive	Essential	Precise	Complex	ALL	NONE
f	14	15	13	5	4	20
% of the total group (n=94)	33%	36%	31%	12%	10%	47%

⁴² See Appendix 7.

7.2.3.2 Illustrative Data.

7.2.3.2.1 Exhaustive.

Question sets that met this criterion were those which covered the whole range of the text rather than becoming embroiled in the detail of the introduction to the text or with a particular section of the material. An exhaustive question set gives a broad overview of the issues dealt with in the text and while some questions are more or less productive (in terms of developing further understanding) they indicate an openness on the part of the student towards the text. What is also significant (and is clearly revealed in the examples below) is that these students tended to structure their questions as if they were in the position of a tester or examiner, questioning or testing themselves. In other words, **exhaustive** responses indicate both an attempt to learn from the text and a meta-level control of the learning process in the measure of distance which they achieve from the text.

Example 1.

1. *What is the subject / concept of Sociology? (What is Sociology?)*
2. *What is sociology has to do with society?*
3. *What relationship do we get between culture and society?*
4. *What is the sociological perspective say about culture and society?*
5. *What interdependence do we get between culture and society?*
6. *What do we mean by socialisation?*
7. *When do we have socialisation, in other words when does the process of socialisation starts and where.*
8. *What do norms and values have to do with society.*
9. *How does status link with roles? What statuses and roles are we talking about?*
10. *How do we define a theory?*
11. *How many theories are there in the text which help to define society?*

12. *How does each one of these theories differ from each other?*
13. *Among these theories, how does functionalism differ from the others?*
14. *Interactionism as one of the theories states it is different from all other theories, what difference do we draw from this theory?*
15. *Marxism, functionalism have something in common, what are those things, how do we make these theories differ from interactionism?*
16. *Positivism as opposed to phenomenology are perspectives one can perceive in terms of addressing the whole question of debates within the discipline. How do these two perspectives differ?*
17. *What do we mean by ideology?*
18. *How do we see such ideology in the given text?*

Example 2.

What is Sociology?

What is a norm?

What is the process by which individuals learn the culture of their society?

What is the role of status?

Where does new-born babies get behaviour patterns necessary for living in their society?

Give contrast between culture and society.

How are people perceived in the sociological view.

Briefly explain ideologies in the context of society.

Do ideologies of different cultures differ?

What is a phenomenological perspective in sociology and how is it argued for.

Are object observation and analysis of social life possible?

In your view how do you feel about the positivist approach in sociology?

Account for the phenomenological and positivist approach and give contrast.

Do you think meanings are fixed entities?

7.2.3.2.2 Essential.

Questions that met the **essential** criterion were particular questions within a set that focused on the central or core topic of the text, the nature of sociology as a discipline. A question of this kind reconstructs the author's generation of the text, posing an issue for debate. The text can be read as an answer to this question. For example,

- *"How do human beings learn their behaviour?"*
- *"What is the sociological perspective say about culture and society?"*
- *"What role does culture plays in sociology compared with anthropology?"*

7.2.3.2.3 Precise.

Questions that met the **precise** criterion were particular questions within a set that focused on important aspects of the text and grappled with developing conceptual precision or definitional understanding of these key conceptual components. For example,

- *"What was Marx primarily concerned with? Was he concerned with socio-economic problems? How does this fit in the theories of man?"*
- *"What do we mean by socialisation."*
- *"How do we define a theory?"*
- *"What are norms and values?"*

7.2.3.2.4 Complex.

Individual questions that met the criterion of **complexity** juxtaposed disparate parts of the text, comparing different approaches with one another or focusing on the tensions/oppositions present in the text. As with the **exhaustive** question sets, if a student is able to meet this criterion, it demonstrates a certain degree of distancing from the text and an attempt to reformulate the debate for oneself independently of the given structure of the text.

- *"Marxism, functionalism have something in common, what are those things; how do they make these theories differ from interactionism?"*
- *"What is the distinction between positivist and phenomenological approaches to any society?"*

7.2.3.3 Trends in Student Responses.

7.2.3.3.1 "Blurred and Sweeping" reading.

In the main, the difficulties that students exhibited in working with this extended text derived from their inability to distance themselves from the text and work with it as a whole. Many students became distracted by minor or illustrative material in the text, producing questions that were peripheral to the central issues of the text. Their questions reflect an approach that fails to weigh the elements of the text differentially, treating all aspects of the material as equally significant in the process of generating an interpretive understanding. The following examples illustrate the tendency to focus on curious and superfluous details.

- *"Why Japanese decided to learn the new behaviour patterns where shared by members of the group?"*
- *"Why is the chimpanzee man's nearest living relative"*
- *"What was wrong when Edward VIII married an American divorcee?"*
- *"Do animals and plants form part of the society?"*
- *"What is the meaning of the word indefensible and infanticide in the text?"*
- *"What is the difference between the human baby and elder person?"*

7.2.3.3.2 Study Skills Approach.

There were also a number of responses that reflect study-skills type generalities about the process of making meaning from the text. Although on the surface these responses may appear to be an attempt at meta-level engagement with the text, these responses

do very little to develop meaning from the particular text confronting the reader. Rather, these questions seem to reflect little or no learner control in relation to the particular task.

For example,

- *"What is central idea about this whole text?"*
- *"What is the reading about and of what interest is it to a student generally?"*
- *"Why is it not a summary form?"*
- *"How is these sentences differs:*
 1. *Labour produces wealth.*
 2. *Wealth is produced by the labour power of the workers."*

7.2.3.3.3 Experiential/moral grounding.

The text attempts to illustrate the sociological approach with reference to ordinary everyday examples. Some students fixed on this illustrative material and focused their questions in terms of a prevalent concern with the 'goodness'/'rightness' or truth of the particular socio-political systems under discussion in the text. For example,

- *"Who is supposed to teach an infant way of life?"*
- *"Marxism is a general theory for Sociology, is it true?"*
- *"Are theories about people a good thing?"*
- *"What solutions could be brought to solve the problem of dependent members - e.g. very young and very old."*
- *"Are the ideologies of communism and democracy not leading towards the Third World War?"*
- *"Why do people have different stereotypes concerning culture to another group of the society?"*
- *"How can one be sure of the political doctrines? since all of them brings about good political points about their standpoint."*
- *"Do you think communist can be good if applied in South Africa?"*
- *"What message did they want us to bear in our minds?"*

- *"Why revolution always take place in our society?" It is because of different beliefs or ideas if so what are we supposed to do in order to be able to normalise the situation?"*

7.2.4 Comparative Comment: Generating Questions (Tasks 1,2 & 3).

The performance of students on Task 2 shows substantial improvement when compared with performance on Task 1 above. In particular,

- 1) a small number of students met all four criteria; and
- 2) the numbers of students meeting the individual criteria is substantially higher.

This difference in performance on the two tasks could be explained in various ways:

- 1) the nature of a written (as opposed to a visual) text more readily effects the distancing of the reader from the familiar;
- 2) the subject matter of the first (film) text is extremely close to students' real world experiences, and this may lead them to draw on this familiar world;
- 3) students' may be demonstrating increasing ability to deal with the demands of generating appropriate questions in relation to text.

This last positive interpretation of the data as reflecting longitudinal development is, however, not sustained by analysis of data from Task 3, in which the group performance is lower than on Task 2. The extended text and time pressure (both essential demands of university reading and meaning construction) meant that even students who met the criteria on the short dense text, struggled to meet the criteria here and produce useful and productive questions in relation to the text. Table 6 below combines the data from Tasks 1, 2 & 3 which deal with the generation of questions in response to text, in order to juxtapose performance across tasks.

Table 6: Comparative Performance on Tasks 1, 2 & 3.

	Kinds of Engagement				ALL	NONE
	Exhaustive	Essential	Precise	Complex		
TASK 1	9%	23%	12%	9%	0%	40%
TASK 2	48%	55%	33%	19%	13%	33%
TASK 3	33%	36%	31%	12%	10%	47%

Because of the extremely poor performance of students in relation to tasks that required them to generate questions, two further instructional and analytic foci were adopted:

- 1) To provide questions that would model an appropriate type of questioning for students and assess their engagement with texts through the use of these 'modelled' questions. (Section 7.3 presents students' engagement with such modelled tasks);
- 2) To analyse in greater detail what students **do**, in other words, to analyse the different questioning approach(es) that they are applying to given tasks, as opposed to that which was expected (Section 7.4 below entails this focus on the further analysis of the nature of students' responses).

7.3 Modelling Questioning.

The second type of task (Type B) provided students with a set of questions to guide their reading and the process of constructing meaning from text; in other words, the questions create a *model* for an appropriate and effective way of engaging with and questioning text.

7.3.1 Task 4: modelled questioning of text (Type B).

Students were presented with an extended text (an adaptation of Geertz's (1983) discussion of common sense) and asked to read it in 10 minutes (insufficient time for a sequential reading of the text). They were again instructed to ask questions of the text,

but to move through the text as fast as possible, the aim being to cover the entire text in the time given. Students were then given a set of questions (to which they responded in writing) to guide a further detailed re-reading of the text.⁴³

7.3.1.1 Quantitative Analysis.

This task was marked in terms of a model answer.⁴⁴ The students' performance is summarised in Figure 1 below, which presents the proportion of the student group that obtained marks in particular performance categories.

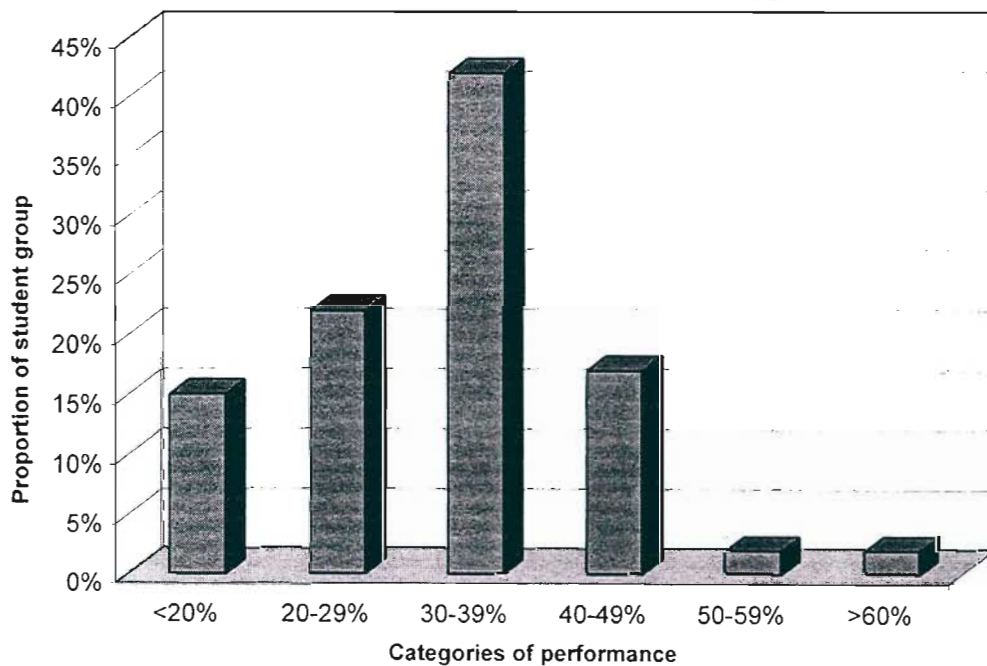


Figure 1: Task Four: Modelled Questioning of Text.

Figure 1 shows that performance on this task was extremely poor for the group as a whole with only two students (4%) producing passing responses. The remaining 96%

⁴³ See Appendix 8.

⁴⁴ The model answer and feedback is also available for reference in Appendix 8.

(n=51) of the group failed the task with the largest group (n=22; 42%) obtaining marks in the 30-39% range.

7.3.1.2 Trends in Student Responses.

Qualitative analysis of students' work facilitates an elaboration of the questioning engagement that produced these poor results in terms of the following trends: establishing a framework of oppositions, blurred and sweeping reading, working with the whole, and constructing implicit text.

7.3.1.2.1 Establishing a Framework of Oppositions.

The title of the text "*Common sense and Good sense*" sets up a framework of opposition between these two forms of knowledge, creating the text's field of enquiry. The majority of 'modelled questions' were designed to focus students' attention on this opposition throughout the text, and on the refining conceptualisation of each form of knowledge that thus becomes possible. Responses to the questions indicated that students tended to treat common sense and good sense either as existing on a continuum or even as indistinguishable from one another. Responses to the following question illustrate that the antithetical structure of the text remains obscure for many students, even when the questions of the task generate a model for their engagement.

What is the relationship between reality & a) good sense & b) common sense?

Model Answer:

a) Common sense *appears* to record reality as it is, but in fact it is an interpretation of reality.

b) Good sense interprets reality explicitly and gives evidence for this particular view of reality, recognising that there are other competing views.

Examples of Data.

1. Common sense is a complex constructed interpretation of reality while good sense is an interpretation/construction of that reality. There is the interpretation of reality in common sense while there is a interpretation about reality.

2. Common sense is the constructed interpretation of reality. Good sense is the construction about reality.

- Common sense interprets and explains the world.

- Good sense interprets the construction about the world.

7.3.1.2.2 Blurred and Sweeping Reading.

The anthropological nature of the text entails the disciplinary characteristic of detailed ethnographic descriptions that illustrate the argument of the author. As the examples below demonstrate, this layer of illustrative meaning seemed over-riding for many students, obscuring the implicit argument.

What is the connection between common sense and science?

Model Answer:

Common sense may be derived from scientific findings or use science as the basis for its claims, but science always makes its method explicit and provides evidence for its claims, whereas common sense assumes its own correctness and is not open for debate.

Examples of Data.

1. Most people have common sense about how germs are spread and precautions of cleanliness in order to prevent it.

2. The common sense system of knowledge operates in conjunction with other systematic bodies of knowledge e.g. religion or natural science; an example of

Zande witchcraft which is only called upon as an explanatory force where common sense fails to account for an event.

7.3.1.2.3 Working with the Whole.

Particularly low scores were recorded in response to questions that required grappling with the whole text, drawing information from different sources to form a comprehensive and exhaustive answer. For example, question 9 of the task required that students deal at a macro-level with the established dichotomy between common sense and good sense.

What is the relationship between common sense and good sense with regard to: a) content, b) form and c) possibilities for transformation?

A complete answer to this question entails selecting information from several different sections of the text and constructing a summary of the similarities and differences between these two types of knowledge in terms of both content and form. Further, the response should include an evaluation of the claims of the text for the possibilities of transfer between these knowledge systems.

Students' responses to this kind of question indicated that the linear sections of the text were not related to a more complex notion of the whole. The general approach to the task seems to have been characterised by a kind of linguistic equation of task questions and textual statements that did not work where questions (such as the example given here) demanded a more integrated response. The examples below are illustrative of this attempt to 'match' parts of the text to the question.

Model Answer

a) content: Common sense and good sense may deal with the same content; i.e. they are not distinguishable one from the other in terms of content.

b) form: Common sense and good sense differ in form - common sense makes authoritative claims whereas good sense makes its argument explicit.

c) possibilities for transformation: Common sense can be transformed into good sense if it is held up for scrutiny, is itself opened up for interpretation, is subjected to searches for evidence and if contradictions are contextualised/explained in terms of wider theory.

Examples of Data.

1. a) content: *belongs to each good sense and common, not even in terms of right and wrong.*

b) form: *that knowledge takes and the method of investigation for good sense.*

c) the possibilities for transformation: *explication of interpretation, resolution of conflict.*

2. a) content: *Common sense is not identical in content across cultures but is marked by the same stylistic features marks of attitude , tonal shading.*

b) form: *Geertz said that the content which belongs to each and is not even in terms of right / wrong but in terms of the form that knowledge takes and method of investigation and argument for good sense.*

c) possibilities for transformation: *Yes, there is e.g. religion or natural science.*

7.3.1.2.4 Constructing Implicit Text.

Students experienced considerable difficulty with the final question of the task that required; 1) the inversion of given information about common sense to construct an

implied schema for what would be considered 'good sense'; and 2) the application of the ideas of the text to another (unstated) context, that of academic essay writing.

Both parts of this question required that students go beyond the given stated meaning of the text, to that which was unstated but **implied** in the text. Often they simply restated the characteristics of common sense.

a) Use Geertz's characteristics of common sense to develop a similar set of criteria for good sense:

b) What is the application of these criteria to the task of writing an essay in the Arts/ Social Sciences:

Model Answer:

a) Use Geertz's characteristics of common sense to develop a similar set of criteria for good sense:

1. Authority comes from evidence.
2. It is aware that it is "artificial" i.e. self-consciously an interpretation of reality.
3. Practicalness is not necessarily highly valued.
4. Interpretation is offered from a particular point of view.
5. It is methodical and this method is open for discussion and analysis.
6. Resolves contradictions.
7. Need specialist knowledge or the particular approach of a discipline to make good sense.

b) What is the application of these criteria to the task of writing an essay in the Arts / Social Sciences:

- There is a need for evidence to substantiate your answer.
- Do not assume "facts" or conclusions as obvious - there is always another possible view / explanation / interpretation.
- The logic of your argument is more crucial / important than direct reference to the world or things which you might personally have experienced.
- Enter the way of the discipline/use the specialist way of "reading"/interpreting the world.
- Make your method explicit for the reader.
- Expect criticism/argument.
- Explain contradictions/qualify your answer with relation to specific circumstances or in terms of particular definitions.

Examples of Data.

Example 1.

Common sense is not identical in content across cultures, makes assertions about the "truths" as self-evident. Common sense ideas are interpretations of reality. Common sense is also practical. Common sense operates in conjunctions with other systematic bodies of knowledge.

Knowledge must be constructed in people's heads. You must check your own work to ensure that you do not deal with material in a common sense way. Arts / Social Science discourse displays none of the characteristics of common sense.

Example 2.

Good sense is made up of different stylistic features, marks of attitude and tonal shading. Good sense does not convey the element of naturalness i.e. it doesn't reflect the natural world. Good sense is also practical but its is opened to investigation or debate.

Writing an essay needs a critical analysis i.e. one does not have to look at the facts as they are but has to argue about the facts put forward. Facts can be interpreted differently as long as there is a good argument of what one thinks the facts mean.

Example 3.

Good sense must be practical so that every one can be convinced by what one propose to a good sense . It must also be simplicity and literal that it can be comprehended.

It's to convince the reader that what one propose has no hesitation about it. It's also indicate that one understand what one says or claims. About all its to construct a critical reasoning ability which serves as an access toward understand thing in detail.

7.3.2 Task 5: non-sequential reading (Type B).

A short text dealing with the non-sequential character of reading was presented to students.⁴⁵ This task focused on the nature of texts and reading, both through the content of this particular text about the nature of non-sequential processing in reading, and modelled questions that structured students' engagement in this same non-sequential way. Appropriate responses to the given questions also entailed a meta-

⁴⁵ See Appendix 9.

cognitive awareness of this non-sequential engagement in the demand for discursive reflect on the nature of the reading process.

7.3.2.1 Quantitative Analysis.

This task was again marked in the conventional way in terms of a model answer and students' scores were converted to percentages. The students' performance is summarised in Figure 2 below, which presents the proportion of the student group that obtained marks in particular performance categories.

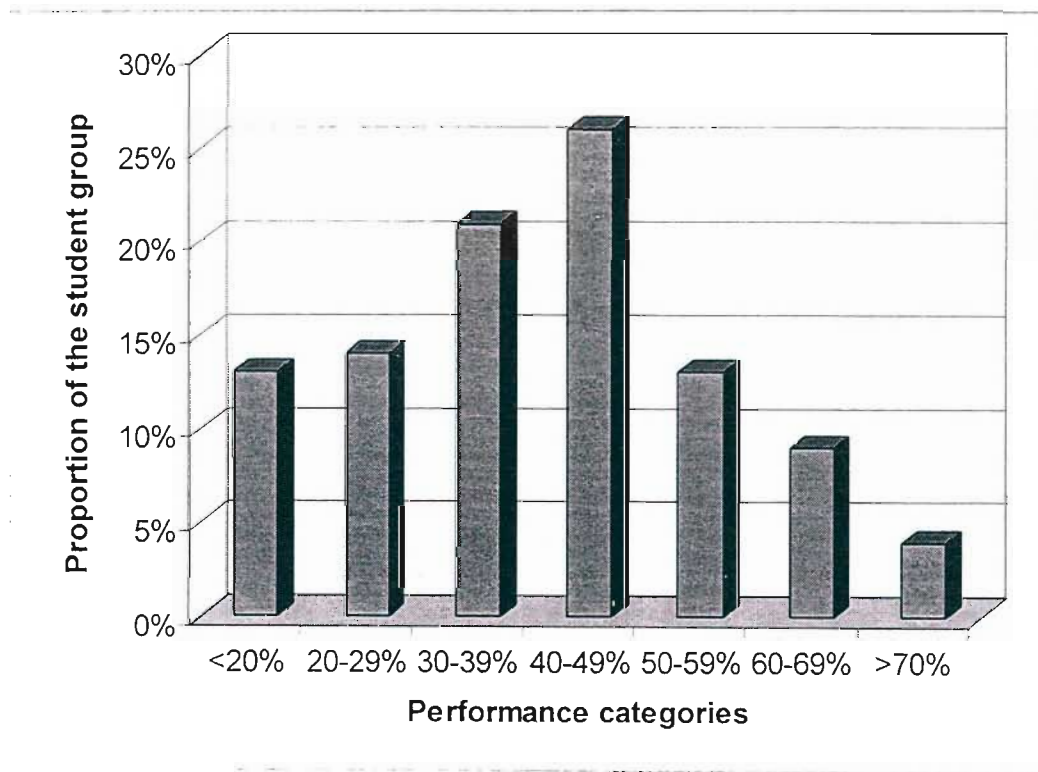


Figure 2: Task Five: Non-sequential Reading.

Figure 2 shows that performance on this task, as on Task 4 (see Figure 1), was generally poor for the group as a whole. Although there were a few students who performed well on this task (4% (n=2) obtained over 70% and 13% (n=8) obtained over 60%) the failure rate is again extremely high (74% (n=48)).

7.3.2.2 Trends in Student Responses.

This task works on two levels to engage students with the nature of meaning construction from text; 1) the content of the text deals with the process of reading, and 2) the questions posed require students to work with the text in a non-linear way, going beyond what is stated, to grapple with the implications of the text. A transcript of the text appears below to facilitate the qualitative analysis that follows.

When one writes one starts on the left-hand side of the page and jots down, letter after letter, forming word after word and sentence after sentence, until one gets to the right-hand-side, then one stops there only to start again at the left, and so on and so on until the page is full or until one has finished. The mechanical act of reading also happens sequentially, that is, from a beginning to an end; and is temporal, that is, it has a start and a finish in real time. That which one writes about, and the meaning which one gets from that which one reads, is something else again.

The meaning events, people, animals and things have for us, accumulates over time. Meaning is, therefore, not something fixed and absolute. We 'get' and 'make' meaning through the interpretation of those events, people, animals and things we encounter in our daily living. The act of interpretation "must inevitably do violence to the sequential nature of reading. Patterning is, by definition, a process of pulling some things out of their sequential position".

Students' generally poor performance on this task includes the following typical problems: precision in meaning, establishing oppositions, linear processing, empirical bias.

7.3.2.2.1 Precision in meaning.

The **specific** meanings of terms (e.g. "sequential" and "temporal") as they are used in the context of this text to refer to the nature of the reading process, are conflated with previous common sense understandings of terms and rather generalised and imprecise ("blurred and sweeping" (Feuerstein, 1980)) definitions are given.

Model Answer

What do you understand by the assertion that "reading is sequential and temporal"?

"sequential": Reading occurs linearly from left to right / beginning to end.

It must follow the chronologically ordered pattern of writing.

"temporal": Reading is an activity which occurs in time; it is a fixed measurable event.

Examples of Data.

- *"Reading involves the linkages of words and coming up with the sense. Reading has got time to end and be revised. That one need to be active and punctual when reading."*
- *"Reading academic tasks involves a certain pattern, understanding the text is very important because in turn you have to account reasonable on what you have read during a given time."*
- *"I will refer temporal as skimming and scanning when one is doing a sort of survey with an aim to reach the exact answer. He/she start with that enthusiasm and immediately he/she get the answer, that the end."*

- *"One has to collect and organise words and vocabulary, it may be in writing or verbal, to put his argument in a logical manner. Therefore time factor must be taken into account when writing an exam."*

7.3.2.2.2 Establishing Oppositions.

The text opposes reading and writing on the one hand, to the construction of meaning on the other. This opposition is the key overarching idea of the text, but is not explicitly stated. Students tended to stick to the given statements of the text, most often stating the opposition as between reading and writing and *"start and finish"*, as a parallel linguistic pairing offered by the text. This meant that the central issue (or question) of the text was missed.

7.3.2.2.3 Linear Processing.

The text introduces students to the distinction between the referential statements of text, and the sense or meaning that one constructs from text. The model answer includes marks for the central idea of disrupting the given sequencing of text, as well as marks for strategies that extend the meaning of the text beyond either the given text itself, or the immediate world of experience.

If you were given a text (book) to interpret, what process would you engage in, in order to 'get' or 'make' meaning from it?

Model Answer.

Of greatest importance is some indication in the answer that meaning is made through a process of "patterning" the information in the text, i.e. pulling things out of their position in the text, and forming links with other pieces of information. This can be done through, using beginnings and endings, focusing on tensions/oppositions, extracting key ideas/re-organising information / shifting backwards and forwards in the text.

Two more marks were allocated for possible techniques / strategies which could be used in reading:

- write notes (scribble) on text
- refer to other texts, dictionaries, etc.
- question oneself and the text
- use headings / titles as clues to organise information
- number points
- underline important terms / points
- create new categories / headings for parts of the text

Reflecting on their own methods of meaning construction, students ignored the new idea in the text which introduces the notion of non-linear processing, and recorded highly linear approaches to developing understanding. The predominant strategies suggested were either to focus on the meanings of individual words or to use 'repeated' (sequential) reading to reach an understanding. The text is thus viewed as a closed entity to be engaged with in terms of its apparent linear and temporal structure rather than as a provocation to mental action on the part of the reader to reorganise (and hence, appropriate) the ideas of the text. For example,

1. I would try to interpret it according to the way I understand so I can see whether it makes any sense or not, if it does not make sense try it the other way.

2. I must read it carefully and find the meaning of words I don't understand and then try to think about it critically.

3. I would read the text thoroughly and get the full knowledge of what is being written and what it means, then I will be able to make meaning or interpretation out of it.

4. I will try to get words which I don't understand and look them in the dictionary. I will try to concentrate on the text. I will read the text over and over till I can interpret or get meaning out of it.

7.3.2.2.4 Empirical Bias.

For many students, the construction of meaning stayed within the rigid bounds of the 'words' of the text (as illustrated above) or alternatively, rejected the presented horizon of the text in favour of another reality (the real world) as final authority. The possibility of fusing various presented meanings (in the text, in other texts, in the world of experience) was generally negated and the independent certainty of the world of experience asserted as a substitute for the questionable truths of text. For example:

- 1. I will look that thing in reality and try to find the meaning.*
- 2. I will try to make it parallel to my own experience and my daily living experience.*
- 3. I would be engaged through the interpretation of those events, people, animals and things I have encounter in my daily living.*

7.4 Engaging with the Academic Process of Enquiry.

Tasks in this final section required students to engage with the relations established between particular questions and answers in the contexts of academic research or assessment. In Tasks 6 and 7, students were expected to work back from the form of an answer to derive the questioning or enquiry process that might have generated such an answer. In Task 8, students are positioned more typically in analysing or responding to an assessment-type 'question'. However, these questions also present as 'answers' to a debate that it is the students' task to reconstruct.

7.4.1 Task 6: the essential question of enquiry (Type C).

Before watching the video [Poetry of the People](#) (see Task One above) for a second time, students were instructed to watch with this question in mind: "*What was the question that led to the production of this video?*"

7.4.1.1 Criteria for Analysis:

Whereas the analysis of Task 1 focused solely on the degree to which students met a set of expected criteria (the demands of the task/text), analysis of Task 6⁴⁶ categorises the **nature of students' responses**. In other words, rather than merely indicating students' failure to engage appropriately, this analysis recognises that students do actively engage with the task and attempts to articulate the nature of this engagement and the kinds of questions generated. These categories of response are outlined below, including reference to examples from the data that typify each category.

7.4.1.1.1 Appropriate.

Appropriate responses identify the question that drives the enquiry process, resulting in this video-text as an 'answer'. The essential issue that the video-text investigates, the relationship between poetry (or more broadly, art) and society (or socio-political realities), is highlighted.

Examples of data.

- *What is the meaning of poets in South African history?*
- *What is the role of poetry in society?*
- *What is the role of poetry in the struggle for liberation?*
- *What is the role that is played by poems in social life and what consequences make one to write a poem?*
- *What is the role of poetry in oppressed societies?*
- *What is the role of poetry in the society?*
- *What is the main goal of poetry in social life?*

⁴⁶ Feedback to students on this task is available for reference in Appendix 10.

7.4.1.1.2 Grappling.

Although not clearly identifying the central issue, responses in this category raise questions about the nature of poetry in a general way. The video-text does elucidate the nature of poetry, but it does so with particular reference to its relationship with society or social issues. Alternatively, the response may link South African socio-political circumstances and poetry, but fails to view this as one particular instance of a wider investigation of these relations relevant to other spatial and historical contexts.

Examples of data.

- *What is the art of the people's poet?*
- *Why do South African poets usually write about politics when writing their poems?*
- *What poems are written by S A poets and why?*
- *What is the importance of a poem?*
- *How poetry must be used to portray reality in South Africa?*
- *Is the poetry the way of overcoming suffering in South Africa?*
- *How does the South African art come about, and how difficult to lay our the experiences of SA society?*

7.4.1.1.3 Peripheral.

Peripheral and irrelevant issues are isolated as central. Responses in this category emphasise aspects of the film that are unimportant or of only tangential significance in terms of its primary focus.

Examples of data.

- *What is the meaning behind poetry?*
- *Why the nature of people be reflected as a form of imagination called poetry?*
- *Do people still recognise other people's social status?*

- *They were having a question that their video they are going to produce will pay back their cost? And whether people will have an interest on it?*

7.4.1.1.4 Grounded.

Responses in this category focus exclusively on South African political reality. Although the film presents extensive footage covering political events and conflict in the final years of the Apartheid era, the pivotal question for this film-text is the relationship between these events of the real world and poetry, or the social role of poets. Students display a real-world bias, grounding their responses in the familiar world of experience. This category represents the predominant form of response for this group of underprepared students.

Examples of data.

- *Will this period of dissatisfaction of African people last forever or not?*
- *Why are the South African people so oppressed?*
- *What can be done in order to make people especially Africans know about the miserable situation they are living in?*
- *Will this film help people in S A?*
- *How can we make our people more aware of the hidden agendas of the government and how can we show the world a true reflection of the socio-political life in our country?*
- *Who really suffer in SA and what is the cause of that suffering?*
- *What is the relationship between people and the police and among people themselves?*
- *Why do people in South Africa who are political minded or political active treated as criminals?*
- *Can education and politics contribute a lot or any transformation towards change in South Africa?*

- *Why are the people killed by the government?*
- *Liberation is it the key to freedom?*
- *Is it possible for blacks to reign in the new South Africa if they continue killing each other like flies?*

7.4.1.1.5 Closed.

Here the task is entirely misconstrued, and the response does not take the form of a question at all but simply makes a statement or offers an opinion about the film. The closure of an answer prevents engagement with the field of enquiry opened by the text.

Examples of data.

- *The question is about the suffering, so they make a research.*
- *They want to research the behaviour of people even though they are killed people don't stop because they know what they are fighting for.*
- *I think the reason is to clarify the point of writing a poem, whether is it through experience or through person's feelings. It has been shown in the video some of the events which had happen, of which most of the poet writes about.*
- *They intended to let us know about the comments of the poets, how do they view politics and violence. Also how some people aware of this.*
- *The producers aim was to reveal oppression in SA. You can see first of all, the poet starts to utter painful speeches about suffering in the beginning. They say a poet can affect suffering. They reveal the hard and demanding road to freedom heroes are lost on the road to freedom.*

7.4.1.2 Quantitative Analysis.

Table 7 below shows the quantitative scoring of students' responses to Task 6. Each student's response is scored only once against each of the possible five categories discussed above.

Table 7: Task Six: Identifying the Question.

	Kinds of Questioning engagement				
	Appropriate	Grappling	Peripheral	Grounded	Closed
f	11	17	9	44	11
% of the total group (n=92)	12%	18%	10%	48%	12%

7.4.1.3 Trends in Student Responses.

Of significance, is the predominance of inappropriate responses (n= 44, 48%) that miss the formative question of the video-text and ground the film in the real world details that form its illustrative material. In addition to the many examples listed above, the following highlight the grounding of responses in the dominant socio-political realities of the South African context, for example:

- *What is really happening in this country?*
- *How does a black man suffer in South Africa. What kind of a situation is a black man live under?*
- *"How are we going to let all the people know about the police brutality in South Africa?"*

The fifth category 'closed' (n=11, 12%) also reflects the overwhelming impact of the material that visually depicts scenes of 'the struggle', for example, *"I will first discuss what had made them to write this video. I should think that these are the people who are involved in the situation (struggle) so it affected them in such a way that they think if they could make a video people will do something about it and they could raise certain opinions."*

Responses of this nature indicate that the reader/viewer does not enter the demarcated field of enquiry within which the textual answer has been constructed. Rather the enquiry

process of the text and the reader are disconnected and distinct from one another and there is no interface between the worlds of the reader and text or, in Gadamer's terms, no "fusion of horizons" (1975). The ideas of the text are accepted only in so far as they confirm or reinforce what is already known and, thus, the domain of the known is strengthened rather than extended or placed in question and challenged by unknown or new possibilities.

7.4.2 Task 7: the circle of knowledge (Type C).

The circle of knowledge (from Craig 1989, **Production of Knowledge** booklet), was presented to students as a possible model for the process of knowledge construction.⁴⁷ The process is depicted as initiated by a question that drives the enquiring subject through a series of steps towards a tentative answer and, then, into further questioning sequences. Students were required to represent any knowledge/understanding of their own choosing, in terms of this staged model.⁴⁸

7.4.2.1 Criteria for Analysis.

This task was analysed in terms of the five possible categories of response as outlined in Task Six above, but the specific application of these criteria, and data to illustrate each, is outlined below:

7.4.2.1.1 Appropriate.

An interesting question for enquiry is identified and followed through the stages of investigation as outlined in the model. The **movement** of the process of enquiry is captured, indicating an understanding of the constructed nature of knowledge and the role that questions play in driving that process forward. Two examples follow:

⁴⁷ See Appendix 11.

⁴⁸ Cohort one did this task at the start of the programme; it was their engagement with this task which indicated the field of enquiry for this research project. Cohort two did not do this task due to time constraints.

1. Question:

→ *What is culture?*

Plan:

→ *To understand the culture, I plan to contact relevant sources like library to read texts about culture. I also plan to ask other academics that might have read about culture.*

Act:

→ *I read the relevant book where the culture is explicitly put.*

Observe:

→ *Understanding the text about culture I am convinced that culture is all forms of behaviour that each and every individual learn and share so that they can fit well in the society they live in, I then observe what people of my elder age (hosts) do so that I also can do to adjust myself to their social life.*

Reflect:

→ *Looking at what they do, comparing with what the texts are saying, I begin to understand fully what does the term culture real means.*

2. Question:

→ *How to build a better house?*

Plan:

→ *i) the type of house I want.*

ii) the place where it should be built.

iii) the materials to be used.

iv) the number of rooms.

v) the interior of the house.

vi) the colour of it.

vii) the building contractor.

viii) the loan.

Act:

→ i) Apply for the site to the superintendent.

ii) Go to the architect for a plan.

iii) Look for a building contractor.

iv) Apply for loan to the building societies.

Observe:

→ Ask other people how much it cost them to build their houses.

Reflect:

→ Is this the house I want?

→ new question: Does this house really suit my needs?

7.4.2.1.2 Grappling.

The student identifies a valid question for enquiry but struggles to follow through the staged construction process, showing only a partial grasp of the development of knowledge and the role of questions in leading to changes/shifts in understanding. For example:

1. *I started with observation the way by which the conservative party act against De Klerk when he was trying to abolish apartheid. Followed by question and a plan. I interviewed some of the whites and I reflect to the question and I act to find an answer.*

2. *What make people always willing to get more education?*

Plan → *To plan for the answering of the question, one has to ask himself the following question: what is the importance of education.*

Act → *In acting on the plan one has to answer the above question, like saying the education is so important in nowadays because without education one cannot live a happy life because he won't have enough things he wish to have. To read different book on education.*

→ *To go to different people and ask them how do they feel about education.*

Observe → *To look at my information I have collected and try to make sense and a conclusion on what I have discovered.*

7.4.2.1.3 Peripheral.

Responses in this category involve the selection of uninteresting (peripheral or irrelevant) questions. These are judged to be so in that the 'question' simply includes its own obvious answer and does not drive enquiry forward.

a) Question:

→ *Why do people sleep?*

Plan:

→ *When do I?*

People sleep when they are tired.

Act:

→ *Ask them do they sleep? Yes.*

When? At night.

Observe:

→ *What makes them sleep at night?*

They need rest.

No place to go at night.

Reflect:

→ *Do all people sleep because they need rest?*

Some do not sleep at night only even during the day.

b) *The question I had in mind is why a person especially males use to iron their pair of trousers before they can wear them? I didn't know the difference between those clothes which has been ironed and those unironed. Then I planned that I can iron my pair of trousers maybe I can get the difference or whatsoever. The following day before I could put on my pair of trouser I ironed it, even then I didn't*

recognise any change. When I was walking down the street the same day, I met someone who appreciated that I was wearing nicely. From that day I realised that even when wearing shrinked clothes you don't look nicely. So I make a point that before I could put on clothes I must first iron them. Later I found that some T shirts need not to be ironed, I asked myself why?

7.4.2.1.4 Grounded.

In this type of response, the answer to the question is to be found not through the process of enquiry and construction but in a given authoritative (moral) source, for example, the bible, god or parents. This grounding of the answer in an unquestionable authority is clearly evident in the following two examples:

1. I had a question that I used to ask myself that why are the parents always keep on advising their children about the point of respect towards them? I had quite a number of questions about the respectation as such. I asked myself and tried to find out the ways to lead me to the best and acceptable way of respecting my parents. All these questions did not give me any answer. So I have to go and contact some fellow youngsters in my age to seek for ideas. (plan) I looked them in their homes how they respect their parents and they told me that youngsters are too young to say no to their parents. (Act) When I sit down alone I was able to see that it is really the truth that we must obey our parents as the Bible said that obey your parents so that your living should be extended in the world.

2. I had asked myself how is it like to take care of a little baby because I don't have any, until my niece had one. She asked me to watch the baby for her one day. To my surprise the baby was crying his wits off. I didn't know what was wrong. I planned to make him smile and I tired and observed whether he would smile or not and he did not. Then another question arouse i.e. why was he not smiling but crying all the time so I planned to examine him for any signs of illness and I did

that. I was surprised to find that his nappy was wet, so I took it off and observed his reactions. I found out that he was no longer crying so the question of crying was answered therefore I knew then that baby care was difficult but the question of why do babies cry when they want attention arose. I was not able to answer that one until my niece arrived and told me that babies cry because that they are unable to talk just like adults so there is no question about that because it is part of nature.

7.4.2.1.5 Closed.

Here the student flattens the process represented by the 'circle of knowledge' restating the stages of the circle as self-evident and almost equivalent to one another. The task is interpreted as to effect closure rather than opening a process of enquiry.

1. Question:

→ *Why women are weak?*

Plan:

→ *Decision to ask.*

Act:

→ *Start asking.*

Observe:

→ *Women are weak but environmentally weak because nowadays women can drive heavy duty vehicles and are excelling in bricklaying and etc.*

Reflect:

→ *Its true but to add on women are weak by nature before are introduced to physical aspects or matters.*

2. Question:

→ *Why is the library an important source of knowledge?*

Plan:

→ *I went to the library and look at them whilst they are in the library.*

Observe:

→ I look at them, I was observing what were they doing.

Reflect:

→ They read and select important facts in order to get knowledge. Library have all the sources of knowledge.

7.4.2.2 Quantitative Analysis.

Frequencies of response in the above categories are reflected in Table 8 below. Only a small minority of students (24 %) use the model appropriately to interpret the process of questioning and answering through which understanding (and subsequent cycles of shifting understanding) is reached. The attempt to close enquiry (as variously reflected in both the categories "grounded" (n=11, 26%) and "closed" (n=8, 19%)) is still a dominant response from this group of students.

Table 8: Task Seven: Questions for Knowledge Construction.

	Kinds of Questioning engagement				
	Appropriate	Grappling	Peripheral	Grounded	Closed
f	10	5	8	11	8
% of the total group (n=42)	24%	12%	19%	26%	19%

7.4.3 Task 8: analysing academic questions (Type C).

Students were presented with typical academic questions, (taken from past exam papers in the faculties of Social Science and Arts) and asked to analyse the questions in terms of a given set of steps. Essentially the task requires that students interpret the question (by using the steps provided) in order to identify the 'issue for debate' implicit in the statement provided.⁴⁹

⁴⁹ See Appendix 12 for the full version of the task and the feedback given to students.

7.4.3.1 Criteria for Analysis.

The criteria for analysing this task are the same as those for Tasks Six and Seven above. In the discussion of examples from the data for each cohort, a brief description of each criterion in relation to this task, is given.

7.4.3.1.1 Cohort 1.

"All whites are born racist." Critically discuss.

7.4.3.1.1.1 Appropriate.

The question implies the demand to explore the question of how racist attitudes and practices develop in society. The statement asserts one possible (and provocative) view, with which the student must engage, offering evidence for and against the statement. Appropriate responses identify the key issue or central embedded question in the stated question, in this instance, how racist attitudes and practices develop in society. For example,

- 1. How is being a racist acquired - is one born with it or is one taught?*
- 2. Does it imply that at birth they became racist or does it mean that they are made by an environment they live in to be racist.*

The **appropriate** category also includes a sub-category where the issue is not clearly and explicitly stated, but the student demonstrates an understanding of the implicit debate by adopting the opposite (unstated) view to that presented in the statement-question. (This sub-category is reflected separately in Table 9 below.) For example,

- 1. It is important to ask in order to find truth that, are all whites racist? Are they taught racist?*
- 3. Why do racism come into existence? What makes it?*

7.4.3.1.1.2 Grappling.

Responses that indicate a grappling with the task of analysis, took the form of several smaller questions relating to the larger issue. There was a recognition of the limitations of the stated claims of the question, without posing possible alternative explanations, as illustrated here:

1. Is this statement true or false?

Does it include all the whites in the world?

2. Born (can't do otherwise?)

7.4.3.1.1.3 Peripheral.

The responses departed from the central focus of the given question into peripheral or related (but not central) issues. Very often, in this instance, because of the focus of the question on racism, students pursued tangential political questions, for example:

1. Will racism build a new South Africa?

Is their racism an advantage to them?

2. Why these type of people called whites? For what I know the white thing is like this piece of paper.

3. Critically discuss it in the way that they will be a change for the better.

7.4.3.1.1.4 Grounded.

In many cases, students simply adopted the stated view of the question, accepting the apparent weight of authority carried in the question-statement itself. The coalescence of this view with the evidence of real personal experience serves to compound the viability of this grounded response. This unquestioning acceptance of the stated view is illustrated below:

1. Most of the whites believe in racism by birth.

2. This question is dealing critically with why all whites are born racist. We must find out why they don't want to live with other races.

3. *Who are born racist, this is important question to ask because it give the broad meaning of people who practice racism and why they are being born racist.*
4. *The key issue this question is dealing about might be the apartheid situation which is existing in Africa or other countries. It is an important question to be asked because the answer might bring about changes or just eradicate the problem where whites are considered to be super subordinate so that reformation could be make for equilibrium.*
5. *... whites are born or one could say its their natural behaviour to practise racialism.*
6. *Whites are the descendants of another whites, if a child is born by the racist, definitely that child is going to be a racist because it resembles his / her parents who are the racists this is the situation that cannot be avoided.*
7. *This implies that the statement was being written by a South African black person, as one may deduct from the implications drawn by the statement. Considering the whites hereditary situation.*

7.4. 3.1.2 Cohort Two.

The following question was presented to cohort two for analysis and their responses were then scored against the same categories as those used with cohort one.

"Describe the nature of adaptation to the environment typical of subsistence pastoralism in Africa and analyse why many pastoralists have experienced difficulty in the face both of socio-political change and various forms of development planning done on their behalf by government and international agencies."

7.4.3.1.2.1 Appropriate.

Appropriate responses identify the key issue or central embedded question in the stated question. In this instance, the question invokes an exploration of the overarching tension between the value of adaptation and the problems incurred where highly developed adaptive systems conflict with new external forces of change. It is this 'tension' which is the focus of discussion, and an appropriate analysis will highlight these two opposing forces. For example:

1. The statement implies that the difficulties facing the pastoralists in the changes are caused by the fact that the people have adapted to their environment. Is it the adaptation to the environment or not? How have these changes affected the pastoralists?

2. Argument

Development planning done by government and international agencies together with the socio-political change have caused difficulties on the pastoralists.

But one might oppose that argument saying that it is not the government and international agencies planning together with the socio-political change.

3. Debate

→ How do pastoralists related to socio-political change?

→ How do pastoralists related to development planning done by the government?

→ Why do the pastoralists experience difficulty in the face of the two above-mentioned?

4. Is it both government and international agencies which makes it difficult for pastoralists to adapt to socio-political changes and various forms of development planning or the pastoralists themselves where does the problems lies?

7.4.3.1.2.2 Grappling.

Responses that indicate a process of grappling with the task of analysis, took the form of several smaller questions (elements) relating to the larger issue. There was recognition of the multifaceted nature of the debate, but little understanding of how these parts related to a single central issue for debate. The following two examples illustrate this partial response:

- 1. Conditions which makes a pastoralist experience a difficulty in facing both of socio-political changes and various form of development planning.*

- 2. What is adaptation to the environment?*
 - Which environment is it that the pastoralism in Africa should adapt?*
 - Which and why are difficulties encountered?*
 - What is that socio-political change and what are other forms of development?*
 - What are the development planning done by the government and various international development agencies?*

7.4.3.1.2.3 Peripheral.

The responses in this category departed from the central focus of the given question into peripheral or related (but not central) issues. The following examples pertain:

- 1. The main debate : The nature of subsistential environment and the link between it and pastoralism (consumption).*
- 2. How do pastoralists live in SA, what role do they play in society?*
- 3. How is socio-political change affected?*
- 4. The key issue is the question of land or pastoralists adaptation to their environment.*
- 5. How is socio-political change and various forms of development affected?*
Does it means that all those changes were caused by the government on their behalf.

7.4.3.1.2.4 Grounded.

Grounded responses to this task (which were small in number for reasons discussed below) tended to manifest as an over-riding concern with the 'truth' of claims presented in the question about the lives of traditional pastoralist peoples. For example,

1. Could it be true for pastoralists experienced difficult? How does this pastoralist have an experience difficult?

2. Did they really experience difficulties or they think that they were going to have difficulties?

Does the government really help them or is he having a motive behind?

7.4.3.1.2.5 Closed.

Responses here indicate no attempt to analyse what 'issue for debate' is raised by the question. A word or phrase flags attention and provides the focus for a ready 'answer'. The question might be restated, but essentially the student is intent upon answering/closing the issue as immediately as possible, for example:

1. I think this question deals with pastoralists who do things by means of supporting life. They experience some difficulties in terms of socio-political change and also various forms of development planning which is done on behalf by government and international agencies.

2. Socio-political changes.

→ Pastoralists depend on produce for survival.

→ Society changed - no longer depend much on cultivated foods.

→ Political change → wars - people have moved from their homes with reasons that they are being intimidated.

→ No time for crops.

7.4.3.2 Quantitative Analysis.

Table 9 presents the frequency of responses scored against each category. Cohorts one and two are separately represented in order to compare the possible effects of the different types of questions with which they engaged.

Table 9: Task Eight: Analysing Questions.

		Kinds of Questioning engagement				
		Appropriate	Grappling	Peripheral	Grounded	Closed
Cohort One	f	11	15	5	13	0
	% of the total group (n=44)	25%	34%	11%	30%	0%
Cohort Two	f	4	12	8	2	7
	% of the total group (n=33)	12%	36%	24%	6%	21%

7.4.3.3 Trends in Student Responses.

Particularly noteworthy are the distinct differences in the frequency of responses for the two cohorts for the categories "peripheral" (cohort 1, 11%; cohort 2, 24%) "grounded" (cohort 1, 30%; cohort 2, 6%) and "closed" (cohort 1, 0%; cohort 2, 21%). The content and form of the question for cohort one appears to entrench students' familiar world of experience and confounds the possibilities for incorporating other (textual) views. Conversely, the content of the question for cohort two is less familiar, and, consequently produces less of this kind of response. However, in the absence of familiar content, the form of this question seems to drive students into producing statements, without isolating 'the issue for debate' from the language of the question. The question itself seems to supply the information of an answer and students simply reproduce a similar dense discourse. It, therefore, seems apparent that the kind of question posed will produce different kinds of difficulties for students and will provoke different kinds of questioning engagement. This tentative finding is further explored in Phase Two of the study.

8. DISCUSSION AND THEORETICAL INTEGRATION: PHASE ONE

In the previous chapter brief comments on each task highlighted trends in the data. In the present chapter, the focus is to provide an explanatory interpretation of the empirical results of the study. The trends identified in the data are related to the theoretical frameworks provided earlier; the conceptualisation of mediated cognitive functioning (Vygotsky, 1978; Feuerstein, 1980; Miller, 1992, 1994); oral and literate forms of knowledge (Ong, 1982; Goody, 1987; Olson, 1996) and common sense epistemologies (Craig 1992 and Geertz 1973). These analyses will be placed in tension with the "questioning epistemology" of the Human Sciences (as provided centrally by hermeneutic theory (see Ricoeur 1981, Iser 1978 and Gadamer 1975) in order to offer possible insights into the nature of appropriate mediation.⁵⁰

8.1 The Instructional Process.

Data were yielded through the instructional process that can be defined as the interface relations between the implicit epistemic demands of the task and students' mental actions or cognitive operations on the task. The task itself creates the moment of mediation between these two 'events' or worlds of meaning.

Where the epistemic assumptions of the Human Sciences are shared by students, the task itself need do little more than present a problem for resolution. Meta-cognitive control over the task will ensure that the knowledge construction parameters inherent in the task will be recognised by students, hence, enabling the selection of appropriate cognitive strategies/operations. However, where these implicit epistemic assumptions are **not** shared, the task must more explicitly mediate these demands for students; in

⁵⁰ In chapter 7 brief comments on each task highlight trends in student responses. Whereas the emphasis there is on the data, here the data are used in a subordinated way to illustrate the theoretical frameworks of analysis. The text includes footnoted references to the tasks contained in the Appendices.

other words, the task itself takes on a regulating function, drawing attention to its epistemic nature and directing appropriate cognitive response. As Miller (1992(b): 9) expresses it, "the task of mediation is to reveal the design that is inherent in a situation" (See discussion in chapter 4). The different forms of task used in this study adopted this mediational function in varying degrees. In the first group of tasks, the 'inherent design' of the task was tacit or assumed. Students' performance on these tasks made evident that the immanent form of the task remained hidden for students. The following two groups of tasks adopted the mediational role by 1) providing appropriate questioning formulated in terms of an understanding of the task to direct students' engagement; and 2) explicitly focusing students' attention on the epistemic parameters of the task.

8.2 Forms of Task.

Three different types of tasks were subjected to varying forms of analysis, emphasising different aspects of the instructional process. The first group of tasks (Type A: Task 1,2 & 3) involved the simple presentation of text and a general instruction to "question the text". Additional minimal guidelines were given; for example, "be as exhaustive as possible" and "try to read through the whole text in the given time limit". Analysis of the cognitive strategies in response to these tasks revealed that students did not apply the required form of questioning; an exhaustive and comprehensive set of questions, including precise and complex questions, and at least one question that focused on the essential (or main) issue of the particular text. It should be noted that although only limited guidance was given for this task, where the epistemic assumptions about the nature of textual knowledge are shared, such instructions would be sufficient to activate the appropriate questioning schemes on the part of the student. Performance on these tasks indicates quite clearly that, in the case of this group of students, these schemes are not spontaneously and comprehensively applied. However, Feuerstein notes that

"failure to perform an operation does not imply an inability to acquire the operation. In this respect the crucial issue for both performance and learning is to track down and identify the specific problems that either prevent or impede the development of operations or their successful application" (1981: 210). In other words, the 'problem' is not located in a static way as inherent in the learner but it presents as a problem to be solved in the learning-teaching process. Towards this end, the project has attempted to trace this kind of inappropriate and inadequate performance to its generative cognitive roots.

The next group of tasks (Type B: Tasks 4 & 5) represents for students, models of the enquiry process by posing appropriate questions as tools for operating on text. Here the task adopts, in a direct and explicit way, the regulating function of "framing, filtering and scheduling" students' engagement with the presented texts (Feuerstein 1981: 271). For example, Task 4 consists of an extended set of questions that require students to read the text at a number of different levels: precise focused questions that highlight important details, and more complex questions that direct students to construct for themselves an oppositional framework for understanding common sense and formal knowledge.

A similar 'modelling' function is entailed in Tasks 7 and 8 which both provide models or methods for approaching the process of enquiry and the relationship between questions and answers in the Humanities. Although Task 6 does not 'model' the questioning process, the express mediational function of the task is evident in its very focused form that directs students to consider that a text originates in a process of enquiry, or is an answer to a question. The task itself, thus, focuses explicitly on the epistemic form of textual knowledge that would ordinarily remain the silent presupposition of the questioning process. Likewise, Tasks 7 and 8 have been placed in the same general category (Type C) with Task 6 (although they share the modelling features of the second group of tasks) because of their explicit focus on the epistemic demands of questioning

in the Human Sciences. Task 7 provides a model whereby students can structure the phases of an enquiry process. Task 8 highlights the underlying question or debate implicit in the statement form of academic questions. The variation in tasks is matched by varying emphases in the analysis of data:

- A. Tasks where students are called upon to formulate their own questions are assessed in terms of the degree to which they meet or do not meet the anticipated form of response, defined by drawing on Feuerstein's categories of deficient cognitive functioning.

- B. Tasks that model appropriate cognitive engagement are assessed against a specific model answer that represents an effective use of the framework for questioning text. The construction of these models was based on an analysis of the epistemic demands that underlie the cognitive strategies appropriate to textual knowledge construction (see chapter 2). These tasks might be conceived of as effecting meta-cognitive functions on behalf of students, in order to direct their selection of appropriate cognitive strategies.

- C. Tasks which focus on the relation between question and answer, explicitly highlight the constructed and open-ended nature of the process of enquiry and focus on the nature of questioning that is appropriate to this form of knowledge. In these tasks the nature of students' responses is specifically categorised in terms of their appreciation of the epistemic parameters of the enquiry process. Response categories were devised in relation to the explanatory frameworks provided by an analysis of a text-based questioning epistemology (Ricoeur 1981, Iser 1978 and Gadamer 1975), that is, the "appropriate" and "grappling" responses. The other categories of analysis ("peripheral", "grounded" and "closed") reflect a common-sense epistemology as constructed from the work of Ong (1982), Craig (1991) and Geertz (1973).

8.3 Appropriate Cognitive Functions.

In order to effectively drive the process of enquiry and knowledge construction forward, questioning needs to be comprehensive and precise. Question sets must include questions that address the text at various levels; which tap into the essential issue(s); and which recognise the complexities (and tensions) in the text.

8.3.1 Comprehensiveness and Precision.

Engagement with text, if it is to move the reader to accepting both new content and new ways of cognising, must be comprehensive and precise. Over-selective responses most often fail to grasp that which is unfamiliar, responding more immediately to those parts of the text that appear similar to that which is already known and which can be easily assimilated to existing mental schemes. In contrast, an openness towards what the text has to offer will manifest in a comprehensive and thorough approach, questioning all levels and grappling with the text as a whole rather than focusing on its parts.

It is also worth noting that episodic or partial responses will not only fail to grasp the whole, but even those parts that *are* attended to will be incompletely understood. The structuring of (academic) text is not simply linear or additive (Ong 1982) as the full significance of each part is only grasped in relation to the whole. Ricoeur highlights the significance of 'the whole' in the process of interpretation: "the whole appears as a hierarchy of topics, or primary and subordinate topics. The reconstruction of the text as a whole necessarily has a circular character, in the sense that the presupposition of a certain kind of whole is implied in the recognition of the parts" (1980: 211).

The implicit or unstated aspects of the text, that form the network of relations between what is said, play a pivotal role in the overall construction of meaning. Effective and comprehensive questioning will work with these nuances and absences as well as with

the immediately apparent 'facts' of the text. The text "Common sense and Good sense"⁵¹ of Task 4 establishes an overarching organising frame that opposes the form of common sense knowledge and scientific or formal knowledge. This opposition is woven throughout the text but in the illustrative form typical of Anthropological ethnography, and the reader must construct the oppositional frame him/herself by working with the whole text. Questions that required engagement at this holistic level presented students with substantial difficulty.

Further, particularly poor performance was noted in regard to the demands for "comprehensiveness" and "precision" where students had to work with extended texts, namely, Tasks 3 and 4.⁵² As Feuerstein (1980) notes, where there are conflicting demands for both rapidity and accuracy, the urgency of ending the task may over-ride comprehensive attention to all aspects of the text and result in apparently random focusing on minor details of the text. The text of Task 3 was an introductory Sociology text dealing with the content focus of Sociology as a discipline and key social theories; the following examples of students' questions illustrate the distraction of very minor elements in the text.

- *"Why Japanese decided to learn the new behaviour patterns where shared by members of the group?"*
- *"What was wrong when Edward VIII married an American divorcee?"*
- *"Do animals and plants form part of the society?"*
- *"What is the meaning of the word indefensible and infanticide in the text?"*

Forming precise and pointed questions enables students to grapple with exactly what the text is asserting, not just recognising or learning 'words', but working with concepts and

⁵¹ See Appendix 8.

⁵² See Appendices 7 and 8.

their meaning and incorporating these new meanings into their own knowledge. The findings of this study indicate that underprepared students do not demonstrate this approach to text and tend to display what Feuerstein (1980) refers to as "blurred and sweeping perception". The ideas about the non-linear nature of text presented in Task 5⁵³ are based on very **specific** meanings of the terms "sequential" and "temporal". Without working to build these conceptual foundations of the argument of the text students often conflated these terms with their previous common sense understandings.

The notion of a definitional concept, abstracted from the everyday world of experience, is one that is very firmly located within textuality. The process of defining an object or a concept depends on identifying key features that makes it what it is (and not something else). It also, however, is not a process of describing an individual, singular entity, but rather a class or category of things, all of which could be identified in terms of these key features. This abstraction of central attributes that both distinguishes between individual cases and creates commonalities, has little relevance in a context where the emphasis is on immediate use of particular objects for specific ends. The situation-bound quality of orality as delineated by Ong (1982) and demonstrated in Luria's work (1976), highlights this absence of definitional conceptualisation. Ong characterises oral meanings as "homeostatic" or tied to their situation of use. Multiple meanings or meanings that are generalised to serve in a number of different contexts cannot be accommodated where storage of such meanings is dependent on the limitations of human memory.

Instead of engaging precisely with the text and constructing particular (definitional) meanings in relation to it, students tended to use the text in a loose way as a base from which to think about and question issues of more immediate personal concern that might have only some tangential and tenuous connection to the text. This response means

⁵³ See Appendix 9.

that the new world of the text remains closed to the reader, who locks him/herself back into the domain of the known or familiar. Where the text includes familiar content (perhaps to illustrate new ideas) the tendency to cling to familiar ground appears irresistible. In response to Tasks 1 and 6⁵⁴ dealing with the video-text "Poetry of the People" which explores the relationship between art and socio-political realities in the South African context, the majority of students⁵⁵ latched onto minor or irrelevant (although certainly visually powerful and otherwise crucial) illustrative details. For example:

1. *If poetry is the case of suffering why then whites write poems since they are capitalist?*
2. *Why is that person sleeping there?*
3. *Why is black township have violence?*
4. *Why these white men seem to be aggressive towards Blacks?*
5. *Why is the way of education not the same in all races?*

The interfering effects of the familiar are also evident in Task 2 which focuses on the far-reaching claims of Gramsci about the nature of revolutionary change and the role of the intellectual elite in this process.⁵⁶ Although the ideas of the text are highly unfamiliar, asserting a complex and subtle view of the nature of social change, the newness of these ideas tends to be masked by apparent familiarity. Students, therefore, fix onto ideas that match their own experience and familiar rhetoric about "workers' power" and "socialism".

Feuerstein observes that where the "internalised, intrinsic need to be exhaustive and precise" (1980: 87) is absent, answers will be "blurred and sweeping" in nature, reflecting

⁵⁴ See Appendix 10.

⁵⁵ 70% of all students' responses fell into the categories "peripheral", "grounded" and "closed", all of which indicate a failure to identify the essential question.

⁵⁶ See Appendix 6.

a "poverty of details or their lack of clarity, a poor quality of sharpness, an imprecise definition of borders, and an incompleteness of the data necessary for proper distinction and description" (Ibid.: 76). This incompleteness and imprecision of response is highly evident in students' attempts to question text and appears to be exacerbated where familiar details seem to distract them from engaging with the whole text.

8.3.2 Essential and Complex Questions.

The requirements of comprehensiveness and precision must be balanced by the imposition of a hierarchical ordering of the ideas of the text, weighting some ideas as more or less important than others. Again, this way of working with ideas is identified by Ong (1982) as peculiar to the literate mode, made possible by the translation of oral language into the permanent visual marks of writing. A hierarchical structuring of thought becomes conceivable by breaking the "sequential" and "temporal" (to draw from the text of Task 5) constraints of verbal communication. The writer in creating the text, and the reader in the reconstruction or appropriation of its meaning, are both able to move back and forth in the text, constructing complex relations between ideas. This restructuring of knowledge is, however, not automatic in the act of reading which must still follow the pattern of words on the page in a chronological fashion. Reading and questioning that fails to break from this apparent form to work with the hierarchies that the text establishes will fail to fully enter the world that the text presents.

In contrast to this textual demand, Craig (1991) describes the process of meaning construction typical of underprepared students as following a linear progression, holding to the chronology of events as presented. Whereas in oral formulations, the sequencing of events is of paramount importance, necessarily leading the listener through a series of steps towards a climax, textual knowledge may, and does, break away from this form. The hierarchical structuring of ideas and formal relations of logic are quite distinct from the notion of a 'story-line' (Craig 1991). Indeed, as Iser (1978) argues, text very often

'works' by thwarting the reader's expectations, forcing one to reject earlier conceptions in the light of further information. Tasks 1 - 5⁵⁷ all represent examples of text where the structure ruptures ostensible chronological sequencing. Students' attention to the minutiae of these texts (see the discussion above) is an expression of their expectations of a story with recognisable characters and a sequence of events.

Because of the multi-layered fabric of textual meaning, effective questioning of the text should encompass questions about the relations between ideas. These questions are at a more complex level than the precise first-level questions that deal with specific isolated concepts. Importantly, this patterning of the text will also enable the reader to grapple with the central idea(s) around which the text is structured. A failure to question the essential issue will critically impede the reader's ability to appropriate the meaning of the text. For example, in Task 4 the text establishes a central argument about the mutually exclusive forms of common sense and scientific knowledge. As a pre-requisite to establishing this position, the author must demonstrate the hidden interpretive nature of common sense and draws on a number of anthropological examples to do so. The force of the illustrative material seems utterly compelling and submerges the implicit (essential) argument. For example:

What is the connection between common sense and science?

- 1. Most people have common sense about how germs are spread and precautions of cleanliness in order to prevent it.*
- 2. The common sense system of knowledge operates in conjunction with other systematic bodies of knowledge e.g. religion or natural science; an example of Zande witchcraft which is only called upon as an explanatory force where common sense fails to account for an event.*

⁵⁷ See Appendices 6 - 9 respectively.

The task is inverted for students in Task 8⁵⁸ where instead of having to generate the question themselves, they are presented with an academic question and required to analyse it. Such questions exemplify the complex form whereby the relations between ideas or elements come under scrutiny. The statement form of the question, however, conceals the "essential" issue for discussion. Responses very often failed to penetrate to the essence of the question, latching on to a part of the question and pursuing a peripheral or minor issue. It is important to note that while these questions in their own right may be interesting, they fail to engage with the central issue of the stated question.

The circle of knowledge (Task 7⁵⁹) provides a means to trace the construction of knowledge back through the process of enquiry, posing the question that might underlie a particular claim to knowledge. Responses in the "peripheral" category involve the selection of uninteresting (or irrelevant) questions that simply include their own obvious answers and do not drive enquiry forward. The following examples illustrate this peripheral questioning:

a) Question:

→ *Why do people sleep?*

Plan:

→ *When do I?*

People sleep when they are tired.

Act:

→ *Ask them do they sleep? Yes.*

When? At night.

Observe:

→ *What makes them sleep at night?*

They need rest.

⁵⁸ See Appendix 12.

⁵⁹ See Appendix 11.

No place to go at night.

Reflect:

→ Do all people sleep because they need rest?

Some do not sleep at night only even during the day.

b) The question I had in mind is why a person especially males use to iron their pair of trousers before they can wear them? I didn't know the difference between those clothes which has been ironed and those unironed. Then I planned that I can iron my pair of trousers maybe I can get the difference or whatsoever. The following day before I could put on my pair of trouser I ironed it, even then I didn't recognise any change. When I was walking down the street the same day, I met someone who appreciated that I was wearing nicely. From that day I realised that even when wearing shrunked clothes you don't look nicely. So I make a point that before I could put on clothes I must first iron them. Later I found that some T shirts need not to be ironed, I asked myself why?

An important factor influencing the nature of students' responses appears to be the length of the text with which they must engage. A greater number of students were able to produce exhaustive and precise question sets in Task 2 where the text was extremely short, whereas the volume of text in Tasks 1 and 3 resulted in far less comprehensive responses. Despite this, however, there was no improvement in the construction of **complex** questions in relation to the shorter text. Although the text of Task 2 is only a single paragraph, it is an extremely dense text, asserting a series of theses and antitheses, and establishing new syntheses between ideas that may ordinarily be considered conflictual. Effective questioning of this text would entail identifying the parameters of Gramsci's claims and questioning their bases.

8.3.3 The Epistemic Assumptions of Appropriate Cognitive Functions.

Feuerstein's (1989, 1981) analysis of task performance attempts to go beyond describing what respondents do and do not do correctly and focuses on the cognitive (mental) actions that lie beneath and generate these performances. However, an explanation of students' failure to apply the appropriate mental schemes to a particular task and, of even greater importance, an explanation of the questioning approaches that they **do** apply, must go beyond the cognitive strategies themselves to the generative epistemic base that determines the conceptualisation of the problem (question). Although Feuerstein does not label it as such, his categories "**defining the problem**" and "**passivity**" begin to examine the epistemic functioning of the subject.

Before one can even begin the process of solving a problem, one must first define or articulate the nature of the problem. Miller identifies the pivotal nature of this step thus: "To ask a question is already to impose understanding on a situation" (1992(b): 10). Crucially, such a process of defining the parameters of investigation involves the adoption of a critical and active stance on the part of the questioner. The field of enquiry is, in some senses, boundless; the task of defining the question is to direct attention to a particular problem (or aspect of a problem) and not to others. The question establishes boundaries and creates the space for enquiry. It is in this sense that we might view a "text as posing a question" (Gadamer 1975: 337). A text demarcates a field of knowledge by offering a response to the question of the author and, then further opening up a field of enquiry for the reader in front of the text. The reader's understanding is called into question, providing the impetus for 'new horizons' through the fusion of the known and unknown. The text (or question), thus, simultaneously opens up possibilities while also closing or excluding others.

A failure to "define the problem" or to recognise and foreground one's own role as the enquirer, leads to a passive approach that seeks closure either in the world of experience or in an immediate, single answer. This conceptualisation of the process of

enquiry stands in direct contrast to the questioning epistemology of text and the open-ended nature of problems in the Human Sciences.

8.4 The Questioning Epistemology of Text.

Appropriate and effective questioning is fundamental to the open-ended process of knowledge construction, which is in perpetual motion towards the unknown. This open system of enquiry is, however, qualified by its historical antecedents, by the cultural forms and practices that inhere in the process of meaning making. Indeed, the very notion of openness is socio-historically composed. Gadamer's metaphor of the horizon that creates a 'moving boundary' best encapsulates this sense of constrained change and openness. The boundaries of modern thought (and even the less defined fragmentary boundaries of post-modernism) are essentially established in text. It is our role as readers and questioners to both locate and challenge these boundaries. The process of enquiry and questioning finds its expression in the relation, first between the author and the text that s/he creates in answer to a question, and then in the engagement of the reader with the text, questioning and probing its meaning in order to appropriate it.

In summary, the questioning process in the development of knowledge from text occurs in the following ways:

- A question or process of enquiry on the part of the author produces a text.
- The reader questions the text in order to appropriate its meaning.
- The text questions the world of the reader, provoking distanciation from the known and opening up that which is not yet known.

CHAPTER 8

DISCUSSION AND THEORETICAL INTEGRATION:

PHASE ONE

8.4.1 The Question and Answer of Text.

The permanency of text gives an apparent weightiness and certainty to its ideas. Geertz (1973) describes common sense knowledge as claiming its authority by means of its self-evident tone. But text also tends to carry its own authority within it. Perhaps (ironically), one of the greatest effects of remnant orality in the context of emerging literacy is the awe and respect for the written word that first replaces it. World religions are built on the authority of the 'book' which is posited as revealed truth, never to be questioned. The need to conserve knowledge in the oral system by reliance on memory is replaced by certain reliance on the book as recording and preserving the truth for all time.

However, text is far more than a powerful 'aide-memoire'; its potency lies in the disclosure of new and previously unknown worlds to the reader. By its permanency, it not only preserves knowledge, but also breaks the bounds of time and space and, hence, the limitations and stasis of oral knowledge. The key to understanding text in this provocative and challenging way lies in the recognition of the constructed nature of text itself; of the history of developing ideas of which a particular text is only a part.

Task 6⁶⁰ required students to go beyond the presented knowledge of the video-text, to consider the text as an answer to a question. By viewing the text in this way, its constructed nature is highlighted. Instead of simply presenting a record of political events in South Africa in the eighties or simply recording the voices and words of poets, "*Poetry of the People*" sets out to explore and answer a very particular question about the relationship between art and society. In fact, the text itself raises the question about how authors interpret and re-present the realities that they experience and observe. Students' responses predominantly failed to grapple with this relation between the author's enquiry and the constructed text, remaining seduced by the details recorded instead of querying

⁶⁰ See Appendix 10.

the process that informed the selection of these images (as opposed to others) and these poets (as opposed to others). This selectivity on the part of the author is guided by his/her attempt to answer an unstated question, to provide evidence for a particular position in a matter of debate. Underprepared students do not recognise this selective process whereby the text contains its own question and answer and so fail to appreciate the constructed nature of text. The questions that they posed (as underlying the production of the film-text) could for the most part either not be answered by the text or would best be answered by reference to other texts and sources (e.g. "*Why is there violence in South Africa?*" "*Why is there police brutality in South Africa?*").

Working back from an answer to its origins in a question was also the task in constructing the "circle of knowledge" (Task 7⁶¹). The circle represents the enquiry or research process as moving through a series of chronological steps moving from question through to answer. However, the circular representation indicates that this answer again poses a question, thus beginning the cycle again. Although students could select knowledge of their own choosing to represent in this way, they found it very difficult to conceive of knowledge (an answer) as the result of a question, to represent the known as once unknown and generated through human enquiry. There was a dominant trend to treat this final claim to knowledge as fixed and evident at each of the previous steps, flattening the process and movement in the model and missing the sense of momentum and impetus that each stage lends to the next. For example:

1. Question:

→ *Why women are weak?*

Plan:

→ *Decision to ask.*

Act:

⁶¹ See Appendix 11.

→ *Start asking.*

Observe:

→ *Women are weak but environmentally weak because nowadays women can drive heavy duty vehicles and are excelling in bricklaying and etc.*

Reflect:

→ *Its true but to add on women are weak by nature before are introduced to physical aspects or matters.*

2. Question:

→ *Why is the library an important source of knowledge?*

Plan:

→ *I went to the library and look at them whilst they are in the library.*

Observe:

→ *I look at them, I was observing what were they doing.*

Reflect:

→ *They read and select important facts in order to get knowledge. Library have all the sources of knowledge.*

A third example of the questioning process behind the text is found in Task 8, "Analysing academic questions".⁶² While this task entails the presentation of questions for analysis, the form of these questions (typical of the Human Sciences) is not of the usual interrogative structure. The questions appear as statements, or claims to knowledge and it would be the task of the student in structuring an essay-type answer to discuss or debate this claim, the evidence of its proponents and the arguments of its detractors. The statement, thus, contains the question or the issue for enquiry, although it is not overtly marked. Underprepared responses indicated no attempt to analyse what 'issue for

⁶² See Appendix 12.

debate' is raised by the question. Instead, there is a simple restatement of the position asserted in the question and an attempt to answer or close the debate. For example:

1. I think this question deals with pastoralists who do things by means of supporting life. They experience some difficulties in terms of socio-political change and also various forms of development planning which is done on behalf by government and international agencies.

2. Socio-political changes.

→ Pastoralists depend on produce for survival.

→ Society changed - no longer depend much on cultivated foods.

→ Political change → wars - people have moved from their homes with reasons that they are being intimidated.

→ No time for crops.

While the apparent form of text is that of an answer, this disguises the process of enquiry that lies behind it. It is with this process that the critical reader must engage. "Thus a person who seeks to understand must question what lies behind what is said. He must understand it as an answer to a question" (Gadamer 1975: 333).

8.4.2 Questioning the Text.

Interpreting a text as the end result of a process of enquiry has implications for the role of the reader in relation to the text. Instead of simply recovering the meaning of the text, or even tracing it back to its origins in the person of the author, the text opens up a critical space of enquiry in front of the text in which the enquiry process is continued and extended. Reading is, thus, an active process (a "happening" as Iser (1978) puts it) and the meaning of the text cannot be released without the activity of the reader. The necessary action on the part of the reader takes the form of questioning and probing the

surface of the text, in order to formulate both the question that underlies the text, and to open up the worlds to which the text points.

The text constrains and directs this activity on the part of the reader in such a way that it is not an idiosyncratic or personal meaning that evolves, but a critical engagement with the text that is "intersubjectively verifiable" (Iser 1978: 22). Such questioning is not identifiable with dialogical or conversational interlocution as it is the text (not the author) that is questioned. The text is distanced from the world of the author in the writing process and then its meaning is again alienated through the appropriation of the reader. This questioning process thus opens up 'possible worlds'.

8.4.2.1 Problematising the unproblematic.

The principal effect of questioning text is that the apparently unproblematic statement of the presented text is problematised. Gadamer conceives of the reader's task as being to establish the "questionability" of the text, or to bring its meaning into a state of "indeterminacy" (1975: 326). This process involves the exploration of the evidence or grounds for particular claims, and the construction of alternative possibilities. Pivotaly, this approach entails an acknowledgement of the constructed (as opposed to natural or god-given) character of all knowledge, and questions the authority of the text.

The two versions of Task 8⁶³ both involved statement questions taken from past first-year examination papers.

1. *"All whites are born racist." Critically discuss this statement.*
2. *Describe the nature of adaptation to the environment typical of subsistence pastoralism in Africa and analyse why many pastoralists have experienced difficulty*

⁶³ See Appendix 12.

in the face both of socio-political change and various forms of development planning done on their behalf by government and international agencies.

While the statements appear firmly founded and unproblematic, they each pose a problem for resolution and an essay response would need to explore not only the position asserted in the question but also alternative or competing claims. The task of the student is to problematise the statement or construct the problem. Many students failed to identify this as their task, instead restating the claims of the question. For example,

- 1. Most of the whites believe in racism by birth.*
- 2. This question is dealing critically with why all whites are born racist. We must find out why they don't want to live with other races.*
- 3. Whites are the descendants of another whites, if a child is born by the racist, definitely that child is going to be a racist because it resembles his / her parents who are the racists this is the situation that cannot be avoided.*
- 4. This implies that the statement was being written by a South African black person, as one may deduct from the implications drawn by the statement. Considering the whites hereditary situation.*

1. I think this question deals with pastoralists who do things by means of supporting life. They experience some difficulties in terms of socio-political change and also various forms of development planning which is done on behalf by government and international agencies.

2. Socio-political changes.

→ Pastoralists depend on produce for survival.

→ Society changed - no longer depend much on cultivated foods.

→ Political change → wars - people have moved from their homes with reasons that they are being intimidated.

→ No time for crops.

8.4.2.2 Establishing a Framework of Oppositions.

Ströhm-Kitchener (1983) points to the productivity of antithetical perspectives in driving the process of enquiry forward. Part of the reader's task is to establish such oppositions either within the text itself or between a given text and other possible ideas on the same issue. Even where claims appear self-evident or unequivocal the dialectical form of knowledge that progresses through the resolution of antitheses (Ströhm-Kitchener 1983) is implicit and must be addressed by the reader/student. A particularly fruitful questioning strategy is, therefore, to establish oppositions or comparisons for analysis.

The text of Task 5 ("Non-sequential Reading"⁶⁴) opposes reading and writing on the one hand, and the construction of meaning on the other. Although implied, rather than overtly stated, this opposition is the key overarching idea of the text. In general, students did not identify this implicit framework, fixing on the words of the text and its parallel linguistic structure, stating the key opposition as between "*reading and writing*" and "*start and finish*".

The title of the text "*Common sense and Good sense*" (Task 4) sets up a framework of opposition between these two forms of knowledge, creating the text's field of enquiry. The majority of modelling questions were designed to focus students' attention on this opposition throughout the text, and on the refinement of meaning that thus becomes possible. However, responses to the questions indicated that students tended to treat common sense and good sense as either existing on a continuum or even as indistinguishable from one another. Responses to the following question illustrate this failure to use the question to establish the oppositions of the text:

What is the relationship between reality and a) good sense & b) common sense?

⁶⁴ See Appendix 8.

Essentially, an adequate response to this question needs to capture Geertz's argument that common sense is an interpretation of reality, as is formal knowledge. However, what distinguishes them is the explicit acknowledgement of the interpretive function of formal knowledge as opposed to the ostensible or apparently simple and direct record of reality that is projected by common sense. This subtle but critical distinction is the pivot of Geertz's argument and is entirely flattened or assimilated in responses such as the following:

1. Common sense is a complex constructed interpretation of reality while good sense is an interpretation/construction of that reality.

2. Common sense is the constructed interpretation of reality. Good sense is the construction about reality.

- Common sense interprets and explains the world.

- Good sense interprets the construction about the world.

8.4.2.3 Constructing Implicit Text.

Very often the oppositions or tensions in the text may not be overtly stated and a primary task of the reader is to construct the argument from what is given. Post-modern and post-structuralist approaches to textual interpretation have emphasised that what is implicit in the text is just as important (some would argue more so) than what is explicitly stated. Meaning inheres not only in the words themselves but also in the absences between words, or in the relations established between ideas.

Task 4 again provides a useful illustration of this task of the reader. The final question of the task requires: (a) the reversal of given information about common sense to construct an implied schema for what would be considered "good sense"; and (b) the application of the ideas of the text to another (unstated) context, that of university essay writing. Both

parts of this question required that students go beyond the given stated meaning of the text to that which is unstated but **implied** in the text. Often they simply restated the characteristics of common sense as are explicitly given in the text itself, for example:

Common sense is not identical in content across cultures, makes assertions about the "truths" as self-evident. Common sense ideas are interpretations of reality. Common sense is also practical. Common sense operates in conjunctions with other systematic bodies of knowledge.

Knowledge must be constructed in people's heads. You must check your own work to ensure that you do not deal with material in a common sense way. Arts/Social Science discourse displays none of the characteristics of common sense.

8.4.3 The Fusion of Horizons: the Worlds of Text and Self.

Questioning the text is quite a different process to the dialogical interaction of conversation in that the interlocutor of the reader is a text and not another person. Clearly, the questions posed by the reader cannot be 'answered' as they would in a personal exchange. What is in question is not only the matter of the text but also, conversely, the text questions the reader or places his/her meaning in a state of openness. The new or unknown aspects of the text challenge that which is already known and certain, creating precisely the state of disequilibrium that Piaget (1977) identifies as pre-requisite for (mental) change and development. It is in this questioning of the reader's reality that the real learning potential of text lies; not just in adding more content to that which is already known, but in challenging and disrupting the fabric of the known and introducing strange and unfamiliar worlds. Text makes it possible for us to experience "... things that no longer exist and to understand things which are totally unfamiliar to us" (Iser 1978: 140).

In contrast to the transcendence of spatial and temporal boundaries that text makes possible, oral knowledge tends to be situation bound and conservative (Ong 1982). That which is of immediate relevance for day-to-day activities is considered valuable and, because of the sole reliance on memory, that which proves useful must be conserved for future generations. The conservation of what is known depends on an understanding that knowledge is given rather than constructed. If what is currently known has not evolved through the changing understandings of people through history but is seen as eternal and unchanging (given by God or nature), then attempts to change this knowledge will tend to be treated with utmost suspicion. Craig describes this epistemic orientation thus: "There is a 'right' and 'true' and 'proper' because God (and the bible or some other unquestionable authority) made it so, or because nature constitutes it as such (and in no other way)" (1991: 137). This assumption about an original and single source of 'truth' is supported by an intricate network of common sense references to lived reality. In other words, the evidence for and authority of any claim to knowledge is experience itself (Geertz 1973). There is a preponderance of this need to check the text against the reality of one's own experience in students' strategies of meaning construction as recorded in Task 5.⁶⁵ The examples below illustrate this point.

1. *I will look that thing in reality and try to find the meaning.*
2. *I will try to make it parallel to my own experience and my daily living experience.*
3. *I would be engaged through the interpretation of those events, people, animals and things I have encounter in my daily living.*

The force of familiar experience appears inexorable where the text presents familiar content. Responses to Task 1 and ⁶⁶ demonstrate this very convincingly. Although the film-text presents extensive footage covering political events and conflict, the pivotal question is the relationship between these events of the real world and poetry, or the

⁶⁵ See Appendix 8.

⁶⁶ See Appendix 9.

social role of poets. For underprepared students, however, the real world events overshadow any more abstract considerations, as evidenced in the responses below:

- *Will this period of dissatisfaction of African people last forever or not?*
- *Why are the South African people so oppressed?*
- *What can be done in order to make people especially Africans know about the miserable situation they are living in?*
- *The political situation in South Africa is in bad terms. What is the cause of the unrest?*
- *Why are the people killed by the government?*
- *Liberation is it the key to freedom?*
- *Is it possible for blacks to reign in the new South Africa if they continue killing each other like flies?*

While these questions are certainly not trivial, they do little to penetrate the new world that the text presents and remain "situation-bound". Also reflected in the above responses is a pressing concern with the **morality** (or 'truth' in the religious sense of the word) of the text and with forming judgements about the 'rightness' or 'wrongness' of ideas and events. This concern with moral questions is also evident in students' engagement with the sociology text of Task 3.⁶⁷ The text attempts to illustrate the sociological approach with reference to ordinary everyday examples. Some students fixed on this illustrative material and focused their questions in terms of a prevalent concern with the 'goodness'/'rightness' or truth of the particular socio-political systems under discussion in the text.

- *"Who is supposed to teach an infant way of life?"*
- *"Marxism is a general theory for Sociology, is it true?"*
- *"Are theories about people a good thing?"*

67 See Appendix 6.

- *"What solutions could be brought to solve the problem of dependent members - e.g. very young and very old."*
- *"Are the ideologies of communism and democracy not leading towards the Third World War?"*
- *"Why do people have different stereotypes concerning culture to another group of the society?"*
- *"How can one be sure of the political doctrines? since all of them brings about good political points about their standpoint."*
- *"Do you think communist can be good if applied in South Africa?"*
- *"What message did they want us to bear in our minds?"*
- *"Why revolution always take place in our society?" It is because of different beliefs or ideas if so what are we supposed to do in order to be able to normalise the situation?"*

This inclination towards closing enquiry in a final and authoritative source is strongly evident in students' engagement with the "circle of knowledge" of Task 7.⁶⁸

I had a question that I used to ask myself that why are the parents always keep on advising their children about the point of respect towards them? I had quite a number of questions about the respectation as such. I asked myself and tried to find out the ways to lead me to the best and acceptable way of respecting my parents. All these questions did not give me any answer. So I have to go and contact some fellow youngsters in my age to seek for ideas. (plan) I looked them in their homes how they respect their parents and they told me that youngsters are too young to

⁶⁸ See Appendix 10.

say no to their parents. (Act) When I sit down alone I was able to see that it is really the truth that we must obey our parents as the Bible said that obey your parents so that your living should be extended in the world.

Rather than problematising, questioning, or investigating the roots of the observed cultural practice, this student simply manages to reassert the self-evident nature of the initial proposition, "It is right to respect one's parents." Responses also include a concern with the usefulness of what the text has to offer or the benefits that it might deliver. This questioning reflects the common sense value of practical import (Geertz 1973). To draw on Tasks 1 and 6 again,

- *Will this film help people in S A?*
- *How can we make our people more aware of the hidden agendas of the government and how can we show the world a true reflection of the socio-political life in our country?*
- *When there is a lot of suffering how to let people know that you are concern.*
- *I will first discuss what had made them to write this video. I should think that these are the people who are involved in the situation (struggle) so it affected them in such a way that they think if they could make a video people will do something about it and they could raise certain opinions.*

Iser claims that the great value of text in terms of extending the collective boundaries of knowledge lies in its ability to disrupt the familiar world and place in question that which is certain. "Suddenly we find ourselves detached from our world, to which we are inextricably tied, and able to perceive it as an object. And even if this detachment is only momentary, it may enable us to apply the knowledge we have gained by figuring out the multiple references of the linguistic signs, so that we can view our world as a thing 'freshly understood' " (Iser 1978:140).

In contrast, an approach to text that privileges the world of personal experience effects a premature closure to the questioning process. Rather than opening up fields of enquiry or entering the new worlds to which the text points, such questioning contains its own answers and quickly truncates the process. Where the task is to question a given text, this approach will not enable the reader to enter the demarcated textual arena. Instead, the enquiry process of the text and the reader are disconnected and distinct from one another; there is no interface between the worlds of the reader and text or in Gadamer's terms, no "fusion of horizons" (1975). The power of text lies in its ability to bring into the present world of the reader a "historical horizon" (Ibid.: 271), that when met with an openness on the part of the reader, questions the limits or parameters of particular constructions of the world. This should not be misunderstood as the privileging of past knowledge, or the reification of text. The horizons of both text and reader are called into question, making it possible to enter previously unknown routes of enquiry. "The historical movement of human life consists in the fact that it is never utterly bound to one standpoint, and hence can never have a truly closed horizon. ... Thus the horizon of the past, out of which all human life lives and which exists in the form of tradition, is always in motion" (Ibid.: 271).

8.5 Meta-cognitive Controls.

The theoretical overview of the role of questioning in the development of knowledge indicated the particularly fruitful nature of this focus for both task analysis and the learning-teaching process. It specifically encapsulates the epistemic character of the Human Sciences and, furthermore, provides for meta-cognitive control over the reader's/learner's engagement with new fields of knowledge. In general, students' responses reflect little meta-cognitive control over

the process of developing meaning from text or over the form of questions that they constructed. Responses indicate a flattening of the reader's role and little appreciation of the active, constructivist role that learners must play in the development of their own knowledge. There is no explicit control over either the (epistemic) parameters of the task or, consequently, over the process of selecting and applying particular appropriate cognitive strategies. Pinard's notion of a "double movement of cognitive activity" expresses the role of self regulation or meta-cognition as a

"movement of interiorization, leading to a prise de conscience of her [the learner's] actions, that is, their conceptualization, which is expressed through analysis of the means employed, their raison d'être and their relative effectiveness; [and] a movement of exteriorization leading to a prise de connaissance or conizance of objects - that is, the understanding of their composition or deep structure and of the interactions between objects"
(1986: 343).

The text of Task 5⁶⁹ explicitly focuses on the non-linear nature of textual meaning and, hence, the appropriate strategies required for engaging with text. Reflecting on their own methods of meaning construction, students recorded highly linear approaches, either focusing at the level of the meaning of individual words or using "repeated" (sequential) reading to reach an understanding. The text is viewed as a closed entity rather than as a provocation to mental action. For example,

- 1. I would try to interpret it according to the way I understand so I can see whether it makes any sense or not, if it does not make sense try it the other way.*
- 2. I must read it carefully and find the meaning of words I don't understand and then try to think about it critically.*

⁶⁹ See Appendix 8.

3. *I would read the text thoroughly and get the full knowledge of what is being written and what it means, then I will be able to make meaning or interpretation out of it.*

4. *I will try to get words which I don't understand and look them in the dictionary. I will try to concentrate on the text. I will read the text over and over till I can interpret or get meaning out of it.*

In questioning the extended text of Task 3 some students also recorded questions that may be interpreted as attempts at meta-cognising their own meaning-making process. However, these questions tend to have the quality of a 'recipe' or puzzle-like formula as opposed to probing the form of the particular text and opening up productive routes of further questioning.

- *"What is central idea about this whole text?"*
- *"What is the reading about and of what interest is it to a student generally?"*
- *"Why is it not a summary form?"*
- *"How is these sentences differs:*
 1. *Labour produces wealth*
 2. *Wealth is produced by the labour power of the workers."*

In essence, it is not possible for students to effectively control and direct their own cognising actions in relation to text without an appreciation of the epistemic character of text. Appropriate questioning (and meta-cognitive control over this questioning) can only derive from an appreciation of the open-ended nature of textual knowledge. Where there is an understanding of the contextually relative and antithetical progression of knowledge in text (Ströhm-Kitchener 1983), questions will problematise the unproblematic, establish oppositions, construct implicit text, and place the self in a relation of openness towards the text.

CHAPTER 9

RESULTS: PHASE TWO

9. RESULTS: PHASE TWO.

9.1 Introduction.

The results of the first phase of research suggest that our understanding of the problem of 'underpreparedness' may be extended by shifting attention from a focus on the (in)adequacy of students' answers, to the underlying enquiry or questioning process that generates these products. An appropriate response to an academic question entails not just the recall of particular information but a critical engagement with the field of enquiry that the question represents.

This phase of the research extends this focus on the cognitive processes of questioning underlying the production of particular answers. The data were drawn from the first year psychology examination (June 1996) as described in chapter six. Marks for these papers were allocated in the usual way in accordance with model answers (see Appendix 13). The majority of marks were allocated for the re-presentation of particular appropriate content but a small proportion of the marks for each question was awarded for appropriate engagement with the critical form of the question. Students' success or failure in these conventional performance terms is juxtaposed with an analysis of their answers in terms of what they reflect about the process of mental reconstruction or transformation of the given questions. As Figure 3 below shows, only 12% ($n = 33$) of the L2 students obtained final marks in the high performance (>59%) category, 37% ($n = 103$) obtained marks in the pass category, and more than half (51%) ($n = 141$) of the students failed the course.

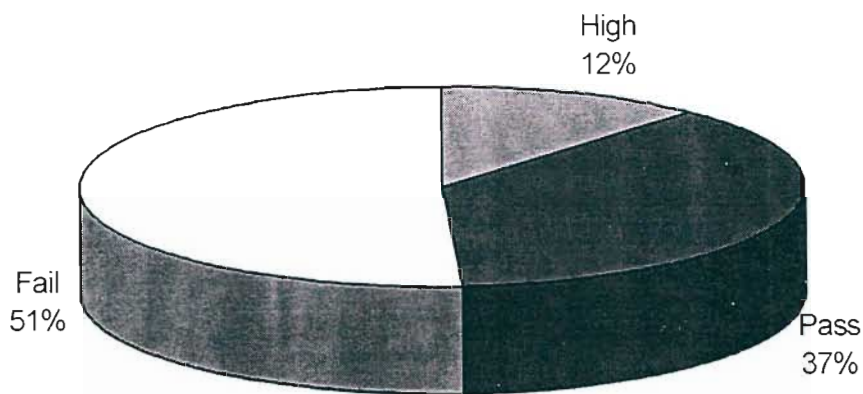


Figure 3: Final Performance of L2 Students on Psychology IA 1996.

These performance data starkly indicate the imperative to understand the reasons for failure. To this end, first, the nature of students' questioning engagement is examined in relation to the range of final performance. Second, in order to ascertain whether the reasons for failure are equivalent regardless of students' prior educational experience, the pattern of engagement for failing L2 students is compared with that of their failing L1 counterparts. Finally, the nature of inappropriate questioning engagement is examined in relation to particular kinds of academic questions.

9.2 Kinds of questions and appropriate engagement.

Students' engagement with the given questions was first assessed in general terms as 'appropriate' or 'inappropriate'. Appropriate responses indicate that the given question provides sufficient impetus for the student to engage with the appropriate area of debate. The questioning framework of the student is in line with that which underpins the particular presented question. It is important to note that an answer categorised as 'appropriate' in

terms of engaging with the given question may not necessarily be a 'good' answer in conventional terms. It is possible to answer a question poorly (e.g. provide insufficient or incorrect factual information, misunderstand the precise nature of relations between different elements of a system) but, nevertheless, demonstrate an understanding of the given questioning parameters.

While the general terms of academic discussion may be broadly characterised in terms of the epistemic parameters already discussed (see chapters two and four), closer analysis of actual questions for assessment reveals that the demands of particular questions may vary considerably. The questions in this particular examination paper (Psychology IA, June 1996) differed not only in terms of the content areas addressed (introduction to psychology, evolution, intelligence, forms of knowledge) but also in terms of the form demands made. The questions were found to be of three kinds typifying different levels of engagement: factual, relational and conceptual.

1) Factual: Questions of this kind require the recall of particular facts. While it is acknowledged that in a theoretical field of knowledge such as the discipline of psychology, all factual information is related in complex ways in the construction of coherent bodies of knowledge, it is possible to question and assess sufficient recall and appropriate selection of specific facts. One of the questions in the examination paper under consideration was of this kind, asking for a summary of important facts. *"EITHER: draw a diagram that summarises Piaget's theory of intelligence. OR: Write a summary discussion of Piaget's theory of intelligence."*

The instruction to 'summarise' necessitates the selection of some facts rather than others and, therefore, an appropriate engagement with this kind of question entails a recognition of hierarchical levels of organisation in a body of information. This specific question requires engagement with both Piaget's general theoretical position and the central theoretical concepts (such as assimilation and accommodation) in establishing this position, and the

more descriptive details of the stages of the development of intelligence. An example of an appropriate response illustrates this simultaneously comprehensive and selective approach.

“Piaget’s theory of intelligence focuses on the universal development of intelligence from birth to maturity. It doesn’t concentrate on the fact that intelligence is innate or inborn or because of academic achievement or environmental experiences. Furthermore it doesn’t deal with measurement of individual differences. Piaget’s interest is the development of intelligence in demonstrating that we use a quasi-experimentation and observation of his own three children.

This development is characterise by four stages: sensory motor stage, preoperational stage, concrete stage and formal stage.

In studying intelligence Piaget uses the structure or the what is it that intelligence construct and function of intelligence or what Piaget called the how of intelligence. He also wanted to know the interaction between individual and environment and how they both influence one another. In doing so the concepts of assimilation and accommodation were mentioned. Assimilation he says the application of structure and understanding of the world, and accommodation is the changes brought by those structures and understanding. For example if a child sees a rattle for the first she/he would assimilate it, but if he shake the rattle and make sound she/he would then accommodate the sound. He also mentioned that intelligence is a biological adaptation of individual. Piaget theory of intelligence focuses on the quality rather than the quantitative or measurement of individual differences.”⁷⁰

2) Relational: Questions of this kind require that respondents demonstrate an understanding not **only** of particular facts, but also of the ways in which these facts are related and integrated in a complex whole. In other words, these questions require the establishment of relational or discursive argument. Questions of this type may require comparisons and contrasts, arguing for and against particular positions, delineating part-

⁷⁰ As in the first phase of the research, all examples of students' work are reproduced without correction for language or other errors.

whole relationships, etc. Two of the given questions, although addressing different content areas, were of this kind: *“Discuss the relationship between the content and form of the discipline of psychology”* and *“Compare Darwin’s theory of evolution through natural selection with the earlier theories of Cuvier and Lamarck.”*

The question of the relationship between content and form in the discipline of psychology requires an appreciation of the notions of necessity and determination. In other words, the question requires a highly abstract consideration of these dimensions of knowledge and the way in which they are necessarily entailed in one another. The relationship between the content and form of the discipline is not incidental or loosely associative, rather, content constrains the possible form of knowledge and vice versa, in a mutually constitutive way. For example:

“Content is what is studied, or is a subject of study. As psychology is a science this is shown and evidenced by the method of its investigation that it uses are scientific. So in psychology each discipline is characterised by its method it uses in going about making sense of the content of its focus. ... But this is not always as I have said in the above that in psychology not always that content determines method, sometimes the method of study lead to reach certain content.”

The evolution question calls for an exploration of relations through comparison. This comparative process entails adopting various positions (those of Cuvier, Lamark and Darwin) in relation to the same phenomenon (evolution). The argument for current theoretical explanation is established through these relations. The response below illustrates cognisance of this relational movement demanded by the question.

“Cuvier’s theory was based on the idea that there was a series of catastrophes that’s why the fossils were found in different geological strata. The problem with this theory was that it could not account for the age of the earth which appeared to be over a billion years old. It

could not give an explanation as to why the fossil record showed some resemblance of living species. So it could not fit the evidence. Lamarck tried to explain the gradual change of organisms by saying that organisms simply change to other species. Lamarck's theory overcame the weakness of Cuvier's theory in the sense that it could explain the age of the earth but the problem with this theory is that there was no evidence for the inheritance of acquired characteristics as Lamarck claimed that a body building man can pass his big muscles to his children.

Then came Darwin, his theory is based on three concepts variation, competition and inheritance. The individuals vary naturally in beak sizes of finches and sizes, when there is scarcity of resources they compete and the better suited survive the less suited die. Those that survive reproduce and pass on their adaptive characteristics to their offspring. Darwin's theory overcame the limitation of Lamarck's theory although Darwin could not explain the mechanism of inheritance (genetic transmission). But it is able to explain all the available evidence and it is not contradicting. The theory fits evidence."

3) Conceptual: Questions of this kind entail the construction and elaboration of conceptual depth. Students are required to demonstrate not just their knowledge of the appropriate language of an area of study, but a clear, complex and precise understanding of the ideas that underpin such specialist terms. This way of questioning evaluates the extent to which students are able to re-conceptualise the world of enquiry in terms of particular bodies of expert knowledge. The remaining three questions in the examination paper under consideration focused on the demand for this conceptual precision: "Give two reasons why the natural process of adaptive change does not lead to perfection. Illustrate each of these reasons with an example"; "Define the concept of g and explain its significance in the construction of models of intelligence" and "Discuss the constructed nature of knowledge in the social sciences in terms of the concepts of intertextuality, conceptual frameworks and theory-laden facts."

In each case, an appropriate response not only precisely defines the concepts identified in the question but also demonstrates an understanding of the implications of conceptualising the phenomenon in this particular way rather than in some other way. For example, conceptualising the process of adaptation as imperfect is antithetical to the notion of design and this distinct 'world view' is clearly expressed in the following example:

“Environment changes from time to time. For instance, before industrialisation took place in Britain, black moths would be easily attacked by predators in plant stems than light moths, but after the industrialisation, plant stems favoured the dark moths.

Nature is not controlled by the organism, what it is today cannot be the same with what it would be tomorrow.

Another problem is the adaptive characteristics are heritable and they are natural. For instance, short necked giraffes would be helped to reach leaves in high branches by adding vertebra in their necks but since adaptation happens on what already exist it is impossible.”

Intelligence has been conceived of as either a unitary fundamental system underlying all performance or composed of several discreet abilities. The concept of 'g' as a general underlying ability is central to establishing these two antithetical models. The following example demonstrates how this central conceptualisation may be used to establish the argument:

“The concept of g was introduced by Spearman and it refers to general intelligence. If the different tests tend to be highly correlated it means that there is an underlying factor which is common for all of them. The g factor as opposed to specific factors which are tested by different sub-tests is shared by all. If for instance height and weight are highly positively correlated it does not mean that one causes the other, all it means that there is a common factor that influence both of them like diet. The g factor may also mean that there is a common thing that the tests are testing or they are looking at the same ability.”

The question dealing with the final module of the course, *Forms of Knowledge*, most explicitly asks for the elaboration of central concepts and lists these. These concepts can be linked to one another to provide a particular way of thinking about knowledge as 'constructed'. The example below illustrates both attention to precise definition, and an appreciation of the implicit conceptual coherence established by this question.

"The knowledge is the information we have about something. Knowledge is the produce of human being. By this I mean that it is constructed by people. The nature of knowledge in social science is different to that of our daily knowledge which is common sense. In social science the scientific knowledge which is systematic and formal way of knowledge that uses theory, facts and evidence to support the general claim. In scientific science the theory is used to analyse or give explanation or meaning of the world. So the theory is the way which is used to make things clear even those which are difficult. What we perceive with our eyes is organise and structured through concepts. This means that we use language to identify the reality. In social science when we are talking about intertextuality we refer to concepts that are shaped or may used only in particular way to fit that theory or based to particular discipline e.g. structures in Piaget's theory. Because knowledge is constructed by people this means that what we perceive may influenced by previous understanding or by ideas of others. And this may be put in a particular way which may lead to the selection of other information and ignore other. In social science the knowledge is constructed by relationship between theory and facts. Facts are combined as evidence to support theory. Then those facts that are shaped and structured by theory is called theory-laden facts. By holding particular theory in our minds may lead us to look for particular facts and this means that because of theory we already have we look for facts that support us to look for particular facts e.g. evolution (homologies)."

9.3 Response profile in relation to overall performance.

Final performance on the course provides an indicator of students' success or failure in the academic arena. For the purposes of this analysis three groups of second-language (L2) students were identified: Fail (less than 50%: n=141); Pass (50% or higher but less than 60%: n=103) and High (60% or higher: n=33). For each of the performance categories, the frequency of appropriate and inappropriate questioning engagement is provided in Table 10 for each of the kinds of questions (factual; relational; conceptual). Table 10 also provides the frequencies for the first-language (L1) failing students (n=69). (These data are required for further analysis – see tables 14, 15 and 16.)

Table 10. Frequency of appropriate and inappropriate responses for L1 and L2 students across performance categories for factual, relational, and conceptual questions.

	Performance categories				Total
	L1	L2			
	Fail	Fail	Pass	High	
Factual (x1)					
Appropriate	23	68	78	25	171
Inappropriate	46	71	25	8	104
No response	5	2	0	0	2
Total	74	141	103	33	277
Relational (x2)					
Appropriate	62	44	72	41	157
Inappropriate	85	234	132	25	391
No response	0	4	2	0	6
Total	147	282	206	66	554⁷¹
Conceptual (x3)					
Appropriate	33	15	44	39	98
Inappropriate	167	374	248	55	677
No response	22	34	17	5	56
Total	222	423	309	99	831⁷²

Because the performance groups are not equal in size (in particular, there are very few students in the high performance category) comparisons across groups are problematic. Any

⁷¹ A total of 554 L2 responses and 147 L1 responses were recorded for relational questions, i.e. 277 L2 students and 74 L1 students responding to two questions.

⁷² A total of 831 L2 responses and 222 L1 responses were recorded for conceptual questions, i.e. 277 L2 students and 74 L1 students responding to three questions.

comparison across performance groups needs to take into account the proportion of the total cohort that a particular group represents. In table 11, the weighted proportions in relation to total responses within the L2 group (i.e. total responses by failing/passing/high performing students) and in relation to total responses across the categories of questioning engagement (appropriate/inappropriate)⁷³ are presented. Based on the data in table 11, the percentages of appropriate and inappropriate questioning engagement, for each of the performance categories, and for each of the question kinds, are provided in table 12; and the percentage of appropriate engagement within each performance group is presented in Figure 4.

Table 11. Weighted frequencies for appropriate and inappropriate responses across performance categories for factual, relational, and conceptual questions.

		Performance categories			
		Fail	Pass	High	Total
Factual	Appropriate	0.19 ⁷⁴	0.35	0.11	0.65
	Inappropriate	0.35	0.06	0.02	0.43
	Total	0.54	0.40	0.13	
Relational	Appropriate	0.04	0.16	0.16	0.37
	Inappropriate	0.50	0.22	0.02	0.75
	Total	0.55	0.38	0.19	
Conceptual	Appropriate	0.01	0.07	0.17	0.24
	Inappropriate	0.53	0.31	0.05	0.89
	Total	0.54	0.38	0.21	

⁷³ Non-responses are dropped from the weighted data as the focus is on the nature of responses. However, it is interesting to note that a substantial number (L2, n=56 and L1, n=22) of non-responses were recorded for 'conceptual' questions.

⁷⁴ The formula for obtaining the weighted frequencies is illustrated in relation to this first cell, "failing appropriate responses to factual questions". The number of appropriate responses by failing students to the factual question (68), is divided by the total number of failing responses (139), multiplied by the number of appropriate responses by failing students (68), divided by the total number of appropriate responses (171). This yields the weighted score of 0.19 that takes into account what proportion of BOTH groups (appropriate) and (failing) this particular sub-group "failing-appropriate" responses represents.

Table 12. Percentages of appropriate and inappropriate responses for each performance category and for each of the factual, relational, and conceptual questions.

		Performance categories		
		Fail	Pass	High
Factual	Appropriate	36	86	86
	Inappropriate	64	14	14
	Total	100	100	100
Relational	Appropriate	8	43	87
	Inappropriate	92	57	13
	Total	100	100	100
Conceptual	Appropriate	1	18	78
	Inappropriate	99	82	22
	Total	100	100	100

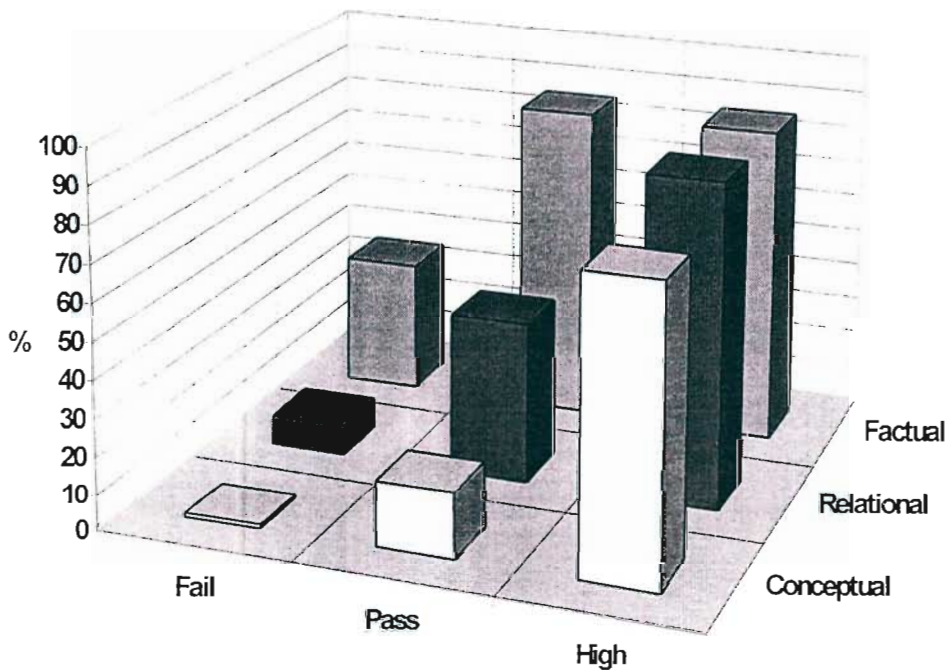


Figure 4: Appropriate engagement within performance categories across questions types: factual, relational and conceptual.

It is evident from Figure 4 that appropriate questioning engagement is strongly related to final performance levels. A very high proportion of the High group's responses is appropriate (86% for factual questions, 87% for relational questions and 78% for conceptual questions). The appropriate engagement of passing students is the same as that of high performers for the factual questions (86%) but drops for the other kinds of questions (43% relational and 18% for conceptual). A very small proportion of responses from failing students demonstrates appropriate engagement with the given questions (36% of factual questions, 8% for relational questions and a negligible 1% for conceptual questions). The kind of question posed seems to have a strong bearing on appropriate engagement, particularly for weaker students. This trend will be pursued further in section 9.5 below.

Another way of examining the relationship between performance and questioning engagement is to compare appropriate and inappropriate questioning engagement across the performance categories for each of the kinds of questions. Table 13 presents the percentage of appropriate and inappropriate questioning engagement across the performance categories for each kind of question.

Table 13. Percentages of appropriate and inappropriate responses across performance categories for each of the factual, relational, and conceptual questions.

		Performance categories			
		Fail	Pass	High	Total
Factual	Appropriate	30	53	17	100
	Inappropriate	82	14	4	100
Relational	Appropriate	12	44	44	100
	Inappropriate	67	29	3	100
Conceptual	Appropriate	2	28	69	100
	Inappropriate	60	35	5	100

Questioning engagement in relation to question kinds is presented in Figures 5 and 6. Figure 5 presents the proportion of inappropriate questioning engagement produced by students from each of the performance categories across the different kinds of questions.

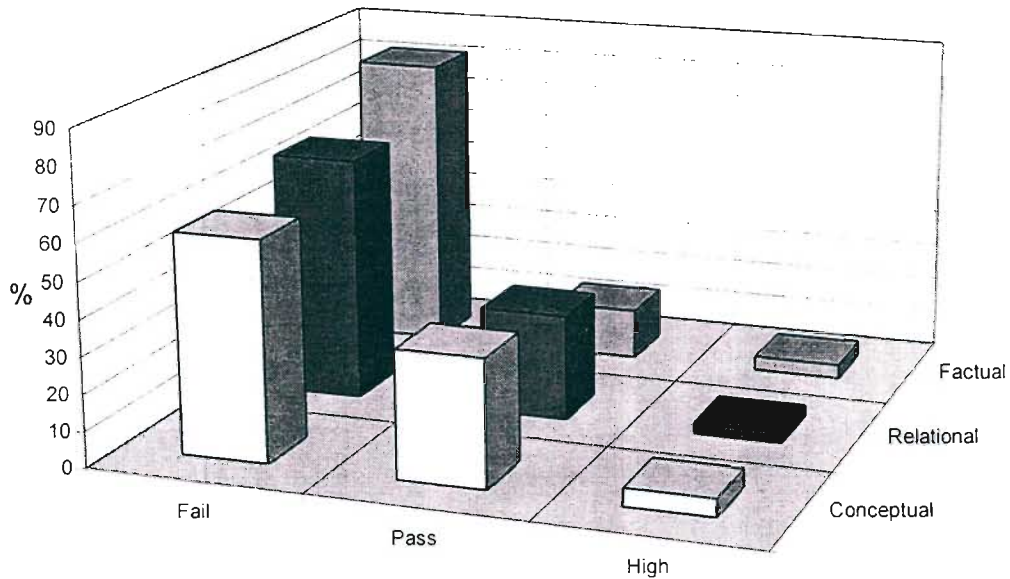


Figure 5: Proportions of inappropriate responses produced by students across performance categories for all kinds of questions: factual, relational and conceptual.

As is to be expected, the majority of inappropriate responses are produced by failing students across all kinds of questions and in all cases, students in the High category produce a very small proportion (3-5%) of inappropriate responses. The proportion of inappropriate responses produced by passing students increases with question type: 14% for factual questions, 29% for relational and 35% for conceptual questions. Figure 6 focuses on the pattern of appropriate responses across different kinds of questions.

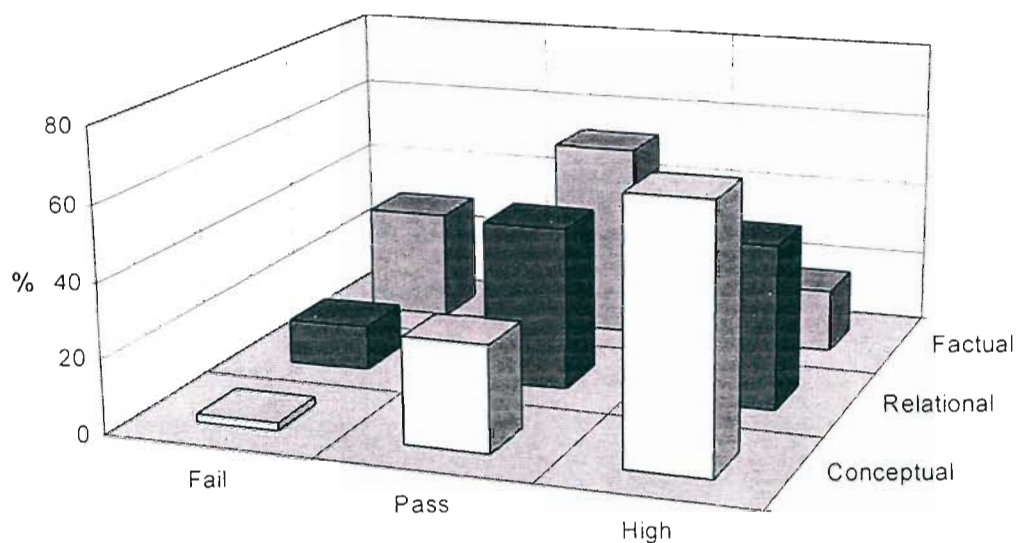


Figure 6: Proportions of appropriate responses produced by students across performance categories for all kinds of questions: factual, relational and conceptual.

The pattern of appropriate response is not simply an inversion of that noted for inappropriate responses and indicates that the kind of question may have a considerable effect on task engagement. Whereas failing students generate nearly a third (30%) of appropriate responses to factual questions, they contribute only 12% and a negligible 2% of the appropriate responses to relational and conceptual questions, respectively. At the other end of the performance spectrum, the small high performing group contributes only a small proportion of appropriate responses for factual questions (17%). This may initially appear surprising, but the distribution for factual questions is in accordance with the ratio of students in this high performance category, i.e. 12% of the class as a whole. The proportion of appropriate responses generated by students in the high category increases dramatically for the other question types: 44% and 69% for relational and conceptual questions, respectively.

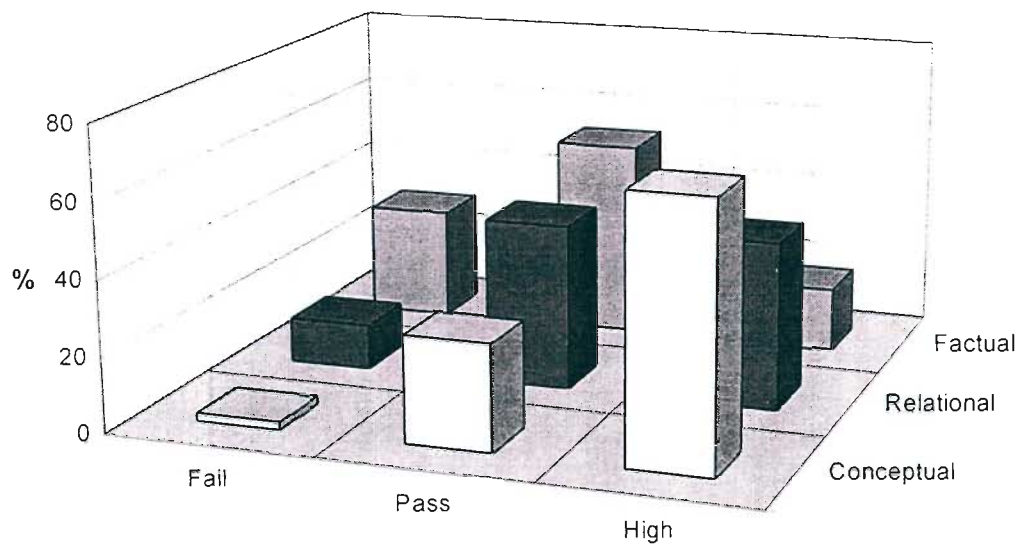


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9.4 The question of underpreparedness.

The research project in all three phases has been conducted with the explicit intention to contribute to more effective educational praxis, particularly in the form of interventions directed at developing the potential of underprepared students. It has been argued (see chapters one and three) that students from certain sectors of the apartheid education system have been deliberately underprepared for university study. This systemic disadvantage negates the conventional location of reasons for failure in individual student deficiencies, such as, laziness, lack of intelligence, incorrect career choices, etc. The investigation of university task demands and psychological functioning of students, as pursued in this project, provides an alternative framework of explanation. In order to ascertain whether the patterns of questioning engagement established in the data above are indicative of the specific phenomenon of underpreparedness rather than generally typical of failure, the responses of second language students were compared with those of their first language peers who failed the course. Again, based on the frequencies of response in table 11, the data were weighted to allow for effective comparison between performance groups. Table 14 presents the weighted proportions⁷⁵ in relation to total responses within the group (i.e., total responses by failing/passing/high performing L2 students and failing L1 students and in relation to total responses across the categories of questioning engagement (appropriate/inappropriate).

⁷⁵ Note that the weighted frequencies in table 15 are no longer valid for the purposes of these comparisons as the addition of the L1 data creates a new total set of data.

Table 14. Weighted frequencies for appropriate and inappropriate responses of L1 and L2 students across performance categories for factual, relational, and conceptual questions.

		Performance categories				Total
		L1	L2			
		Fail	Fail	Pass	High	
Factual	Appropriate	0.04	0.17	0.30	0.10	0.61
	Inappropriate	0.20	0.24	0.04	0.01	0.49
	Total	0.24	0.41	0.34	0.11	1.10
Relational	Appropriate	0.12	0.03	0.12	0.12	0.39
	Inappropriate	0.10	0.41	0.18	0.02	0.71
	Total	0.22	0.45	0.30	0.14	1.10
Conceptual	Appropriate	0.04	0.00	0.05	0.12	0.22
	Inappropriate	0.17	0.43	0.25	0.04	0.88
	Total	0.21	0.43	0.30	0.16	1.10

The percentages of appropriate and inappropriate responses for each performance category and for each of the factual, relational, and conceptual questions are given in table 15 and the appropriate responses are represented in figure 7.

Table 15. Percentages of appropriate and inappropriate responses of L1 and L2 students within each performance category and for each of the factual, relational, and conceptual questions.

		Performance categories				Total
		L1	L2			
		Fail	Fail	Pass	High	
Factual	Appropriate	16	42	88	88	55
	Inappropriate	84	58	12	12	45
	Total	100	100	100	100	100
Relational	Appropriate	54	7	39	85	35
	Inappropriate	46	93	61	15	65
	Total	100	100	100	100	100
Conceptual	Appropriate	20	1	17	76	20
	Inappropriate	80	99	83	24	80
	Total	100	100	100	100	100

The difference between the L2 passing and failing students is, therefore, quantitative rather than qualitative with the failing students producing relatively fewer appropriate responses for each of the question kinds. However, the pattern for the L1 failing students is distinctly different from the L2 failing and L2 passing students with the lowest percentage of appropriate responses occurring for the factual questions and the highest for the relational questions. This poor performance of the L1 failing students on the factual question probably accounts for their failure overall and suggests that these students may simply not have studied sufficiently for the examination. In contrast, the demands of the factual questions are easiest for L2F students and the performance of L2P students on factual questions is equal to that of the L2H students.

It seems from these data that L1 and L2 students are failing for quite different reasons and that the process of questioning engagement may be a pivotal determinant of underpreparedness. The proportions of the total appropriate and inappropriate responses across the performance categories for each kind of question are provided in table 16 and the inappropriate responses for each of the question kinds are presented in figure 8.

Table 16. Percentages of appropriate and inappropriate responses produced by L1 and L2 students across performance categories for each of the factual, relational, and conceptual questions.

		Performance categories				Total
		L1	L2			
		Fail	Fail	Pass	High	
Factual	Appropriate	12	35	40	13	100
	Inappropriate	31	47	17	5	100
Relational	Appropriate	28	20	33	19	100
	Inappropriate	18	49	28	5	100
Conceptual	Appropriate	25	11	34	30	100
	Inappropriate	20	44	29	7	100

9.5 Analysis of inappropriate engagement.

The analysis above forcefully demonstrates that inappropriate question engagement is a highly prevalent trend among failing L2 students. The failure of this group to engage appropriately with given questioning parameters distinguishes them not only from their successful L2 peers but also from their failing L1 counterparts. This suggests that the phenomenon of 'underpreparedness' is encapsulated and defined in the process of questioning. However, establishing the 'inappropriate' nature of this group's questioning engagement, provides little more than a general orientation for educational intervention. From the basis of these quantitative trends, the analytic frame needs to shift to an interpretive mode that will allow for the elaboration of the kinds of questioning transformations that characterise this 'inappropriate' engagement.

As discussed above, there were three kinds of questions posed in this particular examination paper; factual, relational and conceptual. Appropriate questioning engagement entails constructing responses in terms of the implicit demands of these different kinds of questions. Briefly, factual questions demand the selective recall and organisation of specific factual material; relational questions require an investigation into the nature of relationships between elements; and conceptual questions demand precise and comprehensive conceptualisation of phenomena and an appreciation of the implications for conceiving of things in a particular way. The responses of underprepared students indicate not merely inadequate engagement with these demands but rather, a process of reconstruction of the terms of enquiry.

9.5.1 Transformational Processes.

Four common transformational processes were identified as operationalising the given question parameters across question types: 1) flattening, 2) truncating, 3) substituting and 4)

grounding.⁷⁶ Each of these processes will be described in general terms and then elaborated in relation to the three questioning types.

1) Flattening the parameters of a given question transforms the question into a request for a summary or linear listing of information. The question serves to suggest a particular area of information and students understand their task to be the recall and reproduction of this material in its entirety. The information that the learner associates with this topic is not understood as part of ongoing academic enquiry but rather as an absolute and undifferentiated body of facts. However, this finite sense of the factual domain paradoxically creates a dispersion of focus. Whereas an academic question creates explicit boundaries within which discussion is to be constructed, 'flattening' the terms of the question results in an ill-defined and loose, associative frame.

2) Truncating the given question indicates a process of incomplete engagement. A truncated form of the question is substituted for that given. Most often this entails attending only to the descriptive aspects of the question and ignoring any demand to explore the implications or significance of particular facts. By suggesting a way of conceiving of things, a question opens up a network of conceptual links and logical consequences. While a particular conceptualisation may be argued for, it remains open to challenge and retains a requisite sense of openness or uncertainty. Truncating the question closes this conceptual openness prematurely.

3) Substituting another academic question in place of that given is another typical response. While the generative question underlying the answer is not that which is given, the response may be read as an answer to another possible academic question. While these responses do seem to operate within a questioning frame appropriate for academic enquiry, they may indicate simply that 'questions' and their attendant 'answers' have been memorised. The particular route into the domain demanded by a particular question is ignored.

⁷⁶ Note that the discursive labels constructed for analysis this phase of the research are once again informed by Feuerstein's categories of cognitive functioning.

4) **Grounding** a question entails the reconstruction of its given terms in relation to an authoritative source. The phenomenon is called into question, but in relation to some outside authority, perhaps students' prior (cultural) knowledge, perhaps a religious or other authoritative source. Alternatively, students may ground the enquiry in anecdotal observations in the real world of experience. The given question is thus transformed into an enquiry about the 'goodness' or 'truth' of a particular issue. The number and percentage of responses for the four transformational processes across the three question types for all L2 students are presented in table 17.⁷⁷

Table 17. The frequency (f) and percentage (%) of responses for appropriate and inappropriate responses across the four transformational processes for factual, relational, and conceptual kinds of questions.

	Kinds of Questions			Total
	Factual	Relational ⁷⁸	Conceptual ⁷⁹	
Inappropriate				
Ground				
f	33	79	152	264
% of inappropriate	32	20	22	23
% of total responses	12	14	20	17
Flatten				
f	24	212	26	262
% of inappropriate	23	54	4	22
% of total responses	9	39	3	16
Truncate				
f	0	0	222	222
% of inappropriate	0	0	33	19
% of total responses	0	0	29	14
Substitute				
f	47	100	277	424
% of inappropriate	45	26	41	36
% of total responses	17	18	36	27
Total				
f	104	391	677	1172
%	38	71	87	73
Appropriate				
f	171	157	98	426
%	62	29	13	27
Total				
f	275	548	775	1598
%	100	100	100	100

⁷⁷ As the analysis above makes it very evident that the pattern of questioning engagement of L1 students is very different from that of their L2 counterparts, the data for this group are not included for the purposes of this detailed analysis of inappropriate questioning engagement.

⁷⁸ Separate data for each relational question are available in Appendix 14.

⁷⁹ Separate data for each conceptual question are available in Appendix 14.

Two important trends in relation to engagement with different kinds of questions are evident from table 17:

- 1) The proportion of appropriate responses is highest for the factual question (62%) decreasing dramatically across the other question types (relational = 29%, conceptual = 13%).
- 2) Different kinds of questions tend to provoke different patterns of inappropriate engagement. In particular, the tendency to flatten the parameters of the question is more marked in response to relational questions (54% of all inappropriate responses) than for other kinds of questions (23% for factual questions and a marginal 4% for conceptual questions). Truncated enquiries are produced only in response to conceptual questions, where a third of inappropriate transformations of the question are of this kind. These trends are qualitatively explored below in relation to each question type.

Results already presented clearly demonstrate a general relationship between final performance on the course and (in)appropriate forms of questioning engagement. In order to delineate this relationship more precisely, table 18 juxtaposes the form of engagement and the assessment of answers thus constructed, as producing passing or failing answers to each specific question.

Table 18. The frequency (f) and percentage (%) of passing and failing responses for each transformation and question type.

		Kinds of Questions							
		Factual		Relational ⁸⁰		Conceptual ⁸¹		Total	
		f	%	f	%	f	%	f	%
Inappropriate Ground									
	Fail	22	67	49	62	143	94	214	81
	Pass	11	33	30	38	9	6	50	19
		33	100	79	100	152	100	264	100
Flatten									
	Fail	14	58	122	58	21	81	157	60
	Pass	10	42	90	42	5	19	105	40
		24	100	212	100	26	100	262	100
Truncate									
	Fail	0	0	0	0	189	85	189	85
	Pass	0	0	0	0	33	15	33	15
		0	0	0	0	222	100	222	100
Substitute									
	Fail	39	83	82	82	260	94	381	90
	Pass	8	17	18	18	17	6	43	10
		47	100	100	100	277	100	424	100
Total									
	Fail	75	72	253	65	613	91	941	80
	Pass	29	28	138	35	64	9	231	20
		104	100	391	100	677	100	1 172	100
Appropriate									
	Fail	26	15	13	8	29	30	68	16
	Pass	145	85	144	92	69	70	358	84
		171	100	157	100	98	100	426	100
Total									
	Fail	101	37	266	49	642	83	1 009	63
	Pass	174	63	282	51	133	17	589	37
		275	100	548	100	775	100	1 598	100

Two important trends in respect of questioning engagement and conventional assessment of particular answers are evident from table 18:

⁸⁰ Separate data for each relational question are available in Appendix 14.

⁸¹ Separate data for each conceptual question are available in Appendix 14.

- 1) A very high proportion of appropriate responses is awarded passing marks although this proportion varies marginally with question type (85% for factual questions, 92% for relational questions and 70% for conceptual questions).
- 2) Inappropriate engagement tends to produce failing answers (80% of all inappropriate responses). The proportion of inappropriate responses that fail is high for all question types (72% for factual, 65% for relational and 91% for conceptual) and all forms of transformation (grounding 81%, flattening 60%, truncating 85%, substituting 90%). However, the kind of question asked and the transformations effected appear to have a combinatorial effect with considerable differences in the effects on performance. These trends in success or failure are further elaborated in the detailed qualitative analysis and illustration of questioning engagement that follows.

9.5.2 Factual Question Engagement.

There was only a single question in the examination paper that required a simple factual engagement: "*EITHER: draw a diagram which summarises Piaget's theory of intelligence. OR: Write a summary discussion of Piaget's theory of intelligence.*" This kind of question is the least demanding form of possible academic tasks and this is reflected in a relatively good performance for the group as a whole (63% of students passed this question, see table 18). While the majority of students (62%, see table 17) engaged appropriately with this factual question, it is noteworthy that even this simple question form was subjected to transformation by nearly 40% of the group. Table 18 shows that all kinds of inappropriate engagement produced a low rate of success on the question compared with 85% success where the question was engaged with appropriately.

9.5.2.1 Flattening the question parameters.

Although the question explicitly instructed students to 'summarise' Piaget's theory, this instruction does not imply the absence of structure and organisation. In particular, an adequate response necessarily includes the defining theoretical ideas of Piagetian theory.

Many responses 'flattened' the parameters of discussion to read, 'List the stages of development of intelligence'. For example:

Example 1.

Sensory-motor - the child learns through abstract thought. If the child sees a rattle it will take it like all other objects and put it in its mouth and shake it, the rattle will produce noise and then the child will know that if you shake a rattle it makes noise.

Preoperational stage - A child realise a concept through the process of thought and imagination like a thing inside a cup that smoke comes out of it is hot and its not for touching.

Concrete operations stage - The child learn through conservation. The child is able to name some of the things by their name.

Formal operations stage - the child then is fully developed intelligently it is able to understand difficult things."

The question might also in other cases have been used as a trigger to summarise any and all information related to the broad topic of intelligence rather than being bounded by the focus of the question on Piagetian theory as a distinctive way of theorising intelligence. This means that facts about Piaget's theory are simply accumulated together with facts about other approaches to intelligence in a 'blurred and sweeping' way with very little sense of the distinctions between these bodies of knowledge or the very different implications of these perspectives. The question underpinning these responses may be very loosely defined as, 'Summarise the field of intelligence studies in psychology'. For example,

Example 2.

"After various psychologists have attempted to measure IQ like Simon Binet with mental age tests Piaget came up with the fundamental theories that explain mental operation and development of all levels."

Example 3.

“The intelligence test consist of age-related question and problems, if a child has a chronological age of 7 and a mental age of 8, we say that the child is above average because she is able to answer the question of an IQ of above his/her age. Piaget’s theory had different periods: sensorimotor, preoperational, concrete operational.”

Example 4.

“The theory of intelligence was supported by the psychometric tests that were constructed. Intelligence is what the intelligence tests measure. And theory is a claim about intelligence that is supported by facts. ... Piaget claims that intelligence is acquired through genes which are passed on from generation to generation. But also the environment has a great effect in the development of intelligence.”

9.5.2.2 Substituting another academic question.

The most common inappropriate engagement (45%, see table 17) with the given factual question entailed the substitution of an entirely different question. The relatively general formulation of this summary type question was converted into a number of more specifically constrained routes of enquiry. For example:

- Discuss Piaget’s universal account of intelligence.
- Contrast Piaget’s theory with the testing movement.
- Describe Piaget’s methods of experimentation.

Students appear to ignore the given question in order to engage with other possible debates. These other routes of enquiry are legitimate in that they characteristically conform to the open construction typical of the discipline and of the humanities more widely. However, this may not indicate cognisance on the part of the respondents who may have done little more than ‘learn’ possible questions and the ability to mimic the form of response typical of the feedback sheets. This interpretation is supported in that the more complex kind of engagement suggested by these alternative questions did not usually incorporate or

subsume success at the simpler factual level. Very few responses (17%, see table 18) in this category passed the question suggesting that the substitution of these alternative questions was due to a failure to grasp what was required by the given question rather than an attempt to extend these demands.

Example 1.

“Piaget explain intelligence as an instance of biological adaptation. He said intelligence is constructed through our action. He explain intelligence as a universal aspect that it available to all people.”

Example 2.

“Piaget's tests were mainly directed to children. His view of intelligence is merely a theory and is not supported by facts. When testing intelligence a correct method should be used that is the formula which $MA / CA \times 100 = IQ$.”

Example 3.

Piaget attempts to understand what constitute intelligence and what is common to all people. Piaget uses the qualitative of each different stage to measure intelligence. ... Piaget also uses the quasi-experimental method to observe his own children.”

In each of the above cases, although students may produce factual information relevant to the given question, this seems inadvertent and tangential to the direction of their enquiry, shaped by these other substituted questions.

9.5.2.3 Grounding the phenomenon.

A factual question such as this one asking for a summary of Piagetian theory does not necessitate the adoption of a particular position or perspective in relation to the phenomenon under discussion. Despite the unusual absence of even an implicit argument, a number of students formed their engagement in evaluative terms. For these students, the debate about

the heritability of intelligence and the political ramifications of arguments about the sources of individual and group differences is of over-riding importance. Their enquiry into the nature of Piagetian theory is overwhelmed by the need to settle this tangential debate in accordance with a politically correct position. Whereas Piagetian theory explicitly excludes a focus on individual or group differences, a misunderstanding of the universality of its claims about intelligence, leads to approving acceptance of the theory. The question with which these students engage may be phrased as, 'Is Piagetian theory morally or politically acceptable?' or, in these terms, 'Is it a 'good' theory?'

Example 1.

"Piaget's theory of intelligence is a construction of knowledge which can be described as intelligence. Piaget's way of looking at intelligence is diverse. Piaget saw intelligence as being able to adapt to new environments and that the environment can influence intelligence in many different ways. He concluded by saying that intelligence is not heritable, but genes can be the causing factor of our intelligence. Piaget took the case of two identical twins who were born and reared at different homes and when the experiments were done it was found that although they had the same genes their intelligence level was different, but the twins born and grew together their intelligence level was the same. Their environment are the determining factor that they can influence our intelligence. He also concluded by saying that intelligence was not selected for. No person can determine how the level of intelligence should be."

Example 2.

"Piaget's theory deals with universal differences common to all people. Piaget developmental theory deals with children and their ability to grow to maturity. He believed that all children have the same ability to grow to maturity. He believed that all people have the same ability to grow unless there's abnormality in the course of development. ... Piaget's theory does not favour any group of society but deal with all aspects common to all cultures."

An alternative to this kind of validation is to ground the theory in illustrative detail. Although empirical observation provides important supporting evidence for Piaget's developmental theory, responses of this kind (see Examples 3 and 4 below) afford a disproportionate emphasis to examples and illustration. These illustrative details seem to 'stand' independently, central to the response, rather than in relation to abstract principles or general theoretical claims. The accessible world of children's activities allows for validation of the theory in terms of every day experience and, hence, leads to closure of the enquiry process. The question is reconstructed as, 'What does the real world of experience show us about the nature of intelligence?' The enquiry process is understood to require an answer in the world of self-evident experience and new theoretical insights may even be distorted by already known 'facts' or perhaps strongly-held opinion.

Example 3.

"For example a child will know his /her mother because he / she has an image of her in his / her mind. ... For example a child can know a ball because of its shape, and he/she might know the word ball and will call every round object a ball ... For example a child might have knowledge about every object that he finds and shake it and suck it. Say then he finds a rattle as he picks it up and shakes it, it makes a noise which is new knowledge to the child. The child will now know that some objects when you shake them make a noise and others don't and we call this assimilation."

Although the illustrations selected by the student in Example three may be useful in supporting Piagetian theory, s/he does little more than name a stage of development and then proceed with this descriptive information. The detail of these real-world objects and events completely displaces the theoretical framework, resorting to common sense in providing an 'explanation' of these observations. For example, in this case, the student seems to understand knowledge construction as developing on the basis of some platonic image of the mother, the ball or indeed, 'every object'. Example four below provides another typical case.

Example 4.

“Piaget does a lot of his work experimenting with children e.g. he poured liquid in a container with a tall height and then poured some liquid into another container with a different height and width. He then asked children from different categories (preoperational and concrete stages) if the two containers had the same amount of water or not. Preoperational children were conservative and managed to get it correct that the amount was the same, but concrete children just took it as they saw and said the amounts differed. From this Piaget proved that a child becomes more conservative as he grows.”

Although the conservation experiment is a central component of Piaget’s work, its centrality can only be grasped in terms of its theoretical implications. The conservation experiment demonstrates that there are qualitative differences between preoperational and concrete operational thinking; that knowledge must be constructed rather than discovered in the world itself; that the logical operators of identification, reversibility and negation must be applied for the correct resolution of the conservation problem. For this student and many others, the focus is on the events of the experiment itself as if these somehow reveal, in a self-evident way, a theory of intelligence. In the example above, the new theoretical insights of Piagetian theory are missed altogether and the illustrative material is simply assimilated to an already existing scheme about the meaning of the term ‘conservative’, namely that ‘we become more conservative we grow older’.

9.5.3 Relational Question Engagement.

Academic enquiry typically entails investigation into the relationship between elements; between general principles (theoretical claims) and particular examples (empirical evidence), relations of cause and effect or correlation, relations of constitution or dialectical exchange. There were two questions of this relational kind in the examination paper. The first, deals with the introductory module, *“Discuss the relationship between the content and form of the discipline of psychology”*; and the second, evolution, *“Compare Darwin’s theory of evolution through natural selection with the theories of Cuvier and Lamarck”*. The first question

requires the development of an argument about the necessary relation between 'content' and 'form' and the dialectical consequences entailed in the selection of what to study and how to go about investigating it. The second question takes a comparative form, contrasting the particular features of Darwin's theory with earlier theoretical bodies of knowledge. In each case, these questions test not only students' grasp of the facts about content or form in psychology, or each of the evolutionary theories, but also their ability to create a discourse of relationship and argument.

This kind of question was substantially more difficult than the factual question. Only half of the group produced passing answers and only 29% of the responses engaged appropriately with the given questions (see table 17). The pattern of inappropriate engagement also shifts, with the 'flattening' of questioning parameters the most dominant response to these relational questions. More than half of the total number of inappropriate responses are constructed in terms of this flattening transformation of the question's demands (54%, see table 17).

9.5.3.1 Flattening of questioning parameters.

The organisational structure usually provided by the terms of an academic question is starkly lacking in 'flattened' responses to relational questions. Responses of this type conflate the elements of the question and reconstruct the terms of enquiry into the nature of relationship as a simple statement of association or equivalence. The separate elements are identified and may even be accurately described and understood, but the connections between these elements are not appreciated. In each case, the complex relationship posed in the question is disaggregated and restructured as a series of smaller discreet questions of the following kind:

- Describe the theory of Darwin, Describe the theory of Cuvier, Describe the theory of Lamarck.
- What is the content of psychology? What is the form of psychological enquiry?

Example 1.

“Natural selection is when those species are naturally selected or that have adapted to that condition of the environment. Natural selection occurs when there is competition for resources. This is when there is a scarcity for food and species compete, variation, the individuals vary in height, weight, shape and inheritance - this is when species which have survive (survival of the fittest) inherit from their parents. They take the genes and shape of their parents. They will pass on all these to other generations and they are called the survival of the fittest because they have manage to adapt to those environmental conditions. Cuvier theory is that one which talks about how thing came to be the way they are now like that of the stratas on earth. He says that earth has been the way it is. The rains have come and the world have evolved. When the world change or any species that died the erosion and the rain takes that deep down the earth and lives the lines which shows that this is new or old. Many species have evolved this is about the relative timing.

Lamarck talks about the acquired adaptation or selection. That is that when your father have been a boxer or he does some jogging. He will have muscles and when he has a child that child will have muscles like his. Lamarck's theory have been proven and it and a lot of questions like how come this child would have muscles like him meanwhile he just worked for those muscles. It is not appropriate.”

Example one clearly illustrates that for this student the three theories are distinct yet interchangeable. They are offered alongside one another as possible explanations of the evolutionary process. Even a simple chronology of the development of theoretical accounts is absent and despite the final brief expression of uncertainty about Lamarckian theory, there is no evidence that there are significant differences between, or contradictions in, the accounts. The relationship between the theories is reduced to a flat, associative linking of equivalences. Even where there is some recognition that it is a ‘relationship’ that is under discussion, students may be at a loss to do more than conflate the elements, linking them by simple association or juxtaposition. The given questions are rephrased as,

- In what way are content and form the same / similar or how do they ‘go together’? or

- Show how the three theories are equivalent / the same in providing accounts for evolution.

Example 2.

“Content means what is it that psychology studies and by the form we mean how psychology as discipline approach its study by using its appropriate method. Both content and method have a dialectical relationship, that is a two way relationship. In other words they are complementary. Content cannot do without methods and methods cannot work without content. They both influence each other. For example sometimes content may influence method. Freud psychoanalysis he studied unconsciousness (content). He approach the content with method of dream analysis and free association. Sometimes the method can influence the content of how behaviour happen to be (measurement).

In linking both method and content they are both inseparable or isolated. They work together in approaching either perspectives or any study. For example psychoanalysis can be studied if only content unconsciousness is approached by method.”

Although Example two includes the key technical term “dialectical relationship” there is no indication that the student grasps the logical necessity of this claim. The relationship is ‘flattened’ into a coincidental occurrence of two essentially distinct things occurring simultaneously. Alternatively, the boundaries of these relational questions may be loosely extended to create summary type questions that may go way beyond the particular focus of the given questions. For example,

- Summarise what psychology is about.
- List the perspectives discussed in the first module of your course.

Example 3.

“Psychology’s main goals are to describe, understand predict and control behaviour and mental processes. The form of how to deal with these aims is dealt by different perspectives

in the discipline like, psycho-analytic perspective, cognitive perspective, cognitive perspective, psychometric, behavioural and socio-cultural perspective.”

Example 4.

“Psychology is the study of behaviour, experience and mental processes. The content in psychology means the what of something, what is studied in psychology or the focus or interest of psychology. In other words, what psychology tries to understand. And the form is the ‘how’ if you like, because it entails methods used. How is it like how does psychology go about studying, investigating and interpreting what interests them.

The content of psychology is the natural non-material reality. By that I mean what is natural things or entities which are part of our natural world. And those things studied are not tangible i.e. (invisible reality), which we experience as resistances. Psychology is interested in things like, logic, memory, feelings, dreams etc. Most important is the fact that it does NOT study supernatural things.

The form in psychology refers to the methods used in psychology the form which it takes e.g. we have a sub-discipline of psychology called psychoanalysis which focuses on unconsciousness as its content and uses methods which take the form of dream analysis and free association.”

Although the core ideas in the question, ‘content’ and ‘form’ are defined in Example four, the relationship between them is unexamined and the response gives a general summary of the discipline as a whole.

9.5.3.2 Substituting another question.

Approximately a quarter of inappropriate responses (26%, see table 17) substituted alternative academic questions in place of the given relational questions. As argued above, although these alternative questions may in themselves be legitimate routes of enquiry and

may often even take the appropriate relational form, responses in this category fail to be directed by the given instructions and only 18% of these responses are awarded passing marks (see table 18). Substitute questions simply address other issues in the two general topic areas. For example,

- How does defining psychology as a science, influence the content and form of the discipline?
- What are the scientific methods of psychology?
- Describe Darwin's theory of evolution through natural selection.
- Explain the key concepts of variation, competition and inheritance and how they combine to make evolution inevitable.
- Discuss the evidence that supports the theory of evolution.

Example 1.

"The relationship between content and form of the discipline of psychology can be clear if we evaluate the differences between common sense and scientific knowledge construction. These two forms of knowledges are for explaining and interpreting the reality. But what make them distinct from each other is that, the form or the way they are constructed is unsimilar. The content (the what of knowledge construction) may be common if measured on the basis of how different cultures perceive and understand the world. But how these different cultures form understanding is probable unique to each and every cultural group. ...

- 1) *The scientific form of knowledge also operates beyond common sense form for e.g. common sense directly record the event as truth vs scientific which is explicit and seeks more facts about the events. For common sense things are accepted as god created them no question is needed.*
- 2) *Common sense form is selfevident vs scientific form which is complex and layered and open for questions and challenges that can prove its claim, digging and inquiries are regretted in common sense knowledge."*

Example 2.

“Darwin’s theory of evolution through natural select by using his theory when he explain how evolution through natural selection where he use variation, inheritance and competition to explain it. Variation explain it as the process where there is a differences among animals and people in terms of weight, height and all this happen natural and not by means of environment. Competition is where other animals leave in expense of other those who are able to get food live and those who do not or unable to get food may no survive. For example, finches their beak were shape in order to fit the environment. Inheritance is the process which is taking place through the transformation of gene and it is passed to generation by generation thats the certain characters even if the parents had passed off.”

9.5.3.3 Grounding the phenomenon.

Questioning abstract phenomena such as ‘content’ and ‘form’ or theoretical strengths and weaknesses and the relations between them may be inappropriately grounded in specific illustrative detail. This form of engagement treats a relational question as an invitation to re-tell the “story” elements associated with a given topic. For example,

- Give an illustration of the content and form of one of the perspectives of psychology.
- Describe the content and form of behaviourism and psychoanalysis.
- Provide examples of the evolutionary process.
- Discuss how the example of giraffes / moths / finches shows the process of natural selection.

Example 1.

“... In behaviourism the method determines the content. This is illustrated by the stimulus response formula. The dog can salivate to the sound of the bell.

Psychoanalysis is different to the other perspectives, it deals with observation and experience compared to psychometrics which deals with measurement of psychological event (mental abilities)

In psychoanalysis the content is unconscious. The content determines the method. It uses dream analysis and free association.

This is illustrated by a medical student who few weeks before the examination develops neurotic symptoms of eye defect (blindness).

Psychoanalysis is different from socio-cultural perspective which focuses on social background of the individual.”

Although the specific facts selected in Example one may potentially lend support to a dialectical view of the relationship between content and form, this response simply treats the examples themselves as core information. The very vivid images of a salivating dog or a neurotically blind student appear to have been memorised as central rather than incidental information. His/her view of the discipline is grounded in events that can be easily conjured up in the imagination rather than in abstract notions such as content and form and the postulated relationship between them. Example two below illustrates a similar grounding response to the evolution question:

Example 2.

“Darwin’s theory is reliable because his evidence explain much more clear e.g. giraffe that are not the same in height some are short and some are tall. Because of that those who shorter wont find enough that can lead to death and those who survive are tall ones (competition) and are fit they produce more offspring than the short one (inheritance) that means that why we have taller giraffes.

Whereas lamarck said the cause of change that all species derives from one species he made an example of worm-lorm-lorn-lord-loon-lion that was out of topic. His evidence limits us.

Cuvier said the earth was created once. God created all species at the same time and destroy and create again when he need the new one (catastrophy).”

The giraffe example may serve to illustrate the process of natural selection (and the module text does use this example). However, the descriptive weight afforded the example in this response predominates over any conclusions about Darwin's theory itself and entirely misses consideration of the explicit question-focus on the comparative relationship between this theory and others. The example given as Lamarck's (*worm-lorm-lorn-lord-loon-lion*) shows how this student clings to the literal details of the text, grounding a textual analogy in the world of empirical events. There also appears to be a tendency to assert the value of particular claims because their source (Darwin) seems to have current personal authority whereas other theories are deemed to have failed on the basis of some vague and unspecified inadequacies.

9.5.4 Conceptual Question Engagement.

While factual recall is a basic requirement for any academic study and relational argument may be quintessential to the humanities, conceptual precision is pivotal to the theoretical discourse of a discipline such as psychology. The first year course begins by defining the character of psychology as a discipline that examines "ordinary things in an extraordinary way" (Miller, 1994(a): 1). Entering the discourse of the discipline entails learning new and unfamiliar ways of conceptualising phenomena that may be well known and part of everyday life. The examination paper included three conceptual questions, "*Give two reasons why the natural process of adaptive change does not lead to perfection. Illustrate each of these reasons with an example*"; "*Define the Concept of g and explain its significance in the construction of intelligence*"; "*Discuss the constructed nature of knowledge in the social sciences in terms of the concepts of intertextuality, conceptual frameworks and theory-laden facts*". In each case, the question focuses on a central concept or concepts (in evolution, intelligence and forms of knowledge) and demands, not only definitional clarity as regards the concepts specifically, but also demonstrable understanding that a particular way of conceptualising reality has broader theoretical implications. In other words, an appropriate engagement with a conceptual question recognises that phenomena may be conceptualised

in various ways and that there are implicit links between a particular concept and broader theoretical frameworks.

Performance on these questions was even lower than on the relational questions with only 17% of students producing passing answers (see table 18) and only 13% of all responses demonstrating appropriate engagement with the given questions (see table 17). Reference to table 18 shows that again, appropriate engagement produced a high pass rate (70%) although even this is lower than for factual and relational questions (85% and 92% respectively).

9.5.4.1 Flattening the question parameters.

Very few of the responses to the conceptual questions entailed the 'flattening' process in transforming the question. Only 3% of all responses took this form (see table 17) and all of these were in response to the intelligence question (see Appendix 14). The precise focus of this question on the "concept of g" was, in these instances, negated by a summary formulation of the question in relation to the general field of intelligence testing. For example:

- Give a summary of the models of intelligence.
- Summarise the historical development of intelligence testing.

Example 1.

The concept of g factor. It is divided into 2 level. Level I consist of associative and its called g fluid. Intelligence level II is called crystalised factor. These factors were founded by Galton and Binet. They applied the method of mental age and chronological age and by these concepts they were able to identify whether the child's mental ability is high or below average. They also introduced the notion of correlation which consisted of factor analysis.

9.5.4.2 Substituting another question.

The highest proportion (41%, see table 17) of inappropriate engagement with conceptual questions entailed substituting the given question with another question altogether. As with

the other question types, a very high proportion (94%, see table 18) of this kind of response failed the question. A range of questions about evolution were constructed:

- How do we know that evolution has occurred?
- What is the evidence for the theory of evolution?
- Why does evolution occur?
- Under what conditions does evolutionary change occur?
- What is adaptation?

Example 1.

“Natural refers to the physical world phenomenon while adaptation refers to the relationship between environment and living organisms. For example Darwin observe that there different species in different geographic zones and seem that these species seem to have moulded by the environment. In other words there is variation on features of species e.g. thick fur in cold climate, beak shape appropriate for available food resources. Variation links to nature of variation and geographic conditions such as climate and vegetation would lead to adaptation.”

The substitute questions focused on core concepts of evolutionary theory in a very general way and indicate that students had not understood the central importance of the discussion of the question of ‘perfection’ in the module text. Students who grasped the significance of the conceiving of the world in evolutionary terms (rather than in terms of divine design) would have been able to engage appropriately with this question even if they could not recall the particular reasons offered in the text in support of the argument.

Substitute questions for the intelligence question addressed issues outside of the specific concern with different ‘models’ (or conceptual schema) of intelligence. Again, this indicates a failure to appreciate the implications of the notion ‘g’ for conceiving of intelligence as either unitary or multiple. This issue provides the conceptual pivot for the discussion of models of intelligence. It, therefore, seems probable that students who ignore the given question and

pose substitute questions have failed to grasp the central conceptual basis for intelligence testing. Answers suggested that substitute questions were usually relational in form, for example:

- Discuss whether intelligence is heritable or environmentally constrained.
- How does the testing process identify individual differences?
- How is intelligence constructed?

Example 2.

“The g factor is the term which state that the ability of intelligence occurs in each and every person. It is important in the construction of models of intelligence because it give the understand and explanation of intelligence. For example, psychometric as it understand intelligence by using test and measurement performance in relation to environment and heredity.”

The final question of the exam paper asked students to discuss the socially constructed nature of knowledge in terms of three core concepts. In other words, the question posed two levels of conceptualisation: 1) a general way of understanding ‘knowledge’ and 2) specific concepts which, linked to one another, would build this general conceptualisation of knowledge as socially constructed. Substitute questions failed to grasp either the general or specific levels of the question and posed other possible debates, for example:

- How are theoretical claims supported / proven?
- What is the relationship between theory and evidence?
- In what way is science different from common sense?
- Discuss the top-down and bottom-up models for the construction of knowledge.

Example 3.

“Facts which are ‘theory laden’ are filled with theory and the theory penetrates through this facts. In other sense the discussion of constructed nature of perspective, the intertextual constructed knowledge and the influence of language, all explained that there is no theory

which is “pure” or free from assumptions. By that way we could not determine or claim the theory as reality without providing empirical evidence to make it reality. We could not also make theory to predict the future cases because by increasingly general claim of theory needs empirical evidence to support. Thus the increasingly general claim of theory with the aid of many increasingly facts of empirical evidence provide us with the assumption that it is the form of scientific knowledge.

For example anthropologist are concerned with culture which accounts for the norms, values and social rules which are against any physical artifacts, if they are not accept this definition of culture.”

9.5.4.3 Truncating the questioning parameters.

Incomplete or partial responses indicate that the respondent has truncated the given question and attends to only part of what is required. These responses engage with part of the given question but ignore additional instructions such as requirements to illustrate or provide descriptive detail or to explore the implications for conceiving of a phenomenon in a particular way. Conceptual questions are typically constructed in terms of this movement between the general and particular, or between explicit statements of ‘fact’ and implicit theoretical conclusions. For example, “Give two reasons ... Illustrate”; “Define ... and explain its significance”; “Discuss ... in terms of”. The inappropriate truncation of enquiry is clearly a function of this kind of question as this form of engagement is only found in response to conceptual questions, where a third (33%) of inappropriate engagement takes this form (see table 17). Only 15% of these reconstructed enquiries produce passing answers (see table 18). The questions are simply reformulated in a truncated form, for example:

- Give reasons why the process of adaptive change does not lead to perfection. (No examples/elaboration of these reasons).
- Define the concept of “g”. (Part answer without elaborating on the significance of the concept.)
- Describe the concept of correlation. (Part answer, connection to the significance of the concept “g” unexplicated.)

- Define the concepts of intertextuality, conceptual frameworks and theory-laden facts.

(Part answer; one/two/three definitions of concepts without showing their links to the constructed nature of knowledge.)

Example 1.

“Because man or animals can not control the environment. Therefore climate and weather changes over time. What is good for people now will not remain the same in the next few years. 2) Second being that species genes are not controlled as to what to inherit therefore species will continue not being perfect.”

The response of this student in example one is fairly adequate in terms of the reasons given for imperfection in the adaptive process, but the second part of the question that requires illustration of the argument, is ignored.

Example 2.

“g represents the common factor. In correlation (i.e. when two variables are related there is always a common factor e.g. when we relate height and weight the common factor is growth.) If the two test are high perfectly positive correlated i.e. there is a common factor. If the two test are high perfectly negative correlated i.e. there is no common factor. E.g. if you pass test A you must also pass test B. Correlation lies between 1 and -1. 1> high perfectly correlation and -1> low perfectly correlation. People with more weight turn to be tall i.e. high perfectly positive correlation. If people who weigh less turn to be tall then that is perfectly negative correlation. In a normal distribution (bell-shape curve) more people are under average level and fewer people fall in under average and fewer people fall under above average.”

Example two provides a good illustration of how a collection of facts (even as in this case, relevant facts) may be presented without any demonstration of the implicit conceptual connections between ideas. The central notion of ‘g’ is poorly defined as the “common

factor” and the rest of the answer focuses on an analogous example of how correlation is established. While the correlation of factors on intelligence tests is pivotal to establishing the multiple or unitary nature of intelligence (and hence the significance of ‘g’) these implicit moves are not engaged with in the response.

Example 3.

“Social science is another way of constructing knowledge.

Conceptual frameworks means what forms the protective or the basis of our thinking. In construction of knowledge language forms the basis of our knowledge as knowledge of others form the framework through which we perceive the world. If people tell us stories about something we can be able to use that to construct our knowledge. For example in the drawing of the rhinoceros by Durer he used the knowledge got from other people in order to draw it the way he drew it.

Theory laden facts.

This are facts which are woven into the theory. If we have a certain theory we look at the world in different direction basing ourselves on that particular theory. For example if we can take Darwin’s theory that he was able to collect specific information or facts because he had the theory of evolution in his head.

Intertextuality.

In this concept is whereby we use different opinions from different perspectives offered by different theorists and interact them to come to one form of knowledge. No simple theory is perfect they all need to be supported by evidence.”

The final question of the paper was particularly poorly answered. In some sense, example three above may be considered a fairly adequate answer and in this instance, the student did indeed achieve a passing mark. Each of the concepts is defined (although imperfectly) but there is no recognition that these apparently distinct concepts all contribute to an

argument for the socially constructed nature of knowledge. The engagement is truncated at the point where the basic components of the conceptual network have been established and fails to follow through the implicit coherence between them.

9.5.4.4 Grounding the phenomenon.

Conceptual questions require a deliberate abstraction from observable 'facts' in order to question particular ways of conceiving of these facts. In 20% of all responses (see table 17) this possible, hypothetical realm of theoretical debate was subordinated to a focus on illustrative or narrative details without demonstrating in what way these may support or negate particular conceptualisations. Again, although these examples may serve some illustrative purpose (and usually have been drawn directly from the module texts where they do serve such purpose) the weighting afforded them is wholly disproportionate (particularly for the short, five-mark intelligence and evolution questions). Links between these examples and a particular conceptual framework are not established and they are presented as if they have some inherent relevance to the question. This kind of transformation of conceptual questions produces a very high rate of failure (94%, see table 18).

Example 1.

"Species which do not have favourable character are being produced for example in the case of the giraffe, they continue to produce offsprings with short neck for evolution to go on, this may be a case that those who died of hunger might have mated with those who survived and unfavourable character may have been inherited.

In the case of peppered moths, the pale one were safe from predator and the dark were the pray. But after the industrial revolution the case was reversed, we may assume that during the summer it rain and the tree shrunk are washed and the dark one are in stake so this does not end it goes on."

Example 2.

“The cultural influences impact on the manner in which knowledge is constructed and this brings notion of form of knowledge will be varied from culture to culture and not the content which is the same in common and scientific knowledge. The elite populations will look down upon the intersexual organism and see human misfit, wondering how the birth record and identity is filled, marriage option and need to correct the wrong by operation. Others because of cultural influences look at him/her as a form of blessing, one who is generalist and whose removal will usher misfortunes and these are not elite and sophisticated (Navaho).”

Example two above illustrates a common misreading of the term ‘intertextual’ as ‘intersexual’. The module text includes an extended extract from Geertz’s (1983) anthropological work⁸² that demonstrates the constructed nature of knowledge in the very different interpretations that different cultural groups have of the same phenomenon. The vivid (and often ironic) ethnographic descriptions offered by Geertz seem to have made a memorable impression on students and it is these details that rush to the fore when the question focuses on an entirely different, but linguistically similar, concept, “intertextuality”. For these students, the narrative detail of Geertz’s account entirely eclipses not only the concept which they were asked to discuss, but even the conceptual point that the example of intersexuality serves in the text. The loaded terms ‘elite’ and ‘sophisticated’ suggest that for this student (and others who produced this category of response) what is called into question is not the nature of knowledge, but rather the phenomenon of intersexuality itself and the morality of various responses to it.

A moral reformulation of the enquiry process was also very evident in responses to the evolution question. Reconstructed questions were preoccupied with what the (ontological) purpose underlying evolution might be and sought to ground its reality in an ultimate cosmic

⁸² See Task 10 of the Forms of Knowledge Module included in Appendix 4.

authority. Questions of this form reflect concerns about 'fairness' or about whether things 'should', or should not, occur in a particular way. The phenomenon of evolution was called into question as if the validity of the theory was dependent on a moral justification or some original design. The underlying questions framing these responses were of the following kind:

- What causes extinction?
- Why is evolution an unfair process?

Example 3.

"First reason is variation, because different individual members of the species have different variations, i.e. In the case of the giraffe there are shorter and taller and mostly of them are clustered in the middle average level.

Second reason is competition. The demand for resources is greater than the population, i.e. the taller giraffes would be advantaged to taller trees and those who do not have access would find it difficult to compete. As a result some would die and others would live.

So the link between these two reasons is that both would not lead to perfection. As we see that those who have access to the resources would be able to live longer and produce offsprings with the same characters. Those that don't would have a negative effect."

9.6 Conclusions.

The results from this phase of the research yield three central conclusions about the questioning process that will form the framework for the discussion to follow in chapter ten:

- 1) Academic success or failure is a function not just of the adequacy of answers produced but importantly, of the way in which the questions themselves are construed by students.
- 2) The underlying reasons for the failure of L1 and L2 students differ, indicating a substantive base for the notion of 'underpreparedness'. Whereas failing L1 students engage appropriately with given questions but produce poor answers, failing L2 students tend to exhibit inappropriate questioning engagement.

3) Various forms of inappropriate questioning engagement across different question types produce poor results in all cases. However, relational and conceptual questions are more likely to provoke inappropriate forms of engagement than factual questions. Further, the dominant form of inappropriate engagement varies with question type: there is a tendency to flatten the parameters of relational questions and to truncate the terms of conceptual enquiry. Failure, therefore, seems to be a function of the dialectical relationship between task demands and cognitive functioning.

CHAPTER 10

DISCUSSION AND THEORETICAL INTEGRATION:

PHASE TWO

10. DISCUSSION AND THEORETICAL INTEGRATION: PHASE TWO

10.1 Introduction.

The second phase of the research revisits the contextual complexities of mainstream practices in tertiary education, situating the problem of underpreparedness within the (re)construction of discipline curricula. The intensive analyses of the questioning process in the first phase were generated within the circumscribed context of educational development. In particular, the fact that these learning-teaching sessions were conducted outside of the usual curriculum, for an experimental-developmental approach that extricated the particular processes of questioning from the wider task(s) of academic study, for detailed analysis. In the second phase, the research problem was turned full cycle to focus on the answers that students produce in relation to questions in the usual form of academic assessment. While the first phase indicates the generative value of the focus on questioning, in the second phase an extended empirical base allows for further theoretical elaboration. Investigation of a greater range of questions and the responses of a heterogeneous group of students, suggests the following theoretical directions:

- a) The further delineation of the task demands of academic questions, explicating multiple question forms as opposed to a single questioning framework;
- b) Analysis of mental actions entailed in and provoked by particular kinds of questions, revealing that the ostensible mirroring of task demands in mental action, masks inverse requirements that may mislead both learners and teachers;
- c) The definition of parameters for educational development in terms of the features of the questioning processes employed by underprepared students that distinguish underpreparedness from other possible sources of failure.

10.2 Task Demands: Kinds of Questions.

Formulating the nature of studies in the humanities in terms of a questioning epistemology creates new parameters for the description and explanation of the implicit task demands in the process of knowledge construction. Discussion of findings from the first phase of the research (chapter eight) seeks to extend understanding of these task demands by examining the articulation of a general epistemic framework in particular tasks. This approach shifts attention from the manifest differences between tasks, asserting a coherent underlying epistemic framework and suggesting, therefore, that educational intervention should primarily entail the explication of this implicit framework. In these terms, the difficulties that underprepared students experience are construed as rooted in inappropriate epistemic assumptions and, hence, inappropriate questioning engagement with presented tasks. Unequal schooling delivers obvious disadvantages that require redress, such as the low level of skill and training among teachers, grossly inadequate facilities and the paucity of equipment and books. In addition, learning through the medium of a second language clearly contributes considerably to the problems faced by underprepared students. While not denying that these factors need to be taken very seriously, it is also evident that the instructional task entails something more fundamental than the teaching of surface (first level) cognitive processes such as reading or writing techniques or the development of linguistic fluency in English. The process of mediation needs to re-position learners in relation to the task, substituting appropriate epistemic assumptions for already established patterns of engagement and reconstituting the relations between questions and answers.

Despite the productive (educational and theoretical) possibilities realised by this approach, analysis of an examination paper in the second phase of research

suggests that this overarching epistemic framework is variably manifest in different kinds of questions. Although held by a common framework of knowledge construction, rather than simply masking identical task demands, these various surface manifestations provoke and require varying responses. In order to construct a comprehensive view of the task demands of the human sciences, the elaboration of the implicit overarching epistemic framework must, therefore, be complemented by an analysis that refines and differentiates the ways in which this conceptualisation of knowledge construction may be articulated in particular questioning demands.

The research provides empirical grounds for the conclusion that different kinds of questions present different levels of difficulty. These levels of difficulty appear to be associated with the degree to which task demands are concealed by the question-type. Although the demands of factual questions are the most overtly stated, and ostensibly most similar to previous tasks encountered by students in their schooling, a substantial number of students still misconstrue the demands of such questions. Relational questions pose greater difficulty and appropriate engagement with these kinds of questions is characteristic only of excellent students. Although nearly half the passing group are able to grasp the requirements of this sort of question, appropriate engagement with relational questions is almost non-existent among failing students. This pattern is further exaggerated for conceptual questions, which proved the most difficult question-type. The discussion below elaborates the demands of different question-types and delineates the relationship of these different forms of questioning engagement to performance.

10.2.1 Factual questioning.

The general goal of tertiary education to develop 'critical thinking' is pursued within the parameters of particular disciplines towards rather more specific ends. The study of psychology, for example, while having much in common with other cognate

disciplines, is differentiated from these other fields of study by particular content and the application of specific methods. While the disciplines of the academy do not constitute exclusive or essential terrains of knowledge, at least part of the novice scholar's initiation entails coming to terms with historically constructed fields of information or with that which is currently known about particular phenomena. There are, however, two analytical trends that may serve to undercut the importance of this factual engagement:

- 1) The problems of underprepared students have frequently been interpreted as conditional upon the 'rote-learning' mode of apartheid education that conceives of learning as the memorisation and recall of 'facts' (e.g. Moll and Slonimsky, 1989);
- 2) The possibility of intellectual progress through the extension and development of previous knowledge is negated by the postmodern erosion of 'grand' narratives and the consequent contingent status of all 'facts'.

These analyses differ in origin (one local, the other global) and focus (one concerned with the cognitive actions of learners, the other with the epistemic possibilities of systems of knowledge). However, both lines of attack seem to converge in rejecting a conceptualisation of knowledge as factual. Is it possible to conceive of a psychological process of knowledge construction that could dispense with the learning of facts or, to phrase the question epistemologically, to dispense with history?

The question in either formulation cannot be other than rhetorical. Both the psychological (teaching) and epistemological (research) dimensions of academic

practice⁸³ continue to afford factual knowledge a central role. Despite the emphasis in academic teaching-learning on developing critical enquiry or the skills of argument, the assessment of students continues to test factual knowledge and, indeed, substantially rewards the reproduction of relevant facts (Sparks, 1988; van Staden, 1993; Paxton, 1995; Miller, 1996). A parallel analysis of epistemological developments reveals that despite postmodern pessimism about the possibilities for progress in knowledge, the processes of deconstruction and postmodern 'play', far from being independent of historical trajectories of enquiry and the 'facts' delivered by these histories, are premised upon them (e.g. Bertens, 1995; Latour, 1992).

Although the mechanistic recall of isolated facts may reveal little about the processes that we typically refer to as 'understanding', and the development of collective bodies of knowledge clearly entails far more than the simple accumulation of bits of information, the fact of the matter is that facts matter! The notion of facts as isolated meaningless entities and the possibility that they may be recalled and reproduced without understanding derives from the highly artificial practices of early behaviourist laboratories. Current cognitive science recognises that a simple associative sense of cognitive processing is unable to account for even the sheer volume (let alone complexity) of material that the human mind is capable of processing. The facts that we know and can use in daily life, and the facts about which students are questioned in academic study, are embedded in complex inter-related rule-governed networks (Pinker, 1997). In line with Vygotsky's view of all human thought as socially constructed, factual knowledge is incorporated into higher psychological functioning

83 'Practice' is here used in the strong sense of enactment or action that embodies thought. This view rejects a dichotomist view of theory (understanding) and practice (action) whereby practice is reduced to a kind of application of theory that may more or less accurately represent or express understanding. The practices of social actors in relations with one another and the objects of the material world are generative of our understandings, of our consciousness (Miller, 1992(b) & 1994(b); Bhaskar (1979); Latour, 1992).

rather than extraneous to it. The focus on 'factual questions' therefore, implies an analytic (or logical) rather than psychological distinction.

Although factual questions place lower organisational or structural demands on respondents in the construction of answers (see discussion below), they nonetheless require selectivity and comprehensiveness that cannot be accomplished without some measure of organisation in both the storage and recall of information. The decontextualisation typical of all formal schooling and epitomised in tertiary study removes the immediate relevance of knowledge from the world of lived experience. However, the world of academic study creates a self-reflexive context within which new (hierarchical) relations of meaning and relevance (or relatedness), are established. Perhaps the 'rote-learning' of apartheid schooling is distinguishable from the demands of the tertiary context, not because of the focus on learning facts, but because the organisational relations between particular facts are underdeveloped. Further, the fields of factual information with which students must engage at university are characterised by surplus and plurivocity and the questioning process, therefore, makes high selectivity demands. In contrast, in the context of the inadequate schooling of the past, the selection of facts was accomplished not by the learner, but by the curriculum (including an authoritative teacher figure) on his/her behalf.

The factual question posed in the examination under investigation is framed in terms of the explicit instruction to 'summarise' the facts of Piaget's theory of intelligence: *"EITHER: draw a diagram which summarises Piaget's theory of intelligence. OR: Write a summary discussion of Piaget's theory of intelligence."* This question exemplifies the complementary demands of selectivity and organisation: without an appreciation of how Piaget's general explanation relates to the more detailed

descriptive intellectual stages, respondents treat the task as a linear précis of the module text, beginning with the sensorimotor stage and each of its sub-stages. The failure to appreciate the hierarchical relations between the facts of the theory or how they are combined to produce Piaget's particular explanation of intelligence, results in uneven or irregular attention to the range of possible facts relevant to the question. In most instances, this uneven attention gives prominence to specific facts related to particular stages of development at the expense of attention to the central facts of how intelligence develops.⁸⁴

Failing students more often engage appropriately with factual questions than with the other questioning forms (36% of responses as opposed to 8% of relational and only 1% of conceptual responses; see chapter 9, table 12 (p. 211) and figure 4 (p. 211)).⁸⁵ These results seem to indicate that factual questions are less demanding than the other questioning forms but also that appropriate engagement with these kinds of demands may not be sufficient to produce overall success with the range of task demands typical of university study.

These data need to be read in relation to the data for successful L2 students. High performing students (L2H) produce the same high level of appropriate questioning engagement across different question-types but passing students (L2P) show similar sensitivity to the effects of question type as their failing counterparts (refer to table 12 (p. 211), figure 4 (p. 211)). L2P students demonstrate a sharp decline in appropriate engagement from 86% on factual questions (identical to that of L2H students) to 43% on relational and only 18% on conceptual questions. For these students too, factual questions pose the least difficulties.

⁸⁴ The model answer for the marking of this questions (see Appendix 13) rewards these 'central facts' of Piaget's explanation more than the descriptive details about particular stages, reflecting the hierarchical relations between facts.

⁸⁵ All references to tables and figures in this chapter refer to the results presented in Chapter nine.

The lesser demands of this kind of question are also reflected in the comparatively higher proportion of appropriate responses produced by failing students for factual questions in comparison with other kinds of questions. Despite this, failing students, who constitute more than half the group as a whole, still contribute only 30% of appropriate responses and the majority (82%) of all inappropriate responses to factual questions are produced by students who finally fail the course (see table 13, (p. 212), and figures 5 (p. 213) and 6 (p. 214)). It is, therefore, evident that although factual questions may be less demanding than other kinds of questions, the task demands of this question form are not self-evident and may trigger a range of inappropriate questioning engagement by underprepared students. Successful engagement depends on 1) an appreciation of the complexity and organisation of factual fields in the academic terrain; and 2) an acceptance of the limits that make this kind of enquiry highly constrained and self-referential.

10.2.2 Relational questioning.

The formulation of knowledge in the human sciences as contextually relative (e.g., Ströhm Kitchener, 1983; Craig, 1991; Bradbury, 1993) asserts that all facts are contingent rather than inherently valid. Relational questions require that respondents pursue and articulate the nature of such contingency, of the networks whereby particular facts support or contradict one another or constrain possible explanations of phenomena. It has been demonstrated that even factual questions assume some notion of the relations between particular facts and a sense of what makes them cohere as a delimited field of information. However, relational questions centre the enquiry process on the form of connectivity that creates this coherence, requiring the delineation of the structure of these relations. The process of selective recall of facts is assumed to be both accurate and comprehensive but secondary to establishing the nature of relations between the particular facts marshalled in response to a line of

enquiry. To employ the language of deconstruction, it is the 'play of difference' between them rather than the facts themselves that generate our understanding.

The task is, therefore, construed as elaborating the way in which bodies of information are organised or integrated to form an understanding of a particular phenomenon. Relations may take a variety of forms, e.g., opposition or support; cause and effect; dialectics of mutual construction; necessity or, at least, correlation or coincidence; part-whole hierarchies. Appropriate engagement with this kind of question requires arguing for the necessary or inevitable form of this connectivity and the conclusions that it allows us to reach. The task that a relational question poses is best conceived of spatially rather than temporally, developing a perspective on particular objects of analysis and arguing for this subjective positioning. The question of how various elements relate to one another and combine to form a particular explanation or theory may be thought of as analogous to selecting a means of travel between places and tracing the possible routes, specifying distance and direction between them. The task in pursuing a relational question is the development of these relational 'routes' arguing for a particular kind of relationship between ideas (facts) by treating them as elements of a whole rather than isolated entities.

The relational questions in the examination paper under analysis provide examples of two different kinds of such relational structures but both questions emphasise the relationship between elements. The first question examines the relation of necessity and dialectical construction between the content and form of the discipline of psychology: *"Discuss the relationship between the content and form of the discipline of psychology"*. Although marks were awarded for the inclusion of information about the content of the discipline and, separately, for information about the form (or

methods) of the discipline,⁸⁶ an appropriate engagement with the question treated these two views on 'what psychology is' as inextricably interconnected rather than distinct. If the discipline is defined in terms of certain kinds of subject matter (content), this has consequences for the kinds of methods that may be appropriate for study; conversely, the definition of psychology in terms of particular scientific methods, circumscribes the kinds of things that may be investigated. The other relational question juxtaposes three theories and instructs that they be comparatively discussed: "*Compare Darwin's theory of evolution through natural selection with the earlier theories of Cuvier and Lamarck.* Not only should an appropriate engagement highlight similarities and differences between these theories, it should also trace the historical shifts in understanding as evident in the displacement of an earlier theory by a later one. This evaluative stance that prioritises Darwin's theory as the most acceptable explanation is embedded in the formulation of the question which foregrounds his theory in relation to those of his predecessors. The relationship is thereby established as historical and antithetical rather than complementary.

Appropriate engagement with this kind of question remains high for L2H students (87% of the group) but drops dramatically for the other two performance categories. Less than half the L2P students engage with the task demands as outlined above, and over 90% of the failing students reconstruct the question, failing to address the given question. (See table 12 (p. 211) and figure 4 (p. 211)). The analysis of inappropriate engagement on relational questions shows that, as with factual questions, relational questions provoke very few (3%) inappropriate responses from L2H students. However, the proportion of inappropriate responses from L2P students doubles in response to this kind of question (14 % for factual questions and 29% for relational questions; see table 13 (p. 212) and figure 5 (p. 213)). Focusing on appropriate engagement the disproportionately low representation of failing students

⁸⁶ Refer to the model answer in Appendix 13.

is striking. Whereas they contribute 30% of the appropriate responses on the factual question, for relational questions appropriate responses by failing students represent just 12% of the total. (See table 13 (p. 212) and figure 6 (p. 214)).

These shifts in the pattern of appropriate engagement suggest two conclusions about the demands of relational questions as they pertain to performance:

- 1) the demands of relational questions are higher or more difficult to meet appropriately than those posed by factual questions; and
- 2) inappropriate engagement with this kind of question does not necessarily distinguish failing and passing performance but does strongly differentiate between students who may 'know' the work sufficiently well to pass and those who produce good or excellent results.

10.2.3 Conceptual questioning.

As argued above, new trajectories in the construction of knowledge are not developed in a vacuum but constrained and made possible by preceding lines of enquiry. The appropriation⁸⁷ of these prior worlds of knowledge entails developing control over the discursive conventions of a particular field. The human sciences are typically extended by the redeployment of old language for new purposes (e.g. 'perfection' in Darwinian theory or 'conservation' in Piagetian theory). Alternatively, new terms are coined for reconceptualising phenomena that have come to be taken for granted (e.g. 'intertextuality' or 'conceptual frameworks' for re-describing and explaining the spontaneous and non-conscious activities of learning from others). The distanciation⁸⁷ from the familiar that new language creates, places even certain and familiar realities in question. Conceptual questions require the definition and manipulation of these specialist theoretical terms, demonstrating the mobilisation of

⁸⁷ The terms, 'appropriation' and 'distanciation' are adopted from Ricoeur's (1981) description of the hermeneutic actions required and made possible by textuality.

new ways of thinking and, moreover, an appreciation of the peculiar simultaneity of openness and closure characteristic of textual discourse. Appropriate engagement with this kind of question recognises that the questions raised in the human sciences are premised on the possibility of questioning even those aspects of reality that appear unquestionable. Pursuing this kind of study means placing the world of familiar human activity under scrutiny, or in question. Further, language itself is recognised as questionable and open and to multiple interpretations. The arbitrary nature of signs is constrained by the play of difference between signs and the shared meanings of a language community. Hence, a conceptual question provokes the exploration of a particular concept within a theoretical field and the demarcation of shared definitions in order to conceive of human/social phenomena in a particular way rather than in some other way.

The concepts selected for assessment represent central tools in the development of particular areas of theorisation. In each case, students are required to pursue a new way of calling (perhaps familiar) phenomena into question and to demonstrate a clear grasp of this conceptualisation in contrast to possible theoretical alternatives and, probably, in contrast to familiar common sense views of the phenomenon.

- 1) The evolutionary process is conceptualised as a series of compromises as opposed to increasing perfection (*"Give two reasons why the natural process of adaptive change does not lead to perfection. Illustrate each of these reasons with an example."*) This concept of compromise is antithetical to the common sense view that the world must be organised in terms of some transcendental design.
- 2) Intelligence is conceptualised as either unitary or multiple (*"Define the concept of g and explain its significance in the construction of models of intelligence."*) Both of these views of intelligence find sympathy with common wisdom. Individuals are described as intelligent or unintelligent and this characteristic is seen as stable and permanent. Alternatively, people have an intuitive sense that they are 'good

at' some things and not at others. However, these contradictory ways of conceiving of intelligence are usually held simultaneously without demand for resolution. The question challenges the taken-for-granted and requires that the implications of these conceptualisations be pursued.

- 3) Knowledge is conceptualised as socially constructed as opposed to consisting of a set of discoverable truths. (*"Discuss the constructed nature of knowledge in the social sciences in terms of the concepts of intertextuality, conceptual frameworks and theory-laden facts."*) The concepts identified in the question collectively enable the elaboration of the general conceptualisation of knowledge as constructed in contrast to commonly held views that knowledge is something discoverable and ultimately verifiable.

The embedded demands of the conceptual questioning frame proved most opaque of all. Appropriate engagement dropped for this kind of question even among L2H students, although it remained very high (78% of the group, see table 12 (p. 211)). However, among the other performance categories, inappropriate transformations of conceptual questions was ubiquitous with almost all (99%) of the failing students producing inappropriate responses and the vast majority of L2P students (82%) doing likewise (refer to table 12 (p. 211) and figure 4 (p. 211)). Again, as with the relational questions, very few (2%) of the appropriate responses are generated by failing students whereas L2F students produce a high proportion (60%) of all inappropriate responses to conceptual questions. The profile of L2H students is precisely the reverse of this (69% of appropriate and 5% of inappropriate responses; see table 13 (p. 212) and figures 5 (p. 213) and 6 (p. 214)).

The profile of performance in response to conceptual questions confirms and further strengthens the conclusion reached above in connection with relational questions:

- 1) An answer that appropriately engages the question seldom fails and in the case of conceptual questions, the majority of these responses obtain high marks; and
- 2) Although inappropriate engagement does not inevitably lead to a fail mark for these questions (40% of inappropriate responses nonetheless produce passing answers) these passing answers are not highly rewarded.

10.3 The phenomenon of Underpreparedness.

The results discussed above show that the way in which students' engage with the embedded demands of examination questions seems indicative of final performance. This suggests that the reasons for the high failure rate and generally low performance among L2 students may not be a consequence only of their knowledge of the content of the course. Poor performance may result, despite extensive study preparation of material, due to misunderstandings of the peculiar demands of academic questioning and the way in which these questions articulate the epistemic frame of the human sciences. However, this conclusion would not be very useful, either theoretically or in practice, if this inappropriate questioning engagement were inevitably associated with failure. It would then be compounded with other reasons for failure (lack of motivation, laziness, lack of intelligence, varying difficulty levels of the content learned/ taught) and would offer little insight into the **exceptional** levels of failure among L2 students. In order to ascertain whether inappropriate questioning engagement is a peculiar defining factor for the performance of this group of students, their results were compared with an analysis of similar under-performing L1 students. This comparative analysis provides evidence for the claim that underpreparedness is a distinguishable phenomenon and that the reasons for failure among these students are quite distinct.

When the responses of failing L1 students are analysed in terms of whether they address the given question or produce mental transformations of the question, the pattern of engagement is distinctly different to that of their L2 failing counterparts. On relational and conceptual questions, the proportion of L1 failing students who produce appropriate responses is far higher than among L2 failing students, resembling and even out-performing the L2 passing group (refer to table 15 (p. 216) and figure 7 (p. 217)). For both of these question-types, L2 failing students produce the majority of all inappropriate responses and L2 passing students in each case contribute more inappropriate responses than do L1 failing students (see table 16 (p. 218) and figure 8 (p. 219)). The pattern of engagement for L1 failing students is almost identical to that of their L2 passing and L2 high-performing peers in terms of the proportion of appropriate responses to relational questions (see table 15 (p. 216)). This suggests that these failing students have an understanding of the requirements of the task that is comparable to that of highly performing second language students. Very few L2 failing students on the other hand, respond appropriately to relational questions (7%, see table 15 (p. 216)). The pattern of engagement on the conceptual questions is similar except in so far as these questions differentiate more starkly between high performers and those who just manage to pass the course, with L2 high-performing students producing the majority of appropriate responses. However, the profile of L1 failing students is again similar to the L2 passing group rather than their failing L2 failing counterparts. These findings strongly suggest that the underlying reasons for failure among L1 and L2 students are different in nature.

However, the pattern of engagement with the factual question differs markedly from the other question types. In response to this kind of question, the majority of L2 passing students (88%) engage appropriately and are undifferentiated from their highly performing peers. In contrast, the comparative performance of L1 failing

students is weakest of all on factual questions. Only 16% of L1 failing responses are appropriate, lower, in this instance, than even L2 failing students among whom 42% of responses to factual questions are appropriate (refer to table 15 (p. 216) and figure 7 (p. 217)). Another perspective on the data reveals this same pattern. Although L1 failing and L2 failing students generate similarly high proportions of the total number of inappropriate responses to the factual question, their contribution to the total number of appropriate responses differs, with L1 failing students producing very few (12%) while the L2 failing group produce a considerable proportion (35%), (refer to table 16 (p. 218)). Perhaps, L1 failing students assume that the apparently simple factual question conceals a more typically 'critical' academic question or, perhaps, this is simply an attempt to demonstrate what they do know ('how to answer an academic question') in the absence of 'knowing the facts' asked for. L1 failing students are more inclined to reconstruct the factual question whereas all L2 students tend to engage more directly with the given question demands.

It should be noted, however, that although the proportion of appropriate engagement among L2 failing students is substantially higher for this factual question-type than for relational and conceptual questions, and higher than among their L1 failing counterparts, it remains substantially lower than that of the L2 passing and high-performing groups. The equivalent high level of appropriate engagement for L2 passing and L2 high-performing students indicates that the final performance difference between these two groups is a result of their engagement with the other more complex question-types. Conversely, L2 passing and L1 failing students display similar questioning engagement profiles for relational and conceptual questions but L1 failing students perform poorly in response to the easier demands of the factual question. This suggests that the poor performance of L1 students is not related to questioning engagement whereas this remains a distinguishing feature of failure among L2 students.

The findings of the comparative analysis, therefore, support the contention that the learning difficulties of L2 students do not correspond with the usual explanations offered for failure. Rather, these students demonstrate a kind of task engagement that is incongruous with the embedded questioning frame of the human sciences. Underpreparedness is, thus, not simply a failure on the part of individual students but rather reflects a systemic failure on the part of an educational system to initiate these students into the world of academic study and its implicit rules of enquiry and knowledge construction. The potential to bridge this disjuncture, therefore, becomes the task of education. Effective mediation of the academic world must take cognisance, not only of students' failure to engage appropriately, but must also proceed on the basis of a thorough analysis of the cognitive functioning that is provoked in the process of task engagement. Understanding the reconstruction of the task in terms of an alternative questioning epistemology, opens up possibilities for un-learning (Miller 1989) and, hence, for teaching new forms of engagement.

10. 4 Task demands: Mental Action.

The apparently inevitable and self-evident form of a particular task masks the socio-historical actions inscribed in its construction. Vygotsky (1978) refers to such products of human life as 'fossils' and the metaphor illuminates two pertinent qualities for our understanding of task engagement:

- 1) the fixed and stable form represents a living, changing and mutating process from the past; and
- 2) that which we see is merely a trace or indicator of this process rather than a full and direct representation of it.

By analogy, the tasks that confront students instantiate a history of intellectual enquiry, the active and re-generative processes of asking and answering, and forming and reforming understanding. While tasks like essay questions are products of these processes, the formative processes are opaque in the particular manifestation of the task and are only reactivated in the learner's engagement. The world of academia, perhaps more than any other, exemplifies the fossilisation of human action and thought. Shweder describes such a world as "intentional" or imbued with the potential for meaning because "human artifactual worlds [are] populated with products of our own design" (1991: 74). Miller argues that the cultural artefacts of our world, "objects that are the products of labour, ... [the] objective expressions of understanding" (1992: 4) function as second order mediators, designed to impose appropriate actions on the part of those who encounter them. Although such objects may be used inappropriately, (Miller gives the example of a pair of scissors used in a stabbing rather than cutting action) the constraints on action inhere within the design of the object. Cultural objects such as tools are inscribed with the possibilities of action as experienced by the socio-historical 'others' who constructed them for particular purposes or intentions. This 'intention' or purposeful structure will project the possibilities of action for those who encounter the object, hence, revealing not just the immediate function of the particular object, but also a potential world of intention and meaning of which it is representative. Objects are constructed within a socio-historical context and serve to mediate the individuals who use them, directing and regulating their actions in particular ways. Miller (1994) refers to second-order mediators as 'functional structures' as the meaning of these objects is instantiated in their use.

A task is, therefore, construed as an 'intentional' object or an object in a meaningful universe, and is only constituted **as a task** by the actions of those who engage with it. In the same way that a hermeneutic frame negates the possibility of a 'text' without

a reader who reads it, a task is only activated as a particular kind of task in the mental actions towards its resolution. All tasks, but especially those tasks that are textual, are highly artificial entities that owe their existence to the thinking of those who generate them and, therefore, can only be known by a corresponding process of mental engagement by those who encounter them as 'objects' for interpretation. A physical object like a pair of scissors has a highly specific purpose and will, inevitably, because of the way in which it mirrors the human hand and its possible actions, quickly reveal its functional structure. Cultural worlds of meaning are more extensively encoded in textual forms and the design and, hence, appropriate action is less immediately accessible. However, the meaning of the task is not recoverable from within the task itself, but in the activity of engaging with and eventually solving it:

"Intentional things are causally active, but only by virtue of our mental representations of them. Intentional things have no 'natural' reality or identity separate from human understandings and activities. Intentional worlds do not exist independently of the intentional states (beliefs, desires, emotions) directed at them and by them, by the persons who live in them" (Shweder, 1991:74 – 75).

Conversely, the cognitive actions of students are not independent of the task but interactively constituted in their engagement with it. Where the traditions of tasks and learners are concordant (Gadamer, 1975), the cognitive actions that the task provokes are appropriate in the sense that they mirror the design of the task or regenerate its meaning in synchrony with its design. Inappropriate engagement, on the other hand, is not constrained by the task in the same way; developing and pursuing a questioning process other than that suggested by the given question. This disjuncture may seem to imply that the cognitive functioning of underprepared students is entirely autonomous and independent of the presented task. However, a closer analysis of the nature of inappropriate questioning engagement reveals that

this is not the case. In as much the task elicits (and is generative of) appropriate mental actions where previous learning histories make this possible, so too, particular kinds of inappropriate engagement are provoked by different kinds of questions.

10.4.1 Inappropriate Engagement.

Failure is often conceived of as a lack of engagement and the assignment of marks to performance gives the impression that failing students simply produce 'less' of what is required than passing students. However, the analysis of L2 students' products indicates that, on the contrary, inappropriate responses are characterised by highly active processes of mental transformation. The given questions are reconstructed creating parameters that are coherent within the students' epistemic frame and a corresponding answer is then generated in these terms. If, as has been argued above, a task is only constituted in the actions of those who attempt to solve it, then, in their actions, these students generate a different task. It is this task to which they respond, this question that they attempt to answer. Because of this transformation of the task, underprepared students often express surprise and confusion when they discover that they have done badly on an examination. They feel that they have 'answered the question' and produced the information required to demonstrate their knowledge (Miller, 1996). Various kinds of active transformations were effected in the re-construction of the given questions and these were conceptualised as follows: flattening, truncating, substituting and grounding. Flattening the questioning parameters transforms the task into a request for information. Instead of the question providing the framework for the selection and organisation of appropriate information, the field of possible facts is treated uniformly and the question provides merely a general orientation towards a section or topic of the course. The effects of flattening the structural relations established by a question disperses the focus or particular perspective that a question provides and affords

undue attention to tangential facts. On the other hand, truncating a line of enquiry restricts and narrows the question focus negating important elements. Many responses may be structured in legitimate questioning terms. However, the given question is avoided and substituted by another. The mental substitution of an alternative frame then drives the selection and organisation of the answer. Finally, there is a tendency for some students to ground the given question in an authoritative source or in the world of experience. This transforms the task into a question about the truth or moral value of the issue. The analysis of these various transformations augments the earlier conclusion that the general questioning epistemology characteristic of the human sciences is differently articulated in particular kinds of questions. Different kinds of questions not only entail specific appropriate forms of engagement but also provoke different patterns of inappropriate response. This indicates that a given question provides the impetus for the questioning process (or for the constitution of the task) even where the relation between question and answer is distorted by inappropriate mental transformation. The discussion of inappropriate questioning engagement, therefore, proceeds comparatively across question-type.⁸⁸

Analysis of responses to the factual question revealed that most students meet the demands of this kind of question appropriately (see table 17 (p. 222)) and a similar majority (63%) produce passing answers (see table 18 (p. 224)). However, the apparently simple demands of factual questions remain obscure for nearly 40% of these students and this warrants attention. As discussed above, factual questions such as the one posed in this examination paper do not lack structural constraints

⁸⁸ Detailed examples of the various transformations on different question types are presented in chapter nine. Discussion here, therefore, proceeds at a more general level, comparing the patterns of engagement across question types.

and the ostensible similarity with the simple correspondence or associative recall, typical of school assessment, is misleading. In some instances, analysis of responses suggests that students do not appreciate the contextual nature of particular facts within a coherent field and the answers that they produce reflect an understanding of 'facts' as isolated disconnected entities. The task is 'flattened' into a listing activity, or the question is treated as a trigger for the recall of all and any facts that seem loosely associated with the broad content areas of the course. However, this flattening transformation and the absence of organisation in the factual field is less evident than other kinds of questioning transformations in response to factual questions (refer to table 17 (p. 222)). The highest proportion of inappropriate responses (45%) for this question type took the form of substituting an alternative academic question for that given. This result may be indicative of a transition in the learning process for these students. Recognising that the question demands in the academic arena are different from those of the school context, many students resist the apparent similarity between this summary form question and the listing of facts quite typical in their previous learning environments. However, although these attempts may suggest the beginnings of an important shift in coming to terms with academic task demands, only 17% (see table 18 (p. 224)) of these substituted lines of enquiry produce passing answers, indicating that 'simpler' factual demands are not subsumed and addressed within this reconstruction.

Although the substitution of alternative academic questions does occur in response to relational questions, this kind of transformation is less likely for relational questions (26% of inappropriate responses) than for either factual or conceptual questions (45% and 41% respectively, see table 17 (p. 222)). Despite the fact that these substituted questions may represent legitimate lines of academic enquiry, (often relational in nature themselves) the majority of the answers they serve to structure did not obtain passing marks. In particular, only 6% of these substitutional

transformations of the conceptual questions, passed (see table 18 (p. 224)). Therefore, it is evident that the structure of the dialogue of academic question-and-answer is imposed and directed by the form of a particular question. Although a question functions to open up a domain of enquiry, it also constrains possible routes of enquiry, regulating mental action in very specific ways. The parameters of conceptual questions appear the most highly determined of the question-types.

A similar transition in the learning process may account for students who 'ground' a question either in illustrative and familiar details or by construing the question as a position statement that either agrees or disagrees with their own personal world view. Students may sense a need to depart from the reproductive listing of facts that characterised their previous schooling and attempt to introduce a 'critical' view, transforming the given questions into evaluative tasks. However, the criteria for this process of critique are drawn from outside of the question's parameters and, indeed, outside of academic discourse. The authoritative frames of religion or politics, or the world of personal experience and observable events, provide alternative frameworks of enquiry. Although this kind of transformation accounted for a small proportion of responses, it did occur across all question types; reconstructing factual, relational and conceptual questions into considerations of whether something is true or right or desirable.

The dominant form of inappropriate engagement on relational questions was to 'flatten' the parameters of the given question. The formulation of relational questions constrains the process of enquiry in a far more structured way than is the case for factual questions. The focus of this kind of question is on the network of connectivity between the facts and an appropriate answer must trace the nature of these relations. These questions prove more difficult than factual questions and this difficulty is reflected both in performance and in terms of questioning engagement.

Only half the students passed the relational questions (see table 18 (p. 224)) and the majority of responses (71%) did not engage the given questions in the terms designated (see table 17 (p. 222)). The dominant form of engagement entailed 'flattening' the connections between the elements established in the question and disaggregating a series of disconnected, smaller questions that were then addressed sequentially in isolation from one another. Where elements are connected, the relation is formulated as a simple equivalence or association. Almost all (92%) of the responses that appropriately addressed the relational dimensions of a given question, passed the question whereas less than half of those that flattened the given parameters produced passing answers (refer to table 18 (p. 224)). The relational structure of these questions must, therefore, be acknowledged as the defining frame for engagement, rather than an extraneous feature added to a comprehensive reproduction of relevant facts. Appropriate engagement entails arguing for the necessity of the particular connections posited in the question (e.g. the dialectical relation between content and form, or the comparative and evaluative relations between various theories of evolution).

Performance on conceptual questions is even lower than on relational questions with only 13% of responses appropriately engaging the question demands (see table 17 (p. 222)) and only 17% of students producing passing answers (see table 18 (p. 224)). However, the flattening of question parameters is marginal (3%, see table 17 (p. 222)) in response to these kinds of questions. Conceptual questions provoke a different sort of transformation not present in response to the other question types. Close to a third of all responses to conceptual questions truncate the question (see table 17 (p. 222)), addressing only part of what is required, and only 15% of such responses pass these kinds of questions (see table 18 (p. 224)). The typical construction of conceptual questions is to focus on a highly specific concept but require elaboration of its meaning by locating this concept within a network of

meaning. An appropriate engagement with the question, therefore, entails developing the implications and significance of understanding a phenomenon in a particular way. A truncated response defines or describes the concept but closes the enquiry prematurely and fails to pursue the implications of a particular conceptualisation. Whereas inappropriate engagement with relational or factual questions tends to disperse the focus of the question (flattening its parameters), conceptual questions are misread in a different way resulting in a restriction of the question focus (truncating the enquiry).

10.4.2 Reconstituting appropriate task engagement.

Refining our understanding of inappropriate engagement in relation to different kinds of questions, clarifies the way in which the task demands of academic questioning “implicate” (Shweder, 1991) cognitive functioning. First, the analysis of inappropriate functioning in relation to question-types suggests that a question may provoke both appropriate and inappropriate functioning. The relations between task and cognitive functioning are always active and mutually constitutive, regardless of whether the engagement thus generated is appropriate or not. Second, appropriate mental actions do not directly mirror or match the ostensible demands of different question-types. Appropriate cognitive functioning may, paradoxically, require the inversion of these demands as they are inscribed in the construction of the task. A factual question conceals the organisation and structure of the factual field. A relational question opens up a field of enquiry and demands the elaboration of connections between ideas. However, this kind of question simultaneously demands focus and constraint. The dominant form of inappropriate engagement in response to this kind of question entails flattening and dispersing the question focus. Conversely, although the parameters of conceptual questions are highly determined and focused, appropriate engagement pursues the implications of conceptualising phenomena in a particular way, opening up connections between the particular concept under

question and others, and elaborating even those aspects of phenomena that may seem unquestionable. The dominant form of inappropriate engagement in response to this kind of question entails truncating the enquiry, stopping short of what is required and failing to elaborate the meaning of the concept by connecting it to others in the conceptual field. Hence, where the task demands elaboration (relational questions) the inverse mental action is appropriate: narrowing and constraining the focus of enquiry. On the other hand, where the task demands specificity (conceptual questions) the inverse mental action is appropriate: elaborating and pursuing the implications of a particular conceptualisation. Thus, focusing on the cognitive engagement of underprepared students, facilitates the articulation of the “fossilised” (Vygotsky, 1978) paradoxical demands of particular academic tasks. By delineating the mediated nature of inappropriate engagement, the study, therefore, also offers insight into what it means to be prepared for university study. Only students who share the epistemic assumptions of the Human Sciences will spontaneously engage appropriately where the demands of the tasks are implicit even for those who pose the questions.

The tension between the closed structure of a question and the openness of the enquiry process parallels the constraints of textuality and the hermeneutic task. Rejecting a view of text as containing a meaning to be discovered, as closed worlds containing their own and ultimate authority, texts become open to the subjective meanings of readers. However, the world that is revealed in front of the text (Ricoeur 1981), is not just any world and remains constrained by the text. Similarly, a question both opens and closes the possibilities of enquiry. Teaching students to ‘read a question’ will, therefore, entail developing meta-cognitive control over the epistemic nature of the task and their own actions (Pinnard 1986). Students need to understand that their actions cannot simply be derived from the task itself but neither can they operate without submitting to the regulation of the task. Responding appropriately to

a question entails a willingness to place one's self (or ways of understanding) in question.

10.5 Implications for Instruction.

The process of reconstructing the question establishes a new set of boundaries for enquiry within which the dialectic between question and answer is confirmed. Underprepared students may, therefore, experience their relation to the task as one of positive understanding. Where students constitute the question appropriately, success or failure on the task is understood in terms of the degree to which these demands, as objectified in the task, are met. However, where the task is inappropriately transformed the question of success or failure is established with reference to this reconstituted task. In this self-perpetuating and internally referenced circle, failure is 'complete' and misunderstanding absolute in that it is experienced as understanding (Miller, 1989, 1992(b)). Under these conditions, the pedagogical problem is not dissimilar from the psychoanalytic task in that the unknown is not immediately accessible or transferable and further, the learner's way of engaging establishes a coherence and sufficiency that will not easily admit change:

"Ignorance is thus no longer simply opposed to knowledge: it is itself a radical condition, an integral part of the very structure of knowledge. ... Ignorance, in other words, is not a passive state of absence, a simple lack of information: it is an active dynamic of negation, an active refusal of information" (Felman 1987: 78 – 79).

Because misunderstanding is experienced as understanding and is, therefore, self-sustaining, the reconstitution of the task is only possible through other-regulation.

"This circle of understanding preserves the identity or being of the Self, and can only

be disturbed by actions that are not driven by self-understanding" (Miller 1994(b): 2). Although an academic question reveals the (functional) structure of the enquiry process and, thus, acts as a mediator of the learner's engagement, the world that the question represents is highly encoded and is simultaneously also concealed. If students draw on a tradition of learning and questioning that differs from the world of 'work' inscribed in academic questions, the design of the task will remain impenetrable by means of the cognitive operations spontaneously elicited by the task. The person of the teacher (first order mediator) or, perhaps, other (second order) tasks that scaffold the learner's engagement, need to intercept and redirect the learner's engagement, creating opportunities for new kinds of action that will change and reconstruct the sense of what academic questioning is 'about'. Learning how to engage appropriately necessarily involves unlearning inappropriate questioning modes and the instructional process must, therefore, "pose a question or the experience produce a disjunction, in the sense that habitual ways of acting on and with the objects in question, are obstructed" (Miller, 1994(b): 2)

This general conceptualisation of the mediational task suggests the following guidelines for the construction of tasks in an educational programme for underprepared students:

- 1) Articulating an epistemic framework in different kinds of questions
- 2) Scaffolding and modelling.
- 3) Un-learning and Teaching.
- 4) Dialogue and the inter-psychological plane of action.

10.5.1. Articulating an epistemic framework in different kinds of questions

Tasks should be designed to explicate epistemic assumptions, that is, to heighten the contextually relative nature of knowledge and its development through successive syntheses of theses and antitheses (Ströhm-Kitchener 1983). Questions should

guide students to problematise the unproblematic, establish oppositions, and construct implicit text. In particular, the constraints and possibilities of questioning text are quite distinct from the question and answer form of verbal dialogue. Appropriate questioning needs to take account of the distanced relations of author to text, and text to reader (Ricoeur, 1981), and the perpetual interplay of opening and closure which text demands (Gadamer, 1975). Tasks should focus on probing the question process behind a text or viewing a particular text as part of a much wider process of enquiry. Consequently, the learning-teaching process needs to draw on a variety of kinds of texts, demonstrating the constructed nature of text and the building of an intertextual body of knowledge. Understanding the relations between an apparently fixed body of textual knowledge and an underlying process of enquiry, creates the conditions for the potential text that must be generated by the learner in 'front of' an academic question.

However, the general epistemic framework of the Human Sciences is articulated in different ways in factual, relational and conceptual questions. The distinct task demands associated with each of these question types require mediation. In particular, the inversion of the misleading ostensible task demands in appropriate mental action requires attention to the development of the dual direction of meta-cognitive controls, over the nature of the task and over one's own cognitive processes (Pinnard, 1986). The hierarchical organisation of factual fields of theoretical knowledge requires a process of delineation such that the demands of factual questions are distinguished from previously familiar questions about 'facts'. Tasks need to mediate the necessity to constrain relational discussion within specific bounds and the converse requirement for discursive development and extension in response to conceptual questions. One way in which the dimensions of question types could be highlighted is through the use of different question types on the same

content material. The different processes of selection and organisation, and the limits and extent of discussion, would thus be given prominence.

10.5.2. Scaffolding and modelling.

Initially the questioning role should be adopted by the task, modelling the form and type of questioning that is appropriate. A model makes it possible for new kinds of action to first be 'imitated' in the zone of proximal development (Vygotsky, 1978; Tharp and Gallimore, 1988; van der Veer, 1994; Wertsch 1985(a), 1985(b), 1994). Karpov suggests that the benefit of modelling is that it produces an approach that "... find[s] the essential characteristics of this problem without paying attention to its salient surface characteristics" (1995: 138). The relevance of this framework for the development of an appropriate epistemology where the ostensible form of a task may be misleading is evident.

Any suggestion of imitation creates unease in academic circles where the sin of plagiarism is considered greater than any other. However, where underprepared students construct an alternative task to that given, they have no way to assess their own performance in the terms that will determine their success and failure by the standards of the academy (Miller, 1997). Further, the self-sustaining nature of the question-answer cycle within the transformed task means that students remain locked within an inappropriate framework. Modelling other ways of engaging places already established patterns of response in doubt and provides another vantage point from which to evaluate and change one's own action. Models may be provided in dialogue (see the discussion below) and as alternatives in written tasks. For example, the relation between questions and possible answers that demonstrate the constraints of legitimacy can be demonstrated through the construction of various possible answers to a single given question or, conversely, through the derivation of different questions from given alternative answers in relation to the same content

area. Component smaller questions to guide the reading process provide scaffolding for engagement with an essay question by defining an appropriate focus and weighting in relation to the larger questioning frame.

To avoid the negative connotations of empty imitation that fails to change understanding, it is important that tasks develop a theoretical grasp of the implications of particular actions (Karpov, 1995). The elaboration of action in the zone of proximal development that allows for future independent action emphasises the potential for “productive rather than reproductive knowledge” (Kozulin, 1995: 128). The modelling and scaffolding of the learning process can be complemented by the construction of assessment tasks that emphasise independent problem solving. In particular, open-book assessment offers the opportunity to dislocate the tendency to rely on reproductive memory and emphasises the process of engagement.

10.5.3 Un-learning and Teaching.

The use of familiar content when introducing students to unfamiliar forms of knowledge may inhibit rather than enhance learning. Where the emphasis is on teaching new ways of operating with knowledge (in the case of this study, new approaches to questioning), the disruption of the known produced by unfamiliar content seems to facilitate this process by preventing reliance on inadequate known strategies. In contrast, familiar content may disguise the very unfamiliarity of the form of the task that confronts the learner. A parallel may be drawn with Piagetian conservation tasks, the design of which is premised on the conflict between the misleading familiarity of the perceptual cues and the cognitive operations that conserve across transformations. It is the child's ability to transcend the apparent and familiar perceptual evidence that indicates the cognitive developmental shift. This approach distinguishes a developmental interest in cognitive transformations (or

possibilities for change) from the more conventional experimental approach (Miller, 1984).

In the case of the present study, the misleading cues of the task are provided not by perceptual information, but by familiar content. Therefore, a task that embeds new or unfamiliar form demands in familiar content, may be extremely useful to the researcher as it elicits systematic errors indicative of the cognitive operations applied by subjects. However, this is a different point to that of the educational task of *changing* such mental processes. In this regard, the results of this study are in agreement with Zueli (1986) and Craig (1992) that familiar content may merely disguise the foreign form that must be mastered and may encourage students to rely on past and inappropriate mental strategies. Unfamiliar content may serve to force the reader into a relation of openness towards the text and “the surrender of the pre-understandings that obstruct or inhibit those actions whose doing would serve to reveal the design that lies concealed in the structure of the situation”

(Miller 1994(b): 2).

The strategic value of using unfamiliar content to intercept habitual ways of engagement and provoke cognitive change does not negate the value that familiar content and experiential knowledge may have for the learning -teaching process. What is required is a well-integrated and articulated curriculum in which the familiar and the unfamiliar are blended in various representations of the form and content of academic tasks.

10.5.4. Dialogue and the inter-psychological plane of action.

Despite the important distinction drawn between verbal and textual knowledge construction, dialogue may nevertheless offer important mediational opportunities and particularly, for the development of appropriate questioning engagement (Dillon

1986, 1988; Graesser & Person 1994). Vygotsky (1978) argues that the higher psychological functions occur first inter-psychologically before becoming internalised intrapsychologically. While the ideal Vygotskian mediational dyad may seldom be possible in the context of mass tertiary education and second order mediation can occur through the meticulous design of written tasks, tutorial support remains critical. Because the framework of verbal exchange is less-defined than that which constrains a textual encounter, the tutor can flexibly respond to students' questions and pursue trajectories of thought suggested by them. In this way, a good tutor can also reformulate the power relations of learning-teaching that may previously have discouraged learners from adopting a questioning approach in relation to those in authority (E.N. Goody 1978; Moll & Slonimsky 1989).

However, conversation in and of itself will not necessarily deliver any significant learning. Accepting the need for unlearning, the impetus and structure for the exchange must lie with the tutor. Underprepared students often struggle to formulate questions and when they do, the question posed may often conceal (and reveal) a different underlying question. The tutor, therefore, must open up the process of enquiry, sustaining dialogue by answering questions posed, with further questions that serve to generate and extend students' own internal questioning dialogue. Conversely, the tutor must also constrain and focus discussion, creating appropriate boundaries by 'reading' a presented question (and the subsequent dialogical exchange in answering it) in relation to the broader questioning parameters of the Human Sciences. The tutor's role is to "... work[s] out the hermeneutical situation [which] means the achievement of the right horizon of enquiry for the questions evoked by the encounter with tradition" (Gadamer 1975: 269).

Although it is imperative that tutors, rather than students, structure the dialogue of tutorials, the context of small group interactions provides an excellent 'microcosm'

(Catan 1986) or 'cell' (Vygotsky 1978) for the analysis of learners' cognition. In this sense, effective exchange in a tutorial is necessarily dialogical. Tutorials are opportunities for tutors to learn about learners' worlds of (mis)understanding and, hence, to direct their interventions appropriately. While it is essential to scaffold and structure learners' engagement so that they have access to the traditions of academia, it is simultaneously necessary to recognise the dialogical nature of that very tradition and, hence, the possibilities for on-going dialogue to reveal new worlds. Tutors and learners are participants in a process and define one another relationally. In other words, tutors need to retain an openness towards students that will allow their own worlds/selves to be questioned. Other people are the extreme form of Shweder's intentional objects: "[they] achieve their reality because we are implicated in their existence, and we achieve our reality, at least in part by letting them become implicated in ours" (1991:75).

10.6 In conclusion.

The analysis of learners' engagement with examination questions reveals that the testing process captures not only what students know, but also the ways in which they question and understand the world. Learning, therefore, becomes more than simply the accumulation of information within the confines of the formal educational setting, taking on an ontological character. "What distinguishes learning as a special kind of activity is its focus on the changes produced in the learner him/herself" (Kozulin 1995: 120). The instructional process engages students in fundamental and radical change, generating new ways of questioning reality and calling into question previous understandings. Therefore, "[t]eaching, like analysis, has to deal not so much with lack of knowledge as with resistances to knowledge" (Felman 1987: 79). Mediation in this zone of proximal development must balance an affirmation of the self (or ways of understanding) of the learner in order to recruit active participation,

with the imperative to challenge and dislodge that self (Zebroski 1989). "The object of mediation is being, understood as a process of becoming where the process entails the negation and overcoming of the Self by the transformation of consciousness through action" (Miller 1992: 7). In this way, the individual learner becomes participant in the collective traditions of human consciousness fixed in the products of academic bodies of knowledge, open to question and to be questioned.

CHAPTER 11

CONCLUSIONS

11. CONCLUSIONS

11.1 A question of knowing in a textual world: conceptualising the task.

That which we know, both collectively and individually, consists not only of answers to questions but, also, of an understanding of how to pose particular kinds of questions. The textual construction of knowledge both demands and facilitates a peculiarly open-ended process of enquiry. Because interlocution between readers and writers is intercepted by the constructed world of the text, it is impossible to produce final authoritative answers with reference either to the author or to the experiential world of the reader. The possibility of learning from reading is only partly dependent on the authority of the writer of the text. Part of the educator's task entails the selection of appropriate material (texts) and, hence, directing students' reading in particular directions that will enable them to come to know the 'best' of current knowledge. However, more importantly, the reading process must provoke the development of an appropriate questioning stance in relation to text and enable learners to attenuate and integrate the previously discrete boundaries of the text and their world of experience and understanding. University study is, therefore, about coming to know and participate in this textual world of recursive questioning and tentative answers. The task of students is to understand both those 'answers' (theoretical explanations) that have been historically validated (and 'stored' and transmitted in the writings of others) in a particular field of enquiry and, further, the critical forms of enquiry that underpin these constructions.

In this way, the collective 'tradition' (Gadamer, 1975) of knowledge admits new participants that may challenge that which is already known and extend the boundaries of knowledge or even alter the direction of enquiry. The role of questioning is thus conceived of as pivotal to the development and construction of knowledge in that the knower and that which is known are mutually constructed and transformed. This project

aimed to investigate the ways in which the questioning tasks of the Human Sciences 'implicate' (Shweder, 1991) learners in particular worlds of understanding and conversely, how the ways of questioning that learners impose, reconstruct those tasks. The learning-teaching problems encountered in the context of South African tertiary education are thus (re)conceptualised in terms of disparate frameworks of enquiry.

The initial analysis of students' questioning engagement proceeded in relation of to a pattern of appropriate textual enquiry developed by extrapolation from Feuerstein's (1980) taxonomy of cognitive functioning. In these terms, learning from text becomes possible through the construction of a comprehensive range of (mental) questions in relation to a text, entailing a precise formulation of specific focused questions that exhaustively address the concerns of the text. Further, effective questioning by the reader will be informed by the recognition that any text is itself an attempt to answer a particular essential or core question, around which the 'answer' of the text is organised. Effective and appropriate engagement will also involve the development of questions that trace and establish the complexity of relations between component parts of the text. It has been argued that through a questioning approach of this nature, the potential world of textual knowledge will be actualised.

Although the question and answer relation overtly defines the process of assessment, the reconceptualisation of the textual world and the act of interpretation in these terms, allows for a re-turn to the analysis of assessment tasks in relation to this broader view of a questioning epistemology. A question is thus viewed as a platform from which to enquire into a particular phenomenon, positioning the reader (or learner) in a particular way in relation to the phenomenon. The conventional structure of an academic question most often does not adopt an ostensible interrogative form, rather, presenting a 'text' for interpretation, suggesting a line of enquiry for the respondent to pursue. The second

phase of the investigation entailed the reformulation of the general textual framework in terms of particular kinds of questions and the manifestly different demands that these make of the learner. Factual questions, that may initially appear antithetical to the open-ended questioning epistemology of the Human Sciences, require a process of selection and organisation. A question suggests an area of factual knowledge but an appropriate answer necessitates circumscribing the limits of this factual terrain, selecting the most relevant and central facts and creating a coherent structure. These processes of selection and organisation typify all construction of textual understanding. Relational questions emphasise the nature of the connections between facts and it is the structure of these relations that define the process of enquiry. Appropriate engagement traces how particular facts are connected to one another (e.g. contingently, causally, antithetically,) and in this network of relations, establishes a particular understanding of the phenomenon under question. These kinds of questions reflect and require the spatial and hierarchical form of textuality as opposed to the linear and temporal form of verbal dialogue. Conceptual questions focus on establishing the definitional parameters for particular objects or events under enquiry. These questions exemplify the decontextualisation of the self-referential language world of text from the world of ostensive reference and experience. This analysis of various question types demonstrates a common underlying textual framework of enquiry but results in an articulation of important nuances and differentiation of task demands. Appropriate questioning engagement, therefore, requires not only shared epistemic assumptions about the enquiry process in general but also effective meta-cognitive control over the demands of particular tasks.

11.2 The Problem of Underpreparedness.

There was a strong contextual impetus to articulate the usually implicit task demands of university study in the way outlined above. The provision of schooling in South Africa in the Apartheid era was highly differentiated and deliberately unequal and, therefore, continuity between prior learning and the demands of tertiary education could not be assumed. Indeed, universities with a commitment to increasing access for Black African students were confronted with an unprecedented educational challenge. The difficulties encountered by these students were conceived of as fundamentally different to the usual problems or difficulties associated with university study. As opposed to individual affective or cognitive factors, the problem of 'underpreparedness' is a socio-cognitive phenomenon rooted in the systemic effects of particular (inadequate and inappropriate) forms of mediation. Accepting that students who may have the intellectual potential for academic study may not necessarily spontaneously demonstrate appropriate skills and knowledge, the exigent demand was to create learning opportunities that would develop and extend this potential.

The process of mediation must negotiate the terrain between the demands of a particular task and learners' ways of knowing and being. Effective mediation, therefore, entails complementary analyses of these two realities: the task and the actions of learners. Whereas students' performance is most often considered quantitatively as a matter of degree in relation to a (hypothetical) 'model answer', the questioning epistemology of textuality provides an alternative basis from which to investigate the learning actions of students. In these terms, the study provides an analysis of the cognitive processes that underlie the production of particular answers.

It was evident that the notion of "text posing as a question" (Gadamer, 1975: 337) was foreign to students, who tended to treat the text as a closed and final answer rather than

a moment in a perpetual process of enquiry. The hermeneutic approach recognises the question of the text as occurring at two sites: the author generates the text as an answer to a question, and the reader generates a series of questions “in front of the text” (Ricoeur, 1981). In both senses, underprepared students struggled to conceptualise the text in questioning terms, imposing questions that either submit uncritically to the apparent authority of the text (or other external source), or remain tied to the familiar domain of their own experience and knowledge. The data revealed questioning patterns that were peripheral to the focus of the text, attempted to ground the enquiry process in familiar situational realities or even entirely resisted the instruction to question, producing closed statements of ‘truth’. Students’ engagement was characteristically “blurred and sweeping” (Feuerstein, 1980) fixating on minor details and failing to appreciate the hierarchical structure of enquiry typical of textuality. The world of the text for these students, therefore, remained closed and the possibilities for learning and cognitive change were negated. In Gadamer’s (1975) terms, there was no “fusion of horizons”.

The analysis of students’ questioning engagement with text provided a new perspective from which to return to the problem of academic failure. Assessment of students’ knowledge is typically restricted to the conventional examination form. Examination questions are antithetical to the usual uncertainty or lack of knowledge suggested by a question in conversation. Dialogical questions assume that the interlocutor will be able to resolve this uncertainty or supply that which is unknown. In contrast, an exam question is patently inauthentic as the examiner ‘knows’ the answer to the question and will evaluate any answer in terms of this knowledge. A given question, therefore, directs the student’s response in a highly circumscribed way. A comparison of performance (as determined by conventional mark allocation) and an analysis of the questioning process that underpinned the construction of particular answers, delivered two important explanatory insights with regard to the phenomenon of underpreparedness:

- 1) The same performance may be generated in entirely different ways. The failure of L1 and L2 students was shown to have different cognitive origins, supporting the view that underpreparedness cannot be reduced to individual affective and cognitive factors typically associated with poor academic performance.
- 2) Different kinds of academic questions make different demands that are obscured by the ostensible form of given questions. In addition, where students do not share the dominant questioning form, different kinds of questions provoke different processes of reconstructing the question.

This refined analysis of the interface between learners and typical academic tasks, reveals that while underpreparedness is a distinguishable phenomenon, it is demonstrably not a static cognitive entity. Rather, underpreparedness is seen to be a dialectical process of engagement in which the actions of the learner both transform and are mediated by the demands of particular tasks. In Shweder's (1991) terms, the task and the learner are implicated in one another's realities. This dynamic view yields mediational possibilities in that the parameters of the interaction between learner and task are open to change.

11. 3 The process of Mediation

The methodology adopted in this study explicitly endorsed the integration of pedagogical purposes and analytic objectives and the data were generated in the process of specifically designed educational interventions. The findings with respect to the nature of academic task demands and the form of underpreparedness, therefore, provide indicators for effective instructional design and curriculum innovation.

The academic questions of Task 8 in Phase One are typical of essay assignment questions ordinarily presented to students within a few months of beginning their university studies. The assumption in the setting of such questions is that students will spontaneously and independently identify these statements as posing a problem and establishing the parameters of an argument. Students' engagement with the tasks of this study make it clear that this assumption is ill-founded where there is a discontinuity with students' prior learning experiences.

Tasks 1, 2 and 3 contain minimal mediation (or meta-cognitive direction) and, in general, students' responses reveal that they do not spontaneously apply the questioning forms that are appropriate and expected. The important point which this indicates is that the learning-teaching process cannot productively take as a point of departure the questions that students ask, as the type of questions which they spontaneously formulate do not effectively probe the world of the text or drive the process of enquiry forward. Tasks, therefore, need to be structured in such a way as to change the generative (epistemic) base from which questions are constructed.

The other tasks conducted in Phase One have a much more forceful regulatory function, directing students' to the relations between questions and answers and providing models for appropriate questioning of text. The primary assumption is that mediation must provide opportunities for students to "practise what they do not know" (Miller 1989(a): 13) or to engage with that with which they are unfamiliar. As Miller (1989(a), 1989(b)) has argued, the way out of the Meno paradox is through mediation or "other regulation" which makes it possible for that which is foreign or unfamiliar to penetrate the learner's horizon. The role of mediation in the learning-teaching process is to provoke the development of those functions that are not yet mature by guiding the student through the zone of proximal development (Vygotsky 1978).

In order to accelerate the development of an appropriate epistemic frame and, hence, the appropriate cognitive questioning schemes, tasks need to explicate the hidden demands of knowledge construction in the Human Sciences. Further, at least initially, tasks should externalise the regulatory meta-cognitive functions or model appropriate mental strategies for students. Feedback to tasks and repeated opportunities to 'practice the unknown' will eventuate in the internalisation of this monitoring and regulatory function. The design of teaching intervention to focus on the epistemic and meta-cognitive levels enables the formation of appropriate cognitive operations and, hence, fully independent engagement in the questioning process. This is a critical point as repeated exercises of the form of Tasks 1, 2 and 3 which simply present the task of 'questioning text' will not readily succeed in accelerating appropriate questioning or in providing the cognitive tools for independent action. If our interest as educators is in change, Vygotsky's criterion must guide our practice, "The only 'good learning' is that which is in advance of development" (1978: 89). In the South African context where there is a historical imperative to provide access to tertiary studies for people who have previously been denied such access, this demand for acceleration is intensified.

The tasks in the second phase of the project were typical examination questions, constructed to assess students' learning through a curriculum designed to develop specifically, foundational knowledge of the discipline of psychology and generally, critical engagement with text. These questions were, therefore, construed by the examiners as valid indicators of the effectiveness of the learning-teaching process that preceded them. The structure of the first-year psychology programme expressly aimed to provide a supportive learning context for students, with a focus on modelling appropriate critical reading. Despite this, the analysis of L2 students' engagement in the examination assessment tasks indicates that underpreparedness is a distinct phenomenon that can

be defined in terms of questioning engagement as opposed to the inadequate answers generated by L1 failing students. Curriculum development must, therefore, take into account heterogeneous learning needs. The mediation of university task demands for underprepared students entails more than simply additional work of a similar nature to that traditionally provided for struggling students. Further, it is evident that the conventional form of academic questions obscures the questioning demands of the task and, therefore, teaching students to 'answer the question' entails developing the ability to read this embedded questioning frame. However, the general critical epistemology that typifies late 20th century (post-modern) enquiry in the Human Sciences is manifest in various kinds of questioning that make differentiated demands and generate different (cognitive) responses. Mediation must, therefore, develop meta-cognitive control for selectively appropriate engagement.

Finally, the analysis of students' engagement with these questioning tasks makes it possible to offer the following guidelines for the construction of tasks in an educational programme for underprepared students.

1. Tasks should be designed to explicate epistemic assumptions, that is, to heighten the contextually relative nature of knowledge and its development through successive syntheses of theses and antitheses (Ströhm-Kitchener 1983). Questions should guide students to problematise the unproblematic, establish oppositions, and construct implicit text. The constraints and possibilities of questioning text are quite distinct from the question and answer form of verbal dialogue. Appropriate questioning needs to take account of the distanced relations of author to text, and text to reader, and the perpetual interplay of opening and closure which text demands. Tasks should focus on probing the question behind the text or viewing the text as part of a much wider process of enquiry.

2. Teaching students to read academic questions entails articulating the general epistemic framework in the particular demands of different kinds of questions. Such differentiation of demand may be highlighted through the construction of different kinds of questions in relation to the same content. The way in which a particular question functions to limit and extend the enquiry process can thus be comparatively established.

3. Further, it needs to be recognised that different kinds of questions not only demand different kinds of appropriate engagement but, also, elicit different kinds of inappropriate response. This implicational relationship between the nature of the task and cognitive action points to the importance of inhibiting such inappropriate responses that may be quite well-developed and spontaneous. Effective mediation, therefore, involves a critical awareness of the ways in which tasks may mislead underprepared students and should facilitate a process of un-learning (Miller, 1989 (b)).

4. The use of familiar content when introducing students to unfamiliar forms of knowledge may impede rather than enhance learning. Where the emphasis is on teaching new ways of operating with knowledge (in the case of this study, new approaches to questioning), the disruption of the known produced by unfamiliar content seems to facilitate this process by preventing reliance on inadequate known strategies. In contrast, familiar content may disguise the very unfamiliarity of the form of the task that confronts the learner. A task that thus masks new or unfamiliar form demands in familiar content, may be extremely useful to the researcher as it elicits systematic errors indicative of the cognitive operations applied by subjects. However, this is to make a different point to that of the educational task of *changing* such

mental processes. In this regard, the results of this study are in agreement with Zueli (1986) and Craig (1992) that familiar content may merely disguise the foreign form that must be mastered and encourages students to rely on past and inappropriate mental strategies. Unfamiliar content may serve to impel the reader into a relation of openness towards the text, allowing for questioning of the self and the world of experience, and for the development of new forms of thought.

5. The strategic value of using unfamiliar content to provoke cognitive change does not negate the value that familiar content and experiential knowledge may have for the learning-teaching process. What is required is a well-integrated and articulated curriculum in which the familiar and the unfamiliar are blended in various representations of the form and content of academic tasks, and the sequencing of particular kinds of tasks is carefully structured.
6. Initially the questioning role should be adopted by the task, modelling the form and type of questioning that is appropriate. Underprepared students' own questions tend to limit their opportunities to critically enter the world(s) of text. The re-interpretation of tasks through feedback on performance will enable students to increasingly gain meta-cognitive control over their task engagement. In this regard, tutorial dialogue may provide an important modelling resource. Because it is the particular demands of textual enquiry and knowledge construction that create difficulties for underprepared students, the risk of first order mediation is that the conversational format of tutorial discussion may serve to substitute for the reading process. However, a competent tutor can externalise the critical reading process, creating a model for appropriate questioning engagement.

11.4 Further Research.

This project is itself situated within the ongoing cycles of questioning that characterise the knowledge construction process. By raising questions about the conflicting forms of questioning that can be applied to the development of knowledge, the present study attempts to contribute to an understanding of:

1. The epistemological foundations of knowledge production in the Human Sciences and the demands that this general framework makes of learners;
2. The formulation of academic enquiry in particular kinds of questions;
3. The nature of the questions that underprepared students ask in their attempts to construct knowledge from text and the ways in which they engage with various types of academic questions;
4. The kinds of tasks and structure of the mediational process required to provoke learning in the zone of proximal development.
5. The nature of underpreparedness (and preparedness).

However, these 'answers' point to further possible questions. In particular, three primary directions may prove profitable in further understanding the possibilities for effectively mediating the questioning epistemology of the Human Sciences for underprepared students:

1. The levels of difficulty posed by different kinds of questions and particular combinations of familiar/unfamiliar content and form need more precise delineation. Articulating these differentiated demands would contribute towards the construction of curricula in which tasks are appropriately sequenced for the development of autonomous functioning.
2. It would be beneficial to apply the analysis of how learners reconstruct or transform questions, to extended assignment tasks. While the examination questions analysed in this study share important features with an essay task, sustaining a line of enquiry

through an extended piece of writing involves multiple levels of questioning. The construction of an essay entails the reformulation of a given question as a series of smaller questions that together constitute the terrain of enquiry and provide the structure for a particular answer. An analysis aimed at 'reading' constructed responses in terms of these hidden generative questions may further understanding of the task demands of essay writing, and of the appropriate and inappropriate cognitive processes that generate particular kinds of response.

3. An analysis of the processes of questioning implemented by tutors and learners in tutorials may usefully indicate the ways in which dialogue may serve to hinder or promote learning.

11.5 A conclusion: the Questioning Form of Knowledge.

The focus on the process of questioning in the development of knowledge has provided a productive framework for further explicating the nature of university study and the nature of underpreparedness and offers insights into the further design of mediating tasks to provoke learning in the Zone of Proximal Development. The fecundity of this focus lies in the central role of questioning in the development of knowledge, not only for the individual student but further, in the collective enterprise of knowledge. It is a distinct characteristic of university study to call even ostensibly fixed realities into question and, hence, to reconstruct our worlds of understanding. This potential for the transformation of both the world and our-selves, is intensified in the critical questioning process opened up through textuality. Text, which the author has constructed in response to a question, confronts the reader, questioning his/her world, and requires a questioning response. Likewise, the evaluation of learners' engagement, while requiring written answers, entails the construction of a range of enquiry both elaborated and constrained by the particular formulation of a given question. The answers that we are called upon to construct are

not the end of a process but the beginning of yet a further cycle of questioning. It is the persistent questioning of all knowledge that opens up new and previously unknown horizons.

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APPENDICES

**THE QUESTIONING PROCESS IN THE
DEVELOPMENT OF KNOWLEDGE**

Jill Bradbury

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APPENDIX 1

THE TTT PARADIGM STATEMENT

THE TEACH-TEST-TEACH PARADIGM

The teach-test-teach (TTT) research project is an attempt to identify potential academic ability. It is not intended or designed to measure ability or to yield a psychometric/edumetric selection test. The theoretical basis of the TTT project, the research design and the research objectives, are fundamentally different from conventional approaches to testing, measurement, and selection techniques in psychology and education.

Standardised tests such as intelligence or other “ability” tests are designed to measure an individual’s ability at the time of testing. Performance on the test is measured against the average performance of similar individuals. In order not to violate the principles that govern test construction, at least two critical conditions must obtain. First, the testees must be similar in terms of background and, in particular, in learning experience and opportunities, to the population from which average performance levels are derived. Second, the “ability” the test is designed to measure must be assumed to be a relatively stable and fixed property of the individuals tested. The reliability and validity of a measure requires the assumption that a quantum of ability remains stable over time and resistant to change.

In the context of the University, the backgrounds, learning histories and educational opportunities vary dramatically both within and between various student populations. Attempts to measure ability are bound to produce spurious information. Equally important, the assumption that academic performance based on a notion of ability as an invariant quantitative intellectual property can be predicted, runs counter to any educational goal that extends beyond the imparting of practical skills and factual information.

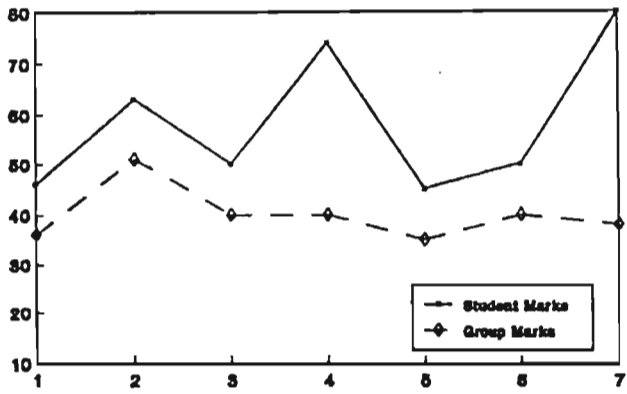
By definition, potential cannot be measured and can only be identified once realised. Any attempt to identify academic potential must translate into an attempt to provoke individuals to realise abilities that are not manifest in their previous academic performance. The first “teach” component of the TTT approach is an attempt to provide students with the necessary tools to realise abilities that may not have been manifest precisely because they have been denied access to the kinds of tools required to achieve proficiency in typical university tasks. The second “teach” component that occurs after testing students’ learning ability, is necessary to consolidate whatever gains are

made. The TTT paradigm represents a continuous process and requires that individuals be monitored through cycles of T-T-T. The fundamental assumption is that education provides learning opportunities that alter the very abilities that are assumed or treated as fixed in the construction of psychometric/edumetric tests. Although the TTT programme can serve as a vehicle for selection, with the students who perform best at the time of testing being selected, it is primarily an educational intervention whose end is not testing but teaching.

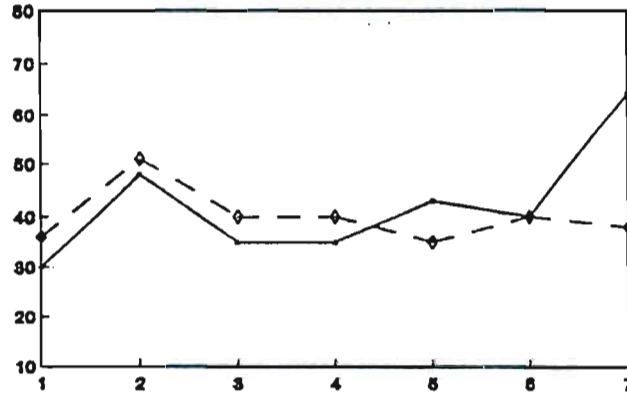
APPENDIX 2

STUDENT PERFORMANCE PROFILES

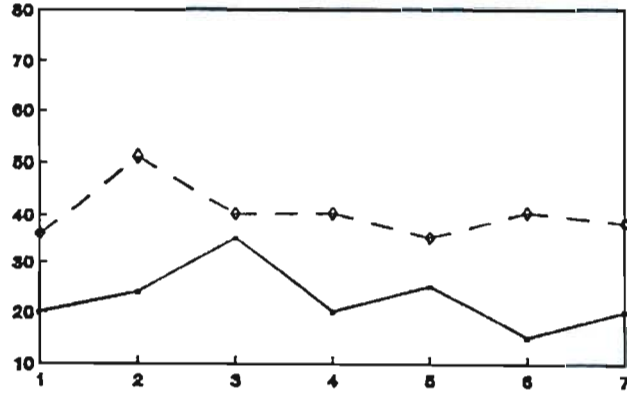
Assessments 1 - 7
Marks (%)



A



B



C

Figure 1: Developmental Profiles

APPENDIX 3

TTT SELECTION PROGRAMME TIMETABLES

TIME TABLE: T-T-T PROGRAMME, DECEMBER 1989

	SUN 3	MON 4	TUES 5	WED 6	THURS 7	FRI 8	SAT 9	SUN 10	MON 11	TUES 12	WED 13	THURS 14	FRI 15	SAT 16	
8-9	ARRIVE	Intro to Arts/ Soc.Sc.	English	Assignment 1 English	Politics	English	Breakfast		Assignment 2 Philosophy	Econ	Assignment 3 Econ	Geog	DEPART		
9-10	Registration	Knowledge Production	Anthro	Socio	Politics	Socio	"Level Session" & Feedback	Career Display	Philosophy	Social Work	Geog	Legal Studies			
10-11			History	History	Legal Studies	Social Work			Psycho	Psycho	Geog	Psycho			
11-12		CONSOLIDATION SESSIONS					Bursary/ loan/ internship	Career Workshop	CONSOLIDATION SESSIONS					Assignment 4	
12-1		READING TEST	SHORT ANSWER TESTS							SHORT ANSWER TESTS				Essay on T-T-T programme	
1-2		L U N C H													
2-3	Intro to pro- gramme	Knowlege Production	Tut 1 (juggler)		Tut 2 (efficiency)		Career Workshop	Tut 3 (chair)				EXAM			
3-4															
4-5	BRONOWSKI SERIES					BRONOWSKI SERIES									
5-6	1	2	3	4	5			6	Essay						
6-7	D I N N E R														
00 ➤	LAN GUAGE EXAM	STUDY							STUDY				Cultural Evening		

Student Study: Reading/Writing
 Assessments

TIMETABLE: 2 -15 DECEMBER 1990

	SUN 2	MON 3	TUES 4	WED 5	THURS 6	FRI 7	SAT 8	SUN 9	MON 10	TUES 11	WED 12	THURS 13	FRI 14	SAT 15		
8		INTRO TO HUMANITIES & SOCIAL SCIENCES AND KNOWLEGE PRODUCTION	COMMUNICATION, LANGUAGE AND LITERATURE STUDIES	HISTORICAL STUDIES	ASSESS 1	ASSESS 2			KP ASSESS 5	LEGAL STUDIES	ASSESS 6	ASSESS 7	ASSESS 9 & 10	STUDENTS DEPART		
9	STUDENT REGISTRATION						HUMAN ACTION IN A SOCIAL CONTEXT	ECONOMIC STUDIES			QUESTION & ANSWER SESSION	APPLIED STUDIES	EXPERIMENTAL METHOD & STATISTICAL STUDIES		THE STUDY OF POLITICAL THINKING & PHILOSOPHY	STAFF & STUDENT CONSOLIDATION OF PROGRAMME & INTER-VIEWS
10																
11																
12							LUNCH									
1		L	U	N	C	H			L	U	N	C	H			
2	INTRO TO PROGRAMME & STAFF	↓	↓	↓	↓	↓	ASSESS 3		↓	↓	↓	↓	FORMAL CLOSING			
3							ASSESS 4									
4		BRONOWSKI SERIES						BRONOWSKI SERIES					ASSESS 8			
5													STUDENT PARTY			
6																
7	S U P P E R															
8 ^{PM}	S T U D Y					MOVIE	S T U D Y									

APPENDIX 4

PHASE TWO: PSYCHOLOGY I TASKS AND FEEDBACK

**PSYCHOLOGY IA 1996
UNIVERSITY OF NATAL
MODULE 4: TASK TEN**

SURNAME: _____

NAME: _____

STUDENT NUMBER: _____

TUTOR'S NAME : _____ **TUT GROUP:** _____

Question one: Group discussion task: Read the following extract from Geertz from page 10 in your module text.

Extract from Geertz, C. 1983: Local Knowledge.

Surely if there is one thing that everyone takes to be part of the way in which the world is arranged it is that human beings are divided without remainder into two biological sexes. Of course, it is recognised everywhere that some people-homosexuals, transvestites, and so on-may not behave in terms of the role expectations ascribed to them on the basis of their biological sex, and more recently some people in our society have gone so far as to suggest that roles thus differentiated should not be assigned at all. But whether one wants to shout "*vive la différence!*" or "*à bas la différence!*", the sheer existence of *la différence* is not subject to much discussion. The view of that legendary little girl - that people come in two kinds, plain and fancy - may have been lamentably unliberated; but that she noticed something anatomically real seems apparent enough.

Yet, as a matter of fact, she may not have inspected a large enough sample. Gender in human beings is not a purely dichotomous variable. It is not an evenly continuous one either, of course, or our love life would be even more complicated than it already is. But a fair number of human beings are markedly intersexual, a number of them to the point where both sorts of external genitalia appear, or where developed breasts occur in an individual with male genitalia, and so on. This raises certain problems for biological science, problems with respect to which a good deal of headway is right now being made. But it raises, also, certain problems for common sense, for the network of practical and moral conceptions woven about those supposedly most rooted of root realities: maleness and femaleness. Intersexuality is more than an empirical surprise; it is a culture challenge.

It is a challenge that is met in diverse ways. ... different people may react differently when confronted with individuals whose bodies are sexually anomalous, but they can hardly ignore them. If received ideas of "the normal and the natural" are to be kept intact, something must be said about these rather spectacular disaccordances with them.

Americans regard intersexuality with what can only be called horror. Individuals, Edgerton says, can be moved to nausea by the mere sight of intersexed genitalia or even by a discussion of the condition. "As a moral and legal enigma," he continues, "it knows few peers. Can such a person marry? Is military service relevant? How is the sex on a birth certificate to be made out? Can it properly be changed? Is it psychologically advisable, or even possible, for someone raised as a girl, suddenly to become a boy? ... How can an intersexed person behave in school shower rooms, in public bathrooms, in dating activities?" Clearly, common sense is at the end of its tether.

The reaction is to encourage, usually with great passion and sometimes with rather more than that, the intersexual to adopt either a male or female role. Many intersexuals do thus "pass" for the whole of their lives as "normal" men or women, something that involves a good deal of careful artifice. Others either seek or are forced into surgery to "correct" cosmetically anyway, the condition and become "legitimate" males or females. Outside of freak shows, we permit only one solution to the dilemma of intersexuality, a solution the person with the condition is obliged to adopt to soothe the sensibilities of the rest of us. "All concerned," Edgerton writes, "from parents to physicians are enjoined to discover which of the two natural sexes the intersexed person most appropriately is and then to help the

ambiguous, incongruous, and upsetting 'it' to become at least a partially acceptable 'him' or 'her.' In short, if the facts don't measure up to your expectations, change the facts, or, if that's not feasible, disguise them."

So much for savages. Turning to the Navaho, among whom W.W. Hill made a systematic study of hermaphroditism as early as 1935, the picture is quite different. For them, too, of course, intersexuality is abnormal, but rather than evoking horror and disgust it evokes wonder and awe. The intersexual is considered to have been divinely blessed and to convey that blessing to others. Intersexuals are not only respected, they are practically revered. "They know everything," one of Hill's informants said, "they can do the work of both a man and a woman. I think when all the [intersexuals] are gone, that it will be the end of the Navaho." ... Change a few interpretations of a few curious facts and you change, here anyway, a whole cast of mind. Not size-up-and-solve, but marvel-and-respect.

Finally, the East African tribe, the Pokot, adopt yet a third view. Like the Americans, they do not regard intersexuals highly; but, like the Navaho, they are not at all revolted or horrified by them. They regard them, quite matter of factly, as simple errors. They are, in what is apparently a popular African image, like a botched pot. "God made a mistake," They say, rather than. "the gods have produced a wondrous gift," or "we are faced with an unclassifiable monster."

Pokot regard the intersexed person as useless-"it" cannot reproduce or extend the patriline as can a proper man nor can it bring in bride-price as can a proper woman. Nor can "it" indulge in what the Pokot say "is the most pleasant thing of all." sex. Frequently, intersexed children are killed, in the offhand way one discards an ill-made pot (so, too, are microcephalics, infants without appendages, and so on; so, too, grossly deformed animals), but often they are allowed, in an equally offhand way, to live. The lives they live are miserable enough. but they are not pariahs-merely neglected, lonely, treated with indifference as though they were mere objects, and ill-made ones at that. Economically they tend to be better off than the average Pokot because they have neither the ordinary kinship drains on their wealth nor the distractions of family life to hinder their accumulation of it. They have, in this apparently typical segmentary lineage and bride-wealth sort of system, no place. Who needs them?

In short, given the given, not everything else follows. Common sense is not what the mind cleared of cant spontaneously apprehends; it is what the mind filled with presuppositions - that sex is a disorganising force, that sex is a regenerative gift. that sex is a practical pleasure - concludes. God may have made the intersexuals. but man has made the rest!

1.1 Identify the common sense views on intersexuality of:

a) Americans

b) the Pokot

c) the Navaho

1.2 What is Geertz's attitude towards the views of Americans and how do we know this from the text?

1.3 What do these different views demonstrate about the nature of common sense?

Question two: Geertz's framework of common sense.

In your own words, **briefly describe** each of the key characteristics of common sense knowledge & the corresponding opposite characteristic of scientific knowledge (Refer to pp. 6 - 8 and pp. 11 – 18 of your module text.)

a) common sense is directly recorded:

... whereas scientific knowledge is explicitly interpretive:

b) common sense is simply self-evident:

... whereas scientific knowledge is complex and layered:

c) common sense is practically valuable:

... whereas scientific knowledge is theoretically interesting.

d) common sense is contradictory:

... whereas scientific knowledge resolves contradictions:

e) common sense is authoritative:

... whereas scientific knowledge is substantiated by evidence:

Question three: Comparing scientific knowledge with common sense. (p.19)

What is the nature of difference or connection between common sense and science in terms of:

a) content (what is known)

b) form (method of knowledge construction)

PSYCHOLOGY IA 1996
UNIVERSITY OF NATAL
MODULE 4: FEEDBACK TO TASK
TEN

Question one: Group discussion task.

1.1 Read Box 4 on page 10. Identify the common sense views on intersexuality of :

a) Americans

Americans are horrified by intersexuals and the usual social structures are unable to accommodate them in any way. Intersexuals are rejected and marginalised by society and there is enormous pressure on them to conform to usual gender roles.

b) Pokot

The Pokot view intersexuals as defective individuals ("mistakes") but are not at all horrified by them. They have no real place in society but are basically disregarded rather than harassed as in American society. They may be better off financially than other members of society as they do not have the usual kinship commitments.

c) Navaho

The Navaho view intersexuals as a blessing and spiritual benefit to the community as a whole. Because they have both male and female physical characteristics, they are viewed as combining also the strengths and value of both sexes. They are treated with respect and awe.

1.2 What is Geertz's attitude towards the views of Americans and how do we know this from the text?

Geertz views the American view as barbaric and primitive. He inverts the usual stereotypic prejudices and shows that less technologically advanced (or "developed") societies are far more humane and civilised in their responses to this phenomenon. He expresses this attitude by dismissing Americans as "savages" and satirising their views by listing a ridiculous set of trivial circumstances created by the rigid bureaucratic structuring of society in terms of gender. He shows his distance from their views by the use of inverted commas to refer to what is "normal" or "legitimate".

NOTE: Many answers to this question identified Geertz's attitude but did not indicate **how** it is possible to deduce this view from the text. Look back at the text and notice the clues which Geertz gives us. He does not state his view directly, but uses various ways to communicate his view quite strongly:

a) the **inverted commas** indicate his lack of acceptance of the American view of normality and the correction procedures which they advocate;

b) he lists a plethora of problems which seem to Americans very serious, but **the way** they are listed, showing common sense "at the end of its tether" make them seem ridiculous;

c) he hints that the pressure on intersexuals to adopt a particular male / female sexual role is forceful and inhumane (... "with great passion and sometimes with rather more than that")

d) he finally dismisses their view as that of "savages"

Use this example to think about the process of reading:

As readers, we must use the hints in the text to **construct** Geertz's attitude. Reading is always a process of constructing meaning - often the author may say something indirectly or imply something rather than stating it explicitly - it is this meaning which we must work at constructing ourselves.

1.3 What do these different views demonstrate about the nature of common sense?

They illustrate the **constructed** nature of common sense. Common sense is not universally common; different people interpret the same phenomenon differently. This means that although common sense puts itself forward as a direct record of copy of reality, it is **not**.

Question two: Geertz's framework of common sense.

In your own words, **briefly describe** each of the key characteristics of common sense knowledge & the corresponding opposite characteristic of scientific knowledge (pp. 6 - 8 and pp. 11 - 18).

a) common sense is directly recorded:

Common sense puts itself forward as a direct copy of the facts of reality. The ostensible / apparent character of common sense denies the interpretive process and assumes that understanding is a simple copy or mirror of reality.

NOTE: this ostensible characteristic is refuted by the differences revealed in different common sense systems - see the example in question one. Make sure that you grasp the distinction between the way in which common sense is asserted and its actual interpretive and constructed form. It **seems** to be a direct record of reality although it is not.

... whereas scientific knowledge is explicitly interpretive:

The function of science is explicitly (openly) stated as to develop and construct understandings of the world. Scientific knowledge and thinking aims to try and understand and explain the world.

NOTE: although science is a formal process of making knowledge about the world, quite often science takes on the appearance of a body of unquestionable fixed truths which have been discovered about the world. In this way, like common sense, claims to knowledge may seem unquestionably factual. However, all scientific claims are constructed by people and can be questioned and perhaps even overturned.

b) common sense is simply self-evident:

Common sense knowledge assumes that the truth about reality is simple and does not require either complex procedures of construction or complex demonstration or argument for its claims. Things are assumed to simply be the way they appear.

... whereas scientific knowledge is complex and layered:

Science does not simply accept things the way they immediately appear, and requires that the facts "behind" or "underlying" things be investigated. This process might entail questioning even those things which seem self-evident. Further, specialist tools may be required which will enable us to "see" things in a new way or from a new perspective.

c) common sense is practically valuable:

Common sense enables us to live in the world and to solve practical, everyday problems. If it has no immediate use, it is simply discarded and replaced.

... whereas scientific knowledge is theoretically interesting.

Although scientific knowledge may lead to the solving of problems which affect people's lives and may eventually have much practical use, this is not the sole or even most important aim of science. Scientific knowledge is aimed at understanding why things are the way they are, i.e. theorising and explaining reality.

NOTE: Scientific knowledge **might** be useful, but it also might not - usefulness is of secondary importance. This opposition of practical and theoretical value in knowledge is a division which is being increasingly challenged. It could be argued that part our task as "intellectuals" (those who are trained in theoretical ways of thinking about the world) is partly to make this thinking applicable to the kinds of problems which confront our society. However, sometimes the best solutions to immediate practical problems are co-incidental results of good theoretical work - the example of the discovery of electricity (see p. 16) illustrates this.

d) common sense is contradictory:

Common sense is focused on immediately useful and applicable knowledge and the demands of the context play a large role in determining the most appropriate way of thinking. Thus, contradictions and incoherence in thinking is tolerated. Different views might be held at different times and by different people.

... whereas scientific knowledge resolves contradictions:

Where contradictions are identified in science, these must be resolved in some way. There is a demand for consistency and coherence in our knowledge. Contradictions between theories and evidence may lead to the construction of a new and stronger theory which "fits" with all available evidence. Claims may be limited to particular contexts and the conditions that limit these claims must be specified.

e) common sense is authoritative:

Common sense is authoritative and difficult to challenge. The authority of its claims derives from: 1) reference to the self-evident appearance of things; 2) the agreement between the majority of people about the truth of shared understandings; and 3) the consolidation of common sense views in public institutions, e.g. religious and political dogma.

... whereas scientific knowledge is substantiated by evidence:

No claim can be said to be scientific without the support of evidence. The available evidence must “fit” the claim made and the theory must be able to explain all known cases. New scientific claims can challenge and even refute previous scientific knowledge either by identifying new evidence or by better explaining the evidence that exists. Thus no claim is unquestionable and the authority of a claim is only as strong as its relation to evidence.

NOTE ON QUESTION TWO AS A WHOLE.

This question was generally well done. There were two general faults which you must use to check your understanding:

- 1) Each characteristic of common sense has a direct opposite in scientific knowledge. Ensure that these “oppositions” are clearly and precisely established. Sometimes the “opposites” established were unconnected, e.g. common sense is practical and scientific knowledge demands evidence. In other words, makes sure that the particular comparison is established in terms of the same aspect. This is even more critical in preparation for Task 12 and the exam where you may not be presented with the oppositions as directly as you were in this task. Use the framework summary (p. 16) and work back through the text to ensure that the distinctions between these different aspects of comparison are clear.
- 2) Examples given in the text (astronomy, evolution, intelligence) are used to illustrate general claims about the way in which common sense and science are constructed. Make sure that you grasp the **general** point that is made in each case and that the way in which the example is used is clear. Some responses to this question repeated the examples from the text without showing how these examples demonstrate the more general characteristic in relation to **all** common sense and **all** scientific knowledge.

Question three: Comparing scientific knowledge with common sense. (p.19)

3.1 What is the nature of difference or connection between common sense and science in terms of:

a) content (what is known)

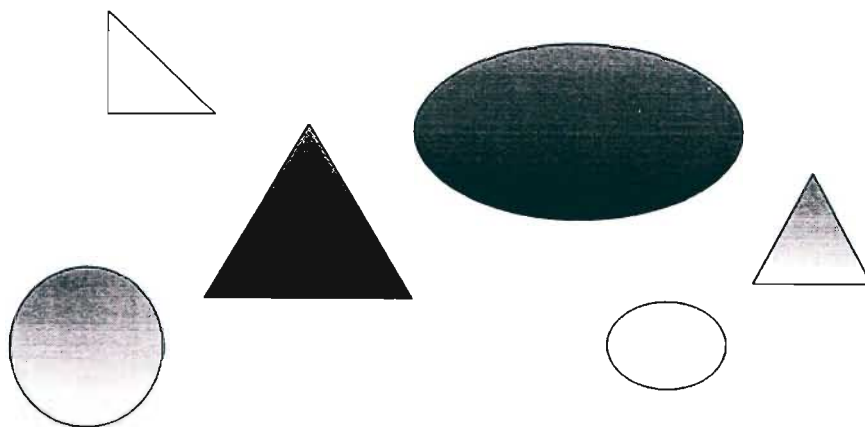
Common sense and scientific knowledge can be made about the same phenomena, i.e. the content or focus of thinking may be the same. What we know in common sense, might be established as scientific through finding evidence that will support and prove a particular view. Alternatively, the content or what is known in science, may become accepted as common sense.

b) form (method of knowledge construction)

The form or way of constructing knowledge in common sense and science is distinctly different. The most important distinguishing feature is that common sense can simply assert its claims as true, whereas scientific claims must be supported by evidence.

NOTE: the comparative framework discussed in your text - see summary p. 18, outlines the form characteristics of the two kinds of knowledge, i.e. what distinguishes the SHAPE of the one from the other.

Think of the characteristics of the simple shapes of circles and triangles - what distinguishes the one shape from the other is the way in which they are composed or put together. Regardless of such particulars as size and colour, there are certain features which make a shape a triangle rather than a circle.



(See also **A Guide to Learning** p. 14 and pp. 43 - 50 and think about the form of knowledge in terms of the analogy of a **game**).

In an analogous way, the characteristics offered in your text, show the distinctive form of common sense and scientific knowledge, i.e. referring to the shape or form of these different kinds of knowledge or the “**rules**” which govern the way it is constructed. It is this, rather than the particular content of actual examples of knowledge, which identifies some knowledge and ways of thinking as **SCIENTIFIC**.

3.2 Discuss with your group the possible meanings and implications of BOX 7, p.19. (Most groups did not have sufficient time to discuss this question and so it is being held over for discussion in tutorial 12.)

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MODULE 4: TASK 11

SURNAME: _____

NAME : _____

STUDENT NUMBER: _____

TUTOR'S NAME : _____ TUT GROUP: _____

1. How would we evaluate a "covering-all" law or theory? (p. 24)

2. What is a probabilistic claim and why is this kind of claim typical of social science?

3. Describe Pratt's pyramidal model and illustrate the use of this model in the organisation of knowledge in either **intelligence** or **evolution**. (pp. 26 - 28)

4. Use the illustration of the rhinoceros to explain what Gombrich means by his claim that "in our visual perception we meet the world half-way". (pp. 29 -31)

5. What does it mean to refer to language as a "grid through which reality is perceived"? (pp. 31 - 33)

6. What are theory-laden facts? Illustrate your answer with your own example from psychology or from one of the other courses which you are studying (**NOT** the examples given in the text).

7. Describe the dialectical relationship between evidence and theory and explain why this form of knowledge construction is typical of the social sciences.

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UNIVERSITY OF NATAL
MODULE 4: FEEDBACK TO TASK ELEVEN

1. How would we evaluate a “covering-all” law or theory? (p. 24)

We would examine the fit between the theoretical claims and available evidence. A “covering-all” thesis would need to explain all known cases. The strength of a particular theory is established in terms of how much can be explained. There should also be no instances where available evidence contradicts or challenges the conclusions offered by the theory.

2. What is a probabilistic claim and why is this kind of claim typical of social science?

A probabilistic claim indicates what is likely or probable to occur in the majority of cases but cannot be predicted for all possible cases. Whereas covering-all laws can account for all cases (even predicting future cases that have not yet occurred), probabilistic claims can only indicate what will probably happen in the majority of cases. This kind of claim is typical of the social sciences because the kinds of things which interest us (social / human phenomena) are complex and affected by many factors over which we have no control. It is therefore not possible to make claims that will cover all cases or predict with absolute certainty, what will occur in the future. For example, while we can make a general claim that the performance of siblings on intelligence tests will **tend** to be similar, this will not be the case in **all** families. Perhaps in one instance, the parents may favour one child over another, perhaps the schooling experiences of siblings may differ or family circumstances change, perhaps an individual child may be born with a genetic or biological defect. We cannot predict these possibilities or their effects on the performance of siblings in **particular** families, although the general claim would hold for **most** families.

NOTE: check that your response includes attention to the second part of this question: “*why is this kind of claim typical of social science?*”

Those who did address this part of the question, tended to simply state that social science is concerned with correlational studies rather than causal laws - the question is **WHY** is this so?

Implicit in this question is a statement that social science claims are probabilistic **NOT COVERING-ALL**. When you asked “why” something occurs the way it does, you are also **IMPLICITLY** (see Conceptual Dictionary) being asked why it does **NOT** occur some other possible way. Probabilistic claims are different from covering-all claims because they cannot account with certainty for all cases or predict future instances. This is particularly important in the social sciences, for two reasons:

1) There are multiple factors which interact to make up the social reality which we study and these cannot be easily experimentally controlled or isolated from one another, e.g. the effects of nature and nurture operate together in every individual's life and it is not easy to isolate the effects of one without the other interfering and also creating an effect.

2) Further, unlike inanimate objects, people do not simply act in response to external forces but also according to individual reasons and intentions. This means that it is always possible that a particular individual may act in an unpredictable way or in a dissimilar way from the majority.

3. Describe Pratt's pyramidal model and illustrate the use of this model in the organisation of knowledge in either intelligence or evolution. (pp. 26 - 28)

The pyramidal model of scientific knowledge proposes that theory consists of increasingly general claims which explain more and more possible cases; and which also offer explanations of explanations! Individual cases are combined into groupings or categories of similar cases and so increasingly general and more encompassing explanations are formed. The particular examples of actual events which can be empirically observed in the world, are subjected to experimentation (e.g. Piaget's conservation tasks) and categorisation (e.g. the kinds of evidence can be identified in evolutionary theory).

Even at this level, we are working with much more general (or abstract) kinds of things than the specific examples of real individual children or specific species. What

we observe in the world are not “homologies” but **examples of** homologies; what we observe in the world is not a thing called “conservation” but **examples of** something which Piaget conceptualised as a cognitive process called conservation. These more general claims about homologies, fossils etc. or conservation and the kinds of thinking at different stages, must again be subjected to further more general explanations in terms of the key concepts of each theory. Variation, competition and inheritance explain the way in which evolution occurs; or assimilation and accommodation explain the way in which the stages of the development of intelligence occurs. The most general claims of each of these theories (evolution through natural selection or intelligence as a universal human phenomenon) must be supported by each these lower and more specific levels. As we ascend the pyramid we become more and more distant from the empirical or specific instances, but these more general levels are each supported by that which is below.

NOTE 1: The model provided here deals with both examples simultaneously; you were only asked to use one of them.

NOTE 2: A good answer to this question involves:

1. A GENERAL description of the pyramidal model; AND
2. An illustration of the main ideas of this model through a SPECIFIC example.

This movement between a general idea and a specific example is a very typical requirement in constructing an answer to an academic question. You will, by now, be very familiar with the “hidden” requirement in all questions that you “illustrate” your answer. Make sure that an answer to a question like this one or question 4 in this same task (see note below) entails attention to both the general and the specific illustration. Also make sure that you clearly identify what the main or general issue is and what the example is. Here, the general thing is the “pyramidal model” and you are asked to think about the way in which this idea is illustrated or shown in the specific example of either evolution or intelligence. In other words, you must think about those aspects of these theories which SHOW or illustrate the way in which the pyramid is constructed. (There is much other information about these theories which is not relevant to this particular general idea.) You could be asked a different question that would focus your attention on evolution or intelligence as the main idea.

For example, “Discuss the theory of evolution and show the way in which evidence is used to support its claims.” Here the general or main focus is “evolution” and the illustration or specific or minor focus is on evidence and its relation to theory. For any question, make sure that you identify both the main / general idea and the illustrative or minor aspects and that you clearly identify which is which! (Look again at **Feedback 5: Comments on illustration** that focuses your attention on the difference between Task 5 and Task 3, question 5.)

4. Use the illustration of the rhinoceros to explain what Gombrich means by his claim that “in our visual perception we meet the world half-way”. (pp. 29 -31)

Gombrich claims that our perception is formed partly by the object or event in the world, but partly also by what we bring to the object. We “meet the world half way” by bringing to the process of viewing something, previous understandings and ways of making sense of visual stimuli. The point he makes is that “seeing” is an active mental process whereby we impose previous understandings rather than just passively receiving information through our eyes. The rhinoceros illustrations show this process very clearly: Although Bruce claimed to be drawing the rhinoceros in a “true-to-life” way, his perception of the animal was influenced and shaped by the previous image created by Durer. He saw the rhino through this previous knowledge of it, i.e. he “met it half way”.

NOTE: Again, you are being asked to respond to a general claim: “in our visual perception we meet the world half way” **and** to link this claim to a specific example, i.e. the rhino illustration. Many responses did only one or the other: either retelling the story of the rhino or giving the meaning of Gombrich's claim. You **MUST** do both! Use the note to question three above to think about the general and illustrative parts of this question.

5. What does it mean to refer to language as a “grid through which reality is perceived”? (pp. 31 - 33)

Language enables us to select particular pieces of information, to categorise and distinguish aspects of the world one from another. Without language to label and distinguish parts of reality, there would simply be a mass of stimuli coming our way that would be impossible to respond to and organise. Different language systems will

select different parts of reality or cut up / slice reality in different ways. ("Language" may refer to cultural languages but also to different systems within a language e.g. the special language of a discipline - read **A Guide to Learning** pp. 111 - 120 and the specific conceptual language of every theory (sometimes referred to as scientific terminology or "jargon").

6. What are theory-laden facts? Illustrate your answer with your own example from psychology or from one of the other courses that you are studying (NOT the examples given in the text).

Facts that are "theory-laden" are filled or saturated with theory. In other words, theory permeates or penetrates these facts; they cannot separate from the theory that explains them. In the most general sense, the discussion of the constructed nature of perception; the intertextual nature of knowledge and the influence of language, demonstrates that no facts can really be "pure" or free from assumptions. We could say that in identifying "facts" we always apply a kind of theorising or hypothesising about reality, through which we see and explain things. However, the effects of theory on what it is that we identify as fact and how we organise and structure this information, is also a part of the more formal process of scientific knowledge. The theories that we hold and importantly, the conceptual language or those theories, enable us to identify and label parts of our world in particular ways. Different theories identify and name facts differently. This process of naming and explaining facts transforms facts from mere examples of empirical events or individuals, into "evidence" which is organised in relation to a particular theory. (See the examples given on pp. 34 & 35 and on p. 55 of **A Guide to Learning**.) You could choose any example at all from psychology or from another course.

Some examples:

Anthropology: a mentalist conception of culture will focus attention on norms, values and social rules as opposed to the physical artefacts which may be of interest if you don't accept this definition of culture.

Sociology: A marxist theory will explain aspects of social relations in terms of such categories as "means of production" "class" "relations of production"; whereas a functionalist or systems theory would understand things quite differently, in terms of the functions of different components of society and interactions between them in maintaining a social system.

Literary studies: Depending on which theoretical approach we adopt we would think about a novel in quite different ways; e.g. a feminist reading would focus on women's

roles and the gender relations in a story; a structuralist approach would focus on the parts of the text and the way the author combines these to construct meaning.

The important thing is that in each instance, your example must show that **the theory provides us with a way of looking at reality and a way of identifying and labeling facts, which would NOT be the case if the theory was absent, or in the application of a different theory. The facts thus identified THROUGH a theory, are what we call theory-laden.**

7. Describe the dialectical relationship between evidence and theory and explain why this form of knowledge construction is typical of the social sciences.

This question is the heart of your essay: What does it mean to say that something is dialectical? It means that there is a two-way relationship, whereby seemingly opposite forces or processes are combined and understood as mutually constructed. In other words, we can understand the process of knowledge construction in the sciences as occurring **both** from the bottom up, through the gathering of specific factual information and the organisation of this information in increasingly general ways to support a theoretical claim **and** as a process whereby the theory which we hold affects and shapes what it is that we identify as fact and how we organise this information. Every act of gathering "facts" is an interpretive process, influenced other texts and images, previous ways of seeing and understanding and by the language which we use. However, in the process of gathering such information, new patterns and combinations may emerge which allow us to refine or change previous understandings and to develop more and more complex and general theories. For example, without some general sense of evolutionary change, the finches of the Galapagos islands would not have been of any real importance at all; but without these empirical examples (and many others) the general claims of evolution and the very precise understanding of evolution through natural selection would not be possible. So theory and the evidence provided by factual examples influence and shape one another in a dialectical way and our construction of knowledge in the social sciences moves back and forth between these levels.

NOTE: Make sure you have grasped this idea of a dialectical relationship; look up dialectic in your Conceptual Dictionary. If you have “got” this, look at the end section of the text (p. 36 - 40) which focuses on the role of meaning and interpretation as PARTICULARLY important in social science because the people whom we study are also busy making meaning about their worlds. (Do NOT worry about this issue if you are struggling with the main ideas about the relationship between theory and evidence.)

Use this feedback to help you prepare for writing your essay.

BEWARE: the essay requires that you integrate and LINK these different ideas together - DO NOT just rewrite this feedback - you will be SEVERELY PENALISED.

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UNIVERSITY OF NATAL
MODULE 4: TASK TWELVE

SURNAME:	_____
NAME :	_____
STUDENT NUMBER:	_____
TUTOR'S NAME :	_____ TUT GROUP: _____

1. What is the relationship between common sense and scientific knowledge in terms of **content**? (4 marks)

2. What is the relationship between common sense and scientific knowledge in terms of **form**? Choose **two** characteristics from Geertz's framework to illustrate your answer. (6 marks)

PSYCHOLOGY IA 1996
UNIVERSITY OF NATAL
FEEDBACK TO TASK 12

1. What is the relationship between common sense and scientific knowledge in terms of content? (4 marks)

In broad terms, common sense and scientific knowledge are not distinguished in terms of content or **what** they are about, i.e. both kinds of knowledge might be made about the same phenomena. (1)

The specific content (or what is known) about something in common sense, may become scientific if subjected to scientific method and proved. (1)

On the other hand, the content of scientific knowledge may become change common sense understandings and become part of ordinary people's knowledge. (1)

Any example (common sense about the movement of the earth and sun) **OR** an elaboration of the main claim that the content is **NOT** what differentiates the two kinds of knowledge. (1)

Comments on responses:

Most students have understood that it is not the content or topic of knowledge which differentiates commonsense and scientific knowledge. However, the way in which information moves or shifts between these two domains was not always clearly described. Something which is "known" in commonsense, is simply accepted as true, for this same thing to be "known" in a scientific way, it must be proven or established on the basis of evidence. If evidence can be produced for a claim, then that which is known becomes "scientific". Knowledge that has been proven (i.e. science) may, over a long period of time, become accepted as part of common sense. However, this does not mean that ordinary people necessarily understand the reasoning of these claims nor that they can produce the evidence known to scientists. In other words, the content of science becomes known in common sense way - just accepted as true.

Read: page 19 of Forms of Knowledge and page 44 of A Guide to Learning.

2. What is the relationship between common sense and scientific knowledge in terms of form? Choose two characteristics from Geertz's framework to illustrate your answer. (6 marks)

The distinction between common sense and scientific knowledge is in terms of the form or structure of claims to knowledge in each of these systems. (1 mark)

Any two sets of opposing characteristics correctly identified and briefly defined. (See Box 6, page 18) (2 x 2 marks)

Note the response only obtained the full marks in each case if the characteristic was correctly defined and the opposite characteristic was indeed the precise **opposite**.

The comparative form of the answer; link. (1 mark)

Comments on Responses.

There were two main areas of difficulty reflected in responses to this question: comparison.

a) Precision & detail.

The characteristics provided by Geertz's framework are closely linked and all relate to a view of commonsense as knowledge that does not require proof or support for its claims. Likewise the opposite characteristics offered in your text as defining the nature of scientific claims are interrelated and all demonstrate the reliance on evidence that is typical of science. **HOWEVER**, each characteristic focuses on a particular aspect of knowledge and deepens our understanding of the form which knowledge takes in a precise way. Make sure that you understand each of the characteristics precisely (as distinct from one another) and can exactly define each of them.

b) Comparison.

The question requires that you **compare** the two forms of knowledge. You cannot simply list characteristics - even if they are correctly listed, you will not get full marks. You must link the two forms of knowledge to one another and demonstrate the relationship (of difference in this case) between them.

Further, as has been pointed out in previous feedback sheets, a comparison must be made in terms of a common aspect. In other words, the particular aspects which you selected from Geertz's framework for commonsense, had to be matched or linked with their exact opposites in the analysis of scientific forms of knowledge. In other

words, you **cannot** get marks for statements like: “commonsense is practically useful whereas science requires evidence” as “practical use” and “evidence” are not opposites and therefore not linked in a comparative way. Please make sure that this **form** requirement is clearly understood.

**Read and work through Feedback 6 and Feedback 9B
AGAIN ... and AGAIN!!**

APPENDIX 5

SEPARATE DATA FOR COHORTS ONE & TWO: PHASE ONE

RESULTS PER COHORT 1990 & 1991

SUBJECTS

The subjects for this study were drawn from two groups of first year students, selected through the TTT programme in 1990 and 1991. Both groups consisted of students who were selected for extended curriculum studies. This means that although the entrance examination indicated that these students were capable of successful university study, they were underprepared to meet the demands of degree studies independently. In this way, the two groups of students were judged to be cognitively similar and there was no basis to assume differences in task engagement. Analysis of their work supported this assumption, with very similar patterns of response being found in both groups. The two cohorts are, therefore, treated as a single group for the purposes of analysis and discussion of results, however in each case where results discussed in chapter x reflect a compilation of data from two separate cohorts one and two (i.e. Tasks 1, 2, 5 & 6) distinct examples from each cohort as well as separate scoring of the results is recorded here in Appendix 4 for detailed reference.

Table 1: Cohort One 1990.

Gender	Women	Men	Total
	15	27	
Origin	Rural	Urban	42
	30	12	
Age	Range = 19-34 years of age.		
	Mean = 23 years of age.		
Matric Points Score ¹	Range = 8- 29 points		
	Mean = 18 points		

¹The matric points score is calculated on students' matric results, and is the selection mechanism used by the University of Natal. The effect of this system is that students must obtain more than a basic matric exemption in order to qualify for entry. In the faculties in which these students were registered, the minimum entry score is set at 30 points.

Table 2: Cohort Two 1991.

Campus	Durban	PMB	Total
	48	27	
Gender	Women	Men	75
	30	45	
Origin	Rural	Urban	75
	41	34	
Age	Range = 18-31 years of age.		
	Mean = 23 years of age.		
Matric points score	Range = 10-31 points		
	Mean = 19 points		

TASK ONE.

Table 3: Analysis of performance on Task One.

CRITERIA	COHORT 1 (n=24) ²		COHORT 2 (n= 34 UND + 15 UNP = 49)	
	n =	% ³	n =	%
EXHAUSTIVE	1	04%	8	16%
ESSENTIAL	7	29%	10	20%
PRECISE	3	13%	8	16%
COMPLEX	3	13%	4	08%

² Although all 42 students of cohort 1 (UND campus) were present for this task, only 24 of the students actually wrote down questions while watching the video and handed these in. Students commented that it was difficult to construct explicit written questions, while watching the video. This may be an indicator of a somewhat passive interpretation of the task of the "watching" the film. Task 2 completed during the same session was completed by all students.

³ All frequencies of responses are recorded as a percentage of the whole group in order to make comparisons across cohorts and across different tasks possible.

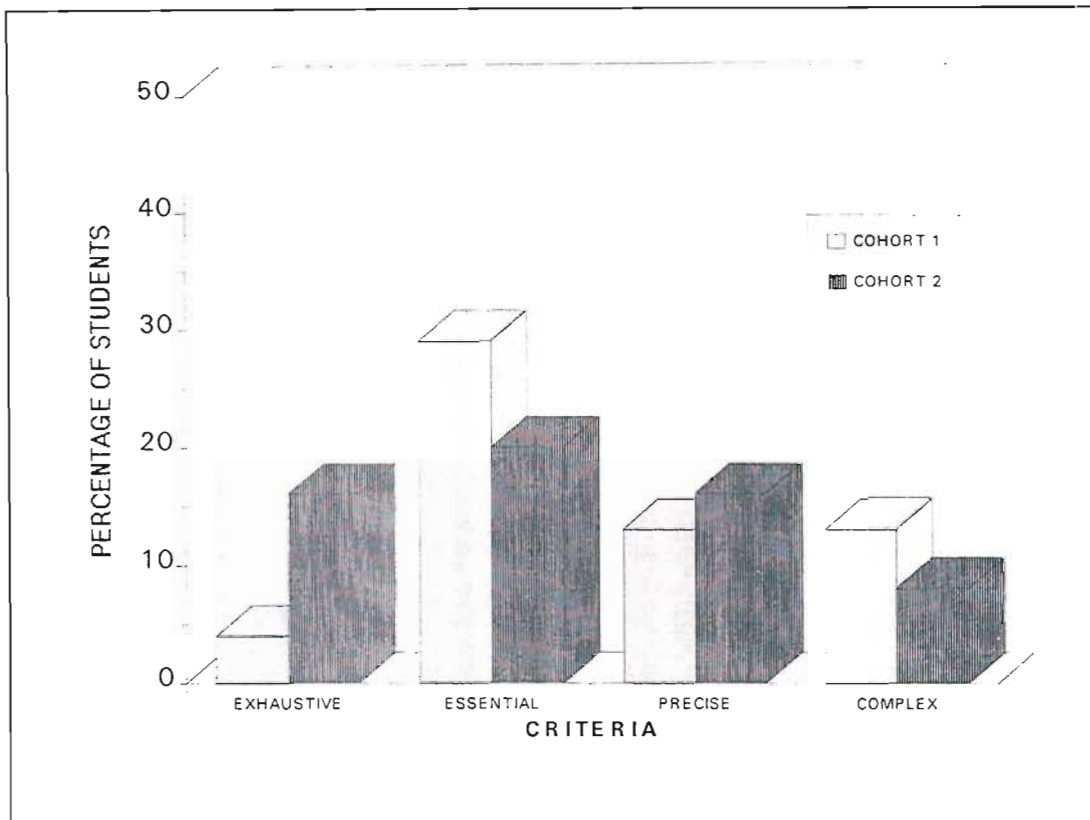


Figure 1: Task One: Generating question sets.

Examples of question sets which met the criteria: exhaustive, essential and precise.

Cohort 1:

1. *What is the first part of the video about?*
2. *Is it a music video?*
3. *What about long queues in the street?*
4. *Are poets part of the struggle?*
5. *What is meant when saying "All propaganda is not art but all art is not propaganda."*
6. *"Eyes of my eyes are opened" whats the meaning of this expression?*
7. *Is political and love poems the same?*
8. *Why should people read or write poems?*
9. *How could one become a poet?*

Cohort 2:

1. *Why SA is suffering as the first speaker said?*
2. *Why Blacks only, why it is in township only?*
3. *What cause killing?*
4. *Why government enjoy to enforce unpopular rules?*
5. *"Now is the time" said Mzwakhe Mbuli. When the time will come? Why people will violate 10 commandments?*
6. *This kingdom will not reign forever why?*
7. *Which kingdom and what kind of kingdom will reign forever?*
8. *Is the poetry one of ways of showing realities?*
9. *If it does what poetry is?*
10. *Poet of love, people, society - what differences are there?*
11. *Poet of nature - what is it?*
12. *Does it possible theoretically that South Africa will change from where it stands and practically apply that change?*

Examples of complex questions.

Cohort 1:

South African poets usually writes about political condition in this country. Do their poems have a significant role in influencing the SA government to make some reforms or changes?

Cohort 2:

a) *What can cause the poetry to mainly emphasise on one sphere of life leaving other dimension of life aspect?*

b) *What can be the difference between the role played by poetry to that played by painting?*

c) *Can poetry not arouse human brutality?*

Table 4: Task One: No. of students who met all or none of the criteria.

CRITERIA	COHORT 1 (n=24)		COHORT 2 (n=49)	
	n =	%	n =	%
All	0	0%	0	0%
None	16	67%	25	51%

Examples of tangential questions which close enquiry.

Cohort 1:

a)

1. *If poetry is the case of suffering why then whites write poems since they are capitalist?*
2. *What is the theme of the video?*
3. *How do you view SA after togetherness?*
4. *Do you think suffering poem can be distinguished after democratic situation in SA?*

b)

- *Why did the poet make use of images in saying his poem?*
- *What had caused the death for many people (why police are killing one another?)*
- *Why did the poet emphasise the words "It is time to go home".*
- *Which kingdom does she says will not reign forever.*

Cohort 2:

a)

1. *Why is that person sleeping there?*
2. *Why is black township have violence?*
3. *Why these white men seem to be aggressive towards Blacks?*
4. *Where was this took place?*
5. *Is the way of gaining the new Africa?*
6. *Which kingdom that poetry is talking about?*

7. *Why is the way of education not the same in all races?*

8. *What is the poem?*

b)

1. *Now is the time to violate the 11th commandment. Why does the poet say this?*

2. *What can be the remedy to situation in SA?*

3. *Will poetry be able to stop suffering in SA?*

4. *The film is about people's poets" Who are these people?*

TASK TWO.

Table 5: Task Two Generating Question Sets.

CRITERIA	COHORT 1 (n= 37 UND +8 UNP = 45)		COHORT 2 (n=34 UND + 15 unp = 49)	
	n =	%	n =	%
EXHAUSTIVE	24	53%	21	43%
ESSENTIAL	29	64%	23	47%
PRECISE	15	33%	16	33%
COMPLEX	6	13%	12	24%

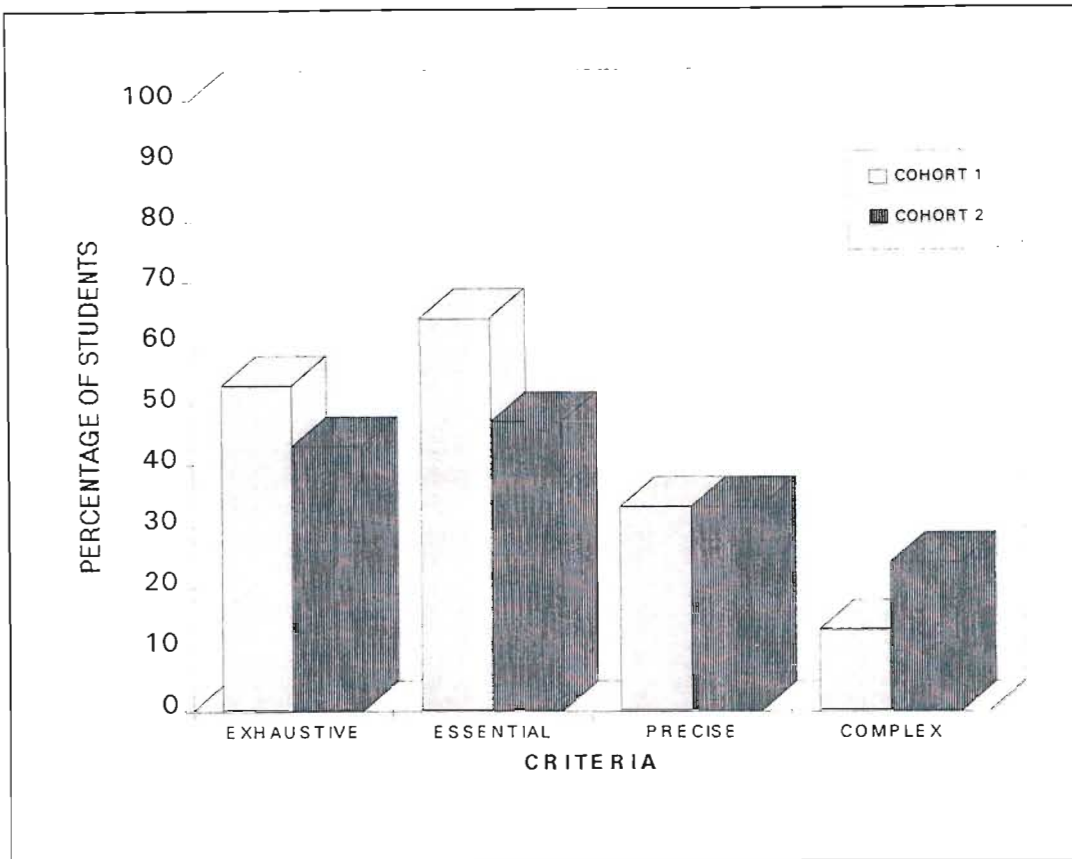


Figure 2: Task Two: Generating Question Sets.

Table 6: Task Two: No. of Students who met all or none of the criteria.

CRITERIA	COHORT 1 (n=42)		COHORT 2 (n=49)	
	n =	%	n =	%
All	6	13%	6	12%
None	13	29%	18	37%

Examples of responses meeting all criteria.

Cohort 1:

1. Why Gramsci consider the masses as primary?
2. What type of masses does he need?

3. *What are the elements of common sense?*
4. *Account for common sense as opposed to good sense in the passage.*
5. *Why should common sense be transformed into good sense?*
6. *What are relevant skills in relation to this passage?*
7. *What is the theme of this passage?*
8. *Critically analyse this passage in your own words.*
9. *What type of people who can make transformation of both senses possible?*
10. *Account for their weakness.*
11. *What is the recommendation / resolution thereafter?*
12. *What type of experiences would be selected, by intellectuals or the working class and why?*
13. *What is the argument all about in this passage?*
14. *Does this argument help you in approaching your essay; how?*

Cohort 2:

1. *Who are the masses and why are their needs primary?*
2. *What problems do the masses needs define?*
3. *What limits common sense, because it is based on experience, then why is it limited?*
4. *He talks of common sense and good sense. Is what is common not good?*
5. *Gramsci says common sense should be transformed into good sense by people who have the relevant skills and who have an organic relationship with the masses. Is this not going to create dictatorship of some sort or won't those people acquire a certain status than those that they represent?*
6. *Gramsci also talks of intellectuals as "knowing" and workers as "feeling" but not "knowing". How can the intellectuals know how much the workers feel? Doesn't the feeling show that you know hardship? If no what is to be known?*
7. *Is the intellectual knowledge synthesise with working class experience not going to cause clashes of differences in feeling?*

Examples of responses meeting none of the criteria.

Cohort 1:

a) 1. *What are the masses?*

2. *What does the word primary mean?*

3. *Masses, do they really define problems?*

4. *Is Gramsci aware of the situation?*

5. *Does common sense really need experience?*

b) 1. *Why did Gramsci says need of masses were primary?*

2. *Is the whole passage describing masses problem in accordance with Gramsci argument?*

3. *I don't know where critical folklore link with the passage?*

4. *What is the meaning of the word fragmentary?*

5. *Is that true that Gramsci is trying to argue about his ideal leader?*

6. *Can I say Gramsci support a leader which is from working class and have skills in leading people?*

7. *I really can not understand the meaning of masses was he meaning majority or large number?*

Cohort 2:

1. *What is this reading all about?*

2. *Who is Gramsci?*

3. *Why was there a need for a new type of intellectual?*

4. *In what way do intellectuals know?*

5. *What causes them not to feel?*

6. *Why is there a need for intellectual knowledge?*

7. *Working class experience for production.*

8. *Why is there a need for synthesis?*

TASK FIVE.

Table 7: Task Five: Non-Sequential Reading.

CATEGORIES OF RESULTS	COHORT 1 (n = 30)		COHORT 2 (n= 34)	
	n =	%	n =	%
80% +	1	03%	0	0%
70 - 79%	1	03%	0	0%
60 - 69%	2	07%	4	12%
50 - 59%	2	10%	5	15%
40 -49%	11	37%	6	18%
30 - 39%	4	13%	10	29%
20 -29%	5	17%	4	12%
10-19%	1	03%	4	12%
0 - 09%	2	07%	1	03%

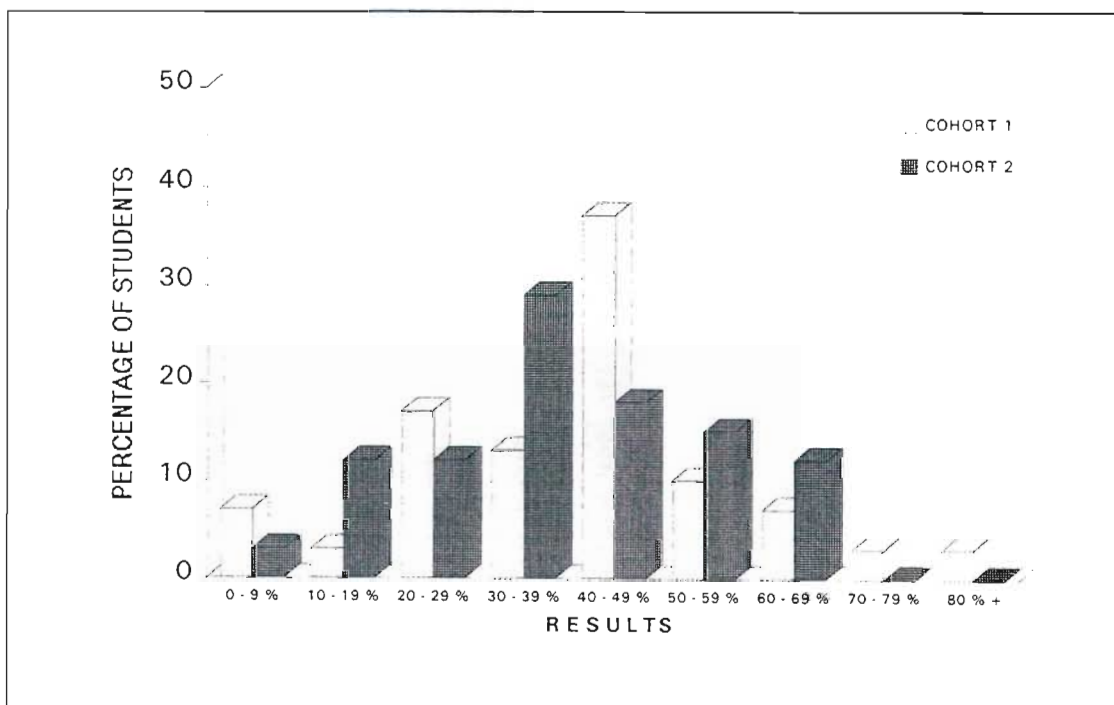


Figure 3: Task Five: Non-sequential Reading.

Examples of students' methods of meaning construction.

Cohort 1:

a) I would try to interpret it according to the way I understand so I can see whether it makes any sense or not, if it does not make sense try it the other way.

b) I must read it carefully and find the meaning of words I don't understand and then try to think about it critically.

Cohort 2:

a) I would read the text thoroughly and get the full knowledge of what is being written and what it means, then I will be able to make meaning or interpretation out of it.

b) I will try to get words which I don't understand and look them in the dictionary. I will try to concentrate on the text. I will read the text over and over till I can interpret or get meaning out of it.

Examples of real world bias in interpretation of texts:

Cohort 1:

a) I will look that thing in reality and try to find the meaning.

b) I will try to make it parallel to my own experience and my daily living experience.

Cohort 2:

I would be engaged through the interpretation of those events, people, animals and things I have encounter in my daily living.

TASK SIX.

Table 8: Task Six: Identifying the Question.

Categories of response	COHORT 1 (n=42)		COHORT 2 (n = 33 UND + 17 UNP = 50)	
	n =	%	n =	%
APPROPRIATE	8	19%	3	06%
GRAPPLING	8	19%	(9) ⁴	18%
PERIPHERAL	7	17%	2	04%
GROUNDING	14	33%	30	60%
CLOSED	5	12%	6	12%

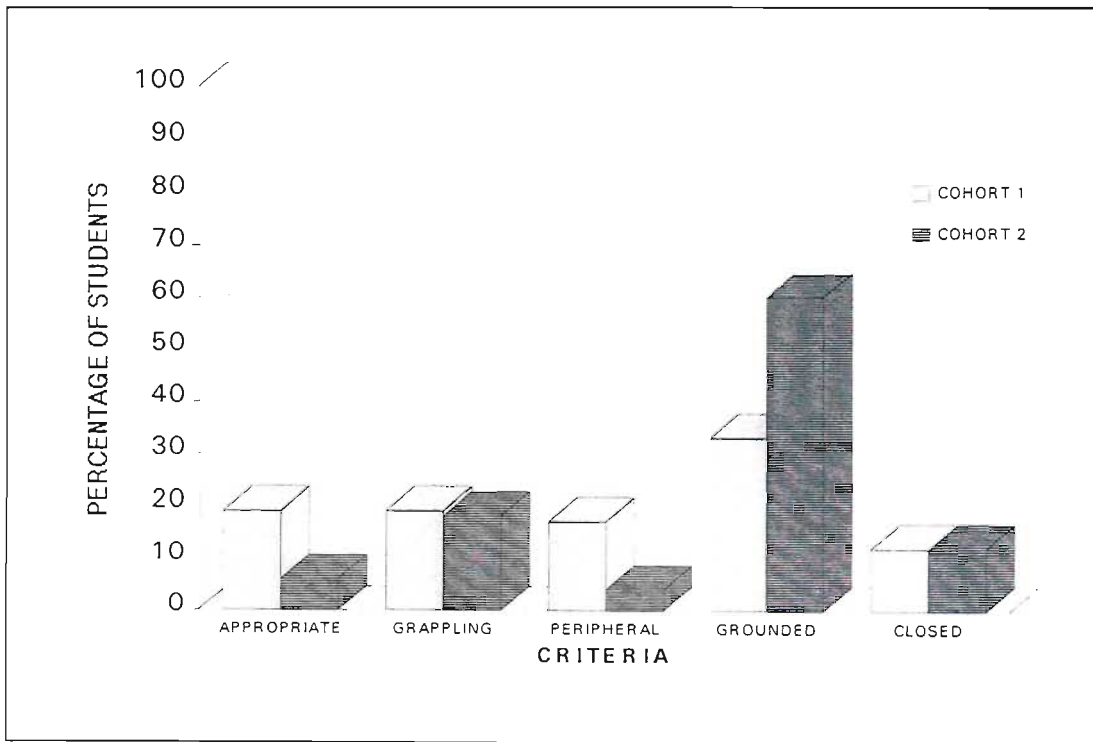


Figure 4: Task Six: Identifying the Question.

⁴ One of the responses classified as category B, is immediately followed by a statement (which had it appeared alone would have been categorised as category E) - an expression of the tendency to close a question with an answer .

Examples of the Appropriate category.

Cohort 1:

- *What is the meaning of poets in South African history?*
- *What is the role of poetry in society?*
- *What is the role of poetry in the struggle for liberation?*
- *What is the role that is played by poems in social life and what consequences make one to write a poem?*

Cohort 2:

- *What is the role of poetry in oppressed societies?*
- *What is the role of poetry in the society?*
- *What is the main goal of poetry in social life?*

Examples of the Grappling category.

Cohort 1:

- *What is the art of the people's poet?*
- *Why do South African poets usually write about politics when writing their poems?*
- *What poems are written by S A poets and why?*

Cohort 2:

- *What is the importance of a poem?*
- *How poetry must be used to portray reality in South Africa?*
- *Is the poetry the way of overcoming suffering in South Africa?*
- *How does the South African art come about, and how difficult to lay out the experiences of SA society?*

Examples of the Peripheral category.

Cohort 1:

- *What is the meaning behind poetry?*
- *Why the nature of people be reflected as a form of imagination called poetry?*

Cohort 2:

- *Do people still recognise other people's social status?*
- *They were having a question that their video they are going to produce will pay back their cost? And whether people will have an interest on it?*

Examples of the Grounded category.**Cohort 1:**

- *Will this period of dissatisfaction of African people last forever or not?*
- *Why are the South African people so oppressed?*
- *When there is a lot of suffering how to let people know that you are concern.*
- *What can be done in order to make people especially Africans know about the miserable situation they are living in?*
- *The political situation in South Africa is in bad terms. What is the cause of the unrest?*

Cohort 2:

- *Will this film help people in S A?*
- *How can we make our people more aware of the hidden agendas of the government and how can we show the world a true reflection of the socio-political life in our country?*
- *What is the cause of the violence?*
- *What effect does politics have on South African citizens?*
- *Who really suffer in SA and what is the cause of that suffering?*
- *How can we reveal SA situation to other countries and to the young ones of SA?*
- *What is the relationship between people and the police and among people themselves?*
- *Why do people in South Africa who are political minded or political active treated as criminals?*
- *Can education and politics contribute a lot or any transformation towards change in South Africa?*
- *Why are the people killed by the government?*
- *Liberation is it the key to freedom?*

- *Is it possible for blacks to reign in the new South Africa if they continue killing each other like flies?*

Examples of the Closed category.

Cohort 1:

- *The question is about the suffering, so they make a research.*
- *They want to research the behaviour of people even though they are killed people don't stop because they know what they are fighting for.*
- *I think the reason is to clarify the point of writing a poem, whether is it through experience or through person's feelings. It has been shown in the video some of the events which had happen, of which most of the poet writes about.*

Cohort 2:

- *They intended to let us know about the comments of the poets, how do they view politics and violence. Also how some people aware of this.*
- *The producers aim was to reveal oppression in SA. You can see first of all, the poet starts to utter painful speeches about suffering in the beginning. They say a poet can affect suffering. They reveal the hard and demanding road to freedom heroes are lost on the road to freedom.*

APPENDIX 6

TASK 2

INTERROGATING TEXT

T-T-T EXTENSION: SECOND QUARTER 1990.

INTERROGATING TEXT

Although knowledge presented in texts, (written or spoken,) **looks complete**, as if the work that needs to be done to create meaning has been done by the author/ lecturer, this is **not** the case. Meaning is only possible by the action which the reader performs on the text, in other words, meaning depends on deliberate and forceful action by the mind of the reader on what is presented. This action can be likened to an "interrogation" in that the text doesn't automatically or naturally yield up its meaning - you have to fight and grapple with it - meaning depends entirely on your action.

Below is a sample text : your task is to "interrogate" this text - to ask as many questions as possible of it, in order that all its complex meaning be discoverable.

For Gramsci the needs of the masses were primary; **they** defined the problems. Nevertheless, he was critical of folklore, - the superstitious elements within common sense. Common sense, though based on experience, was limited. It was simple, fragmentary, contradictory; unlike "good sense", it was not worked out critically or systematically. He argued that there was a need for a new type of intellectual, for persons who made an already existing activity coherent, critical and systematic. "Common sense" should be transformed into "good sense", but this can only be done by people who have the relevant skills and who have an "organic" relationship with the masses. Gramsci argued that intellectuals "know" but do not feel while workers feel but do not "know"; hence the need for a synthesis of intellectual knowledge and working-class experience for the production of a socialist culture.

APPENDIX 7

TASK 3

QUESTIONING EXTENDED TEXT

Sociology

Themes and Perspectives

Michael Haralambos

with Robin Heald

Bell & Hyman

1 The sociological perspective

'Human beings learn their behaviour and use their intelligence whereas animals simply act on instinct.' Like most common-sense notions, this idea has an element of truth but reality is far more complex.

The regimented society of social insects such as ants and bees is an object lesson in order and organization. Every member has clearly defined tasks in a co-operative enterprise. Thus in a beehive the worker bees, depending on their age, will either feed the young, stand guard and repel strangers, forage for food or ventilate the hive by beating their wings. The behaviour of insects is largely instinctive. It is based on programmes contained in the genes which direct their actions. However, it would be a mistake to assume that the behaviour of insects is based solely on instinct. Experiments have indicated that at least some have the ability to learn. For example, ants are able to memorize the path through a maze and are capable of applying this learning to other mazes.

Moving from insects to reptiles to mammals, the importance of learned, as opposed to genetically determined, behaviour gradually increases. Studies of macaque monkeys on islands in northern Japan provide some indication of the importance of learned behaviour. On one island the macaques lived in the forested interior. Japanese scientists attempted to discover whether they could change the behaviour patterns of the troupe. They began by dumping potatoes in a clearing in the forest. Gradually the macaques changed their eating habits and became largely dependent on potatoes, a food previously unknown to them, as their staple diet. The scientists slowly moved the food dumps towards the shoreline and the troupe followed. The potatoes were then regularly placed on the beach which now became the normal habitat for the macaques. In the following months, without any encouragement from the scientists, a number of new behaviour patterns emerged in the troupe. Firstly, some members began washing the potatoes in the sea before eating them. Others followed suit until it became standard practice in the group. Then some of the younger macaques began paddling in the sea and eventually took the plunge and learned how to swim. They were imitated by their elders and again, the novel behaviour of the few became the accepted behaviour of the group. Finally, some adventurous youngsters began diving off low rocky outcroppings on the shoreline, a practice which was copied by other members of the troupe.

The Japanese macaques had learned new behaviour patterns and these

patterns were shared by members of the group. The simple generalization that animal behaviour is genetically determined whereas the behaviour of man is learned is clearly incorrect. However, the range and complexity of learned behaviour in man is far greater than in any other species. This is shown by experiments with man's nearest living relative, the chimpanzee. For a few years chimpanzees raised in human households learn as well as human infants of the same age, but they soon reach the limit of their ability and are rapidly overtaken by human youngsters. Compared to mammals other than man, chimpanzees have a considerable learning capacity. They can solve simple problems to obtain food, they can learn a basic sign language to communicate with humans and even ape their more intelligent cousins in the famous chimpanzee tea party. Yet despite this capacity to learn, the behavioural repertoire of chimpanzees is rudimentary and limited compared to man.

More than any other species, man relies for his survival on behaviour patterns which are learned. Man has no instincts, that is genetically programmed directives to behave in particular ways. An instinct involves not only the impulse to do something, but also specific instructions on how to do it. Birds have an instinct to build nests. They have an impulse for nest building and all members of a particular species are programmed to build nests in the same way. The range and variety of dwellings constructed by man clearly shows the absence of directives based on instinct. The following examples from nineteenth-century North America provide an illustration. In the Arctic, the Eskimos constructed igloos from rectangular blocks cut from closely compacted snow. On the northwest coast of the USA and the west coast of Canada, tribes such as the Nootka built oblong houses with a framework of cedar logs, walled and roofed with planks. On the opposite side of the subcontinent, in the eastern woodlands, the Iroquois also lived in oblong dwellings, known as 'long houses', but they substituted birchbark for planks. On the prairies, the easily transportable conical tipi made from long saplings covered in buffalo hides provided shelter for tribes such as the Sioux and Cheyenne. Further south, the Apache of Arizona and New Mexico lived in domed wickiups made from brushwood and scrub. In the same area, tribes such as the Zuñi and the Hopi built the first apartment houses in the USA. Even today many members of these tribes live in multi-occupation dwellings made from sun-dried mud bricks known as adobe. These examples show clearly that man's genetic code does not contain specific instructions to behave in a particular way.

Culture and society

To all intents and purposes a newborn human baby is helpless. Not only is it physically dependent on older members of the species but it also lacks

the behaviour patterns necessary for living in human society. It relies primarily on certain biological drives such as hunger and the charity of its elders to satisfy those drives. The infant has a lot to learn. In order to survive, it must learn the skills, knowledge and accepted ways of behaving of the society into which it is born. It must learn a way of life; in sociological terminology, it must learn the culture of its society.

Ralph Linton states that, 'The culture of a society is the way of life of its members; the collection of ideas and habits which they learn, share and transmit from generation to generation'. In Clyde Kluckhohn's elegant phrase, culture is a 'design for living' held by members of a particular society. Since man has no instincts to direct his actions, his behaviour must be based on guidelines which are learned. In order for a society to operate effectively, these guidelines must be shared by its members. Without a shared culture, members of society would be unable to communicate and cooperate, and confusion and disorder would result. Culture therefore has two essential qualities: firstly it is learned, secondly it is shared. Without it there would be no human society.

To a large degree culture determines how members of a society think and feel, it directs their actions and defines their outlook on life. Members of society usually take their culture for granted. It has become so much a part of them that they are often unaware of its existence. The following example given by Edward T. Hall provides an illustration. Two individuals, one from North America, the other from South America are conversing in a hall forty foot long. They begin at one end of the hall and finish at the other end, the North American steadily retreating, the South American relentlessly advancing. Each is trying to establish the 'accustomed conversation distance' defined by his culture. To the North American, his South American counterpart comes too close for comfort whereas the South American feels uneasy conversing at the distance his partner demands. Often it takes meetings such as this to reveal the pervasive nature of culturally determined behaviour.

Culture defines accepted ways of behaving for members of a particular society. Such definitions vary from society to society. This can lead to considerable misunderstanding between members of different societies as the following example provided by Otto Klineberg shows. Amongst the Sioux Indians of South Dakota, it is regarded as incorrect to answer a question in the presence of others who do not know the answer. Such behaviour would be regarded as boastful and arrogant, and, since it reveals the ignorance of others, it would be interpreted as an attempt to undermine their confidence and shame them. In addition the Sioux regard it as wrong to answer a question unless they are absolutely sure of the correct answer. Faced with a classroom of Sioux children, a White American teacher, who is unaware of their culture, might easily interpret their behaviour as a reflection of ignorance, stupidity or hostility.

Every society has certain common problems to deal with, for example

the problem of dependent members such as the very young and the very old. However, solutions to such problems are culturally determined: they vary from society to society. The solutions provided in one society may well be regarded as indefensible by members of other societies. Under certain circumstances, infanticide – the killing of infants – and geronticide – the killing of old people – have been practised by certain groups of Australian aborigines, Eskimos and Caribou Indians. Particularly in the more arid parts of Australia, female infanticide was practised to reduce the population in times of famine, and occasionally the baby was eaten. In Tasmania aborigine hunters led a nomadic life to take advantage of the seasonal food supply in different regions. The old and infirm who were too feeble to keep up with the band were left behind to die. The Caribou Indians, who lived to the west of Hudson Bay in Canada, were dependent for their food supply on the caribou herds. Sometimes, in winter, the herds failed to appear. To prevent the starvation of the whole community, the following priorities were established. First the active male adults were fed because if they were to weak to hunt, nobody would eat. Next, their wives were fed since they could bear more children. Male infants were considered more important than female because they would grow up to become hunters. Old people were the most expendable and in times of famine they committed suicide by walking naked into the snow. If there were no old people left, girl babies would be killed. The practices of infanticide and geronticide are culturally defined behaviour patterns designed to ensure the survival of the group in times of extreme food shortages. Like many of the customs of non-Western societies, they appear strange and even heartless to Western man, but in the context of the particular society, they are sensible, rational and an accepted part of life.

The above examples of culturally defined behaviour have been selected because they differ considerably from behaviour patterns in Western society. It is easier to appreciate the idea that human behaviour is largely determined by culture with the use of examples which appear strange to Western man.

Socialization

The process by which individuals learn the culture of their society is known as socialization. Primary socialization, probably the most important aspect of the socialization process, takes place during infancy, usually within the family. By responding to the approval and disapproval of its parents and copying their example, the child learns the language and many of the basic behaviour patterns of its society. In Western society, other important agencies of socialization include the educational system, the occupational group and the peer group – a group whose members share similar circumstances and are often of a similar age. Within its peer

group, the young child, by interacting with others and playing childhood games, learns to conform to the accepted ways of a social group and to appreciate the fact that social life is based on rules. Socialization is not, however, confined to childhood. It is a lifelong process. At the beginning of their working lives, the young bricklayer, teacher and accountant soon learn the rules of the game and the tricks of the trade. Should they change jobs in later life, they will join a different occupational group and may well have to learn new skills and adopt different mannerisms and styles of dress.

Without socialization, an individual would bear little resemblance to any human being defined as normal by the standards of his society. The following examples, though they lack the reliability demanded by today's standards of reporting, nevertheless provide some indication of the importance of socialization. It is reported that Akbar, who was an emperor in India from 1542 to 1602, ordered that a group of children be brought up without any instruction in language, to test the belief that they would eventually speak Hebrew, the language of God. The children were raised by deaf mutes. They developed no spoken language and communicated solely by gestures. There is an extensive, though somewhat unreliable, literature on children raised by animals. One of the best documented cases concerns the so-called 'wolf-children of Midnapore'. Two females, aged two and eight, were reportedly found in a wolf den in Bengal in 1920. They walked on all fours, preferred a diet of raw meat, they howled like wolves and lacked any form of speech. Whether these children had been raised by wolves or simply abandoned and left to their own devices in the forest is unclear. However, such examples indicate that socialization involving prolonged interaction with adults is essential not only for fitting new members into society but also to the process of actually becoming human.

Norm and value

Every culture contains a large number of guidelines which direct conduct in particular situations. Such guidelines are known as norms. A norm is a specific guide to action which defines acceptable and appropriate behaviour in particular situations. For example, in all societies, there are norms governing dress. Members of society generally share norms which define acceptable male and female apparel and which specify appropriate dress for different age groups. For example, in British society, a seventy year old grandmother dressed as a teenager would contravene the norms for her age group. Norms of dress provide guidelines for what to wear on particular occasions. A formal dance, a funeral, a day out on the beach, a working day in the bank, on the building site or in the hospital – all these situations are governed by norms which specify appropriate attire for the occasion. Norms of dress vary from society to society. A missionary

presented with bare-breasted African females in his congregation provides an example. Flushed with embarrassment, he ordered a consignment of brassières. The ladies could make little sense of them in terms of their norms of dress. From their point of view, the most reasonable way to interpret these strange articles was to regard them as headgear. Much to the dismay of the missionary, they placed the two cups on the top of their heads and fastened the straps under their chins.

Norms are enforced by positive and negative sanctions, that is, rewards and punishments. Sanctions can be informal, such as an approving or a disapproving glance, or formal, such as a fine or a reward given by an official body. Continuing the example of norms of dress, an embarrassed silence, a hoot of derision or a contemptuous stare will make most members of society who have broken norms of dress change into more conventional attire. Usually the threat of such negative sanctions is sufficient to enforce normative behaviour. Conversely an admiring glance, a word of praise or an encouraging smile provide rewards for conformity to social norms. Certain norms are formalized by translation into laws which are enforced by official sanctions. In terms of laws governing dress, the nude bather on a public beach, the 'streaker' at a sporting event and the 'flasher' who exposes himself to an unsuspecting individual are subject to official punishments of varying severity. Like informal sanctions, formal sanctions may be positive or negative. In terms of norms associated with dress, awards are made by official bodies such as tailors' organizations to the best-dressed men in Britain.

To summarize, norms define appropriate and acceptable behaviour in specific situations. They are enforced by positive and negative sanctions which may be formal or informal. The sanctions which enforce norms are a major part of the mechanisms of social control which are concerned with maintaining order in society.

Unlike norms, which provide specific directives for conduct, values provide more general guidelines. A value is a belief that something is good and desirable. It defines what is important, worthwhile and worth striving for. It has often been suggested that individual achievement and materialism are major values in Western industrial society. Thus the individual believes it is important and desirable to come top of the class, to win a race or reach the top of his chosen profession. Individual achievement is often symbolized and measured by the quality and quantity of material possessions that a person can accumulate. In the West, the value of materialism motivates individuals to invest time and energy producing and acquiring material possessions. Like norms, values vary from society to society. For example, the Sioux Indians placed a high value on generosity. In terms of Sioux values, the acquisitive individual of Western society would at best be regarded as peculiar and more probably would be condemned as grasping, self-seeking and antisocial.

Many norms can be seen as reflections of values. A variety of norms

can be seen as expressions of a single value. In Western society the value placed on human life is expressed in terms of the following norms. The norms associated with hygiene in the home and in public places reflect a concern for human life. Norms defining acceptable ways for settling an argument or dispute usually exclude physical violence and manslaughter. The array of rules and regulations dealing with transport and behaviour on the highway are concerned with protecting life and limb. The same applies to safety regulations in the workplace, particularly in mining and manufacturing industries. Thus the variety of norms concerned with the health and safety of members of society can be seen as expressions of the value placed on human life.

Many sociologists maintain that shared norms and values are essential for the operation of human society. Since man has no instincts, his behaviour must be guided and regulated by norms. Unless norms are shared, members of society would be unable to cooperate or even comprehend the behaviour of others. Similar arguments apply to values. Without shared values, members of society would be unlikely to cooperate and work together. With differing or conflicting values they would often be pulling in different directions and pursuing incompatible goals. Disorder and disruption may well result. Thus an ordered and stable society requires shared norms and values. This viewpoint will be considered in greater detail in a later section.

Status and role

All members of society occupy a number of social positions known as statuses. In Western society, an individual will usually have an occupational status such as bus driver, clerk or solicitor; family statuses as son or daughter, father or mother; and a gender status as male or female. Statuses are culturally defined, despite the fact they may be based on biological factors such as sex or race. For example, skin colour assigns individuals to racial statuses such as Black and White but this merely reflects the conventions of particular societies. Other biological characteristics such as hair colour have no connection with an individual's status and, in future societies, skin colour may be equally insignificant.

Some statuses are relatively fixed and there is little an individual can do to change his assignment to particular social positions. Examples of such fixed or ascribed statuses include gender and aristocratic titles. On rare occasions, however, ascribed statuses can be changed. Edward VIII was forced to abdicate for insisting on marrying an American divorcee. Anthony Wedgewood-Benn renounced his peerage in order to stand for election to the House of Commons. Revolutions in America and Russia abolished the ascribed status of members of the aristocracy. Ascribed statuses are usually fixed at birth. In many societies occupational status has been or still is transmitted from father to son and from mother to

daughter. Thus in the traditional Indian caste system, a son automatically entered the occupation of his father. Statuses which are not fixed by inheritance, biological characteristics, or other factors over which the individual has no control, are known as achieved statuses. An achieved status is entered as a result of some degree of purposive action and choice. In Western society an individual's marital status and occupational status are achieved. However, as the following chapter will indicate, the distinction between ascribed and achieved status is less clear cut than has so far been suggested.

Each status in society is accompanied by a number of norms which define how an individual occupying a particular status is expected to act. This group of norms is known as a role. Thus the status of husband is accompanied by the role of husband, the status of solicitor by the role of solicitor and so on. As an example, a solicitor is expected to possess a detailed knowledge of certain aspects of the law, to support his client's interests and respect the confidentiality of his business. His attire is expected to be sober, his manner restrained, confident yet understanding, his standing in the community beyond reproach. Playing or performing roles involves social relationships in the sense that an individual plays a role in relation to other roles. Thus the role of doctor is played in relation to the role of patient, the role of husband in relation to the role of wife. Individuals therefore interact in terms of roles.

Social roles regulate and organize behaviour. In particular, they provide means for accomplishing certain tasks. It can be argued, for example, that teaching can be accomplished more effectively if teacher and student adopt their appropriate roles. This involves the exclusion of other areas of their lives in order to concentrate on the matter in hand. Roles provide social life with order and predictability. Interacting in terms of their respective roles, teacher and student know what to do and how to do it. With a knowledge of each other's roles they are able to predict and comprehend the actions of the other. As an aspect of culture, roles provide an important part of the guidelines and directives necessary for an ordered society.

This section has introduced some of the basic concepts used by many sociologists. In doing so, however, it has presented a somewhat one-sided view of man in society. Man has been pictured rather like an automaton who simply responds to the dictates of his culture. All members of a particular society appear to be produced from the same mould. They are all efficiently socialized in terms of a common culture. They share the same values, follow the same norms and play a variety of roles, adopting the appropriate behaviour for each. Clearly this picture of conformity has been overstated and the pervasive and constraining influence of culture has been exaggerated. There are two reasons for this. Firstly, overstatement has been used to make the point. Secondly, many of the ideas presented so far derive from a particular perspective in sociology which has

been subject to the criticisms noted above. This perspective, known as functionalism, will now be examined.

Theories of society

This section will examine three theories of society. A theory is a set of ideas which claims to explain how something works. A sociological theory is therefore a set of ideas which claims to explain how society or aspects of society work. The theories in this section represent only a selection from the range of sociological theories. They have been simplified and condensed to provide a basic introduction. Since they are applied to various topics throughout the text, an initial awareness is essential. Criticism of the theories has been omitted from this chapter for the sake of simplicity. It will be dealt with throughout the text and in detail in the final chapter. Again for simplicity, each theory is presented as though there were no disagreement about its nature. For example, functionalism, the first theory examined is presented as if there were only one version of the theory whereas in fact there are several.

Functionalism

Functionalism was the dominant theoretical perspective in sociology during the 1940s and 1950s. From the mid 1960s onwards, its popularity steadily declined due partly to damaging criticism, partly to competing perspectives which appeared to provide superior explanations, and partly to changes in fashion. The key points of the functionalist perspective may be summarized by a comparison drawn from biology. If a biologist wanted to know how an organism such as the human body worked, he might begin by examining the various parts such as the brain, lungs, heart and liver. However, if he simply analysed the parts in isolation from each other, he would be unable to explain how life was maintained. To do this, he would have to examine the parts in relation to each other since they work together to maintain the organism. Thus he would analyse the relationships between the heart, lungs, brain and so on to understand how they operated and appreciate their importance. From this viewpoint, any part of the organism must be seen in terms of the organism as a whole. Functionalism adopts a similar perspective. The various parts of society are seen to be interrelated and taken together, they form a complete system. To understand any part of society, such as the family or religion, the part must be seen in relation to society as a whole. Thus where a biologist will examine a part of the body, such as the heart, in terms of its contribution to the maintenance of the human organism, the functionalist will examine a part of society, such as the family, in terms of its contribution to the maintenance of the social system.

Functionalism begins with the observation that behaviour in society is structured. This means that relationships between members of society are organized in terms of rules. Social relationships are therefore patterned and recurrent. Values provide general guidelines for behaviour and they are translated into more specific directives in terms of roles and norms. The structure of society can be seen as the sum total of normative behaviour – the sum total of social relationships which are governed by norms. The main parts of society, its institutions, such as the family, the economy, the educational and political systems are major aspects of the social structure. Thus an institution can be seen as a structure made up of interconnected roles or interrelated norms. For example, the family is made up of the interconnected roles of husband, father, wife, mother, son and daughter. Social relationships within the family are structured in terms of a set of related norms.

Having established the existence of a social structure, functionalist analysis turns to a consideration of how that structure functions. This involves an examination of the relationship between the different parts of the structure and their relationship to society as a whole. From this examination, the functions of institutions are discovered. At its simplest, function means effect. Thus the function of the family is the effect it has on other parts of the social structure and on society as a whole. In practice the term function is usually used to indicate the contribution an institution makes to the maintenance and survival of the social system. Thus a major function of the family is the socialization of new members of society. This represents an important contribution to the maintenance of society since order, stability and cooperation largely depend on learned, shared norms and values.

In determining the functions of various parts of the social structure, functionalists are guided by the following ideas. Societies have certain basic needs or requirements which must be met if they are to survive. These requirements are sometimes known as functional prerequisites. For example, a means of producing food and shelter may be seen as a functional prerequisite since without them members of society could not survive. A system for socializing new members of society may also be regarded as a functional prerequisite since without culture social life would not be possible. Having assumed a number of basic requirements for the survival of society, the next step is to look at the parts of the social structure to see how they meet such functional prerequisites. Thus a major function of the economic system is the production of food and shelter. An important function of the family is the socialization of new members of society.

From a functionalist perspective, society is regarded as a system. A system is an entity made up of interconnected and interrelated parts. From this viewpoint, it follows that each part will in some way affect every other part and the system as a whole. It also follows that if the

system is to survive, its various parts must have some degree of fit or compatibility. Thus a functional prerequisite of society involves a minimal degree of integration between the parts. Many functionalists argue that this integration is based largely on 'value consensus', that is on agreement about values by members of society. Thus if the major values of society are expressed in the various parts of the social structure, those parts will be integrated. For example, it can be argued that the value of materialism integrates many parts of the social structure in Western industrial society. The economic system produces a large range of goods and ever increasing productivity is regarded as an important goal. The educational system is partly concerned with producing the skills and expertise to expand production and increase its efficiency. The family is an important unit of consumption with its steadily increasing demand for consumer durables such as washing machines, televisions and three-piece suites. The political system is partly concerned with improving material living standards and raising productivity. To the extent that these parts of the social structure are based on the same values, they may be said to be integrated.

One of the main concerns of functionalist theory is to explain how social life is possible. The theory assumes that a certain degree of order and stability are essential for the survival of social systems. Functionalism is therefore concerned with explaining the origin and maintenance of order and stability in society. Many functionalists see shared values as the key to this explanation. Thus value consensus integrates the various parts of society. It forms the basis of social unity or social solidarity since individuals will tend to identify and feel kinship with those who share the same values as themselves. Value consensus provides the foundation for cooperation since common values produce common goals. Members of society will tend to cooperate in pursuit of goals which they share. Having attributed such importance to value consensus, many functionalists then focus on the question of how this consensus is maintained. Indeed the American sociologist Talcott Parsons has stated that the main task of sociology is to examine 'the institutionalization of patterns of value orientation in the social system'. Emphasis is therefore placed on the process of socialization whereby values are internalized and transmitted from one generation to the next. In this respect, the family is regarded as a vital part of the social structure. Once learned, values must be maintained. In particular those who deviate from society's values must be brought back into line. Thus the mechanisms of social control discussed earlier in the chapter, are seen as essential to the maintenance of social order.

In summary, society, from a functionalist perspective, is a system made up of interrelated parts. The social system has certain basic needs which must be met if it is to survive. These needs are known as functional prerequisites. The function of any part of society is its contribution to the maintenance of society. The major functions of social institutions are those

which help to meet the functional prerequisites of society. Since society is a system, there must be some degree of integration between its parts. A minimal degree of integration is therefore a functional prerequisite of society. Many functionalists maintain that the order and stability they see as essential for the maintenance of the social system are largely provided by value consensus. An investigation of the source of value consensus is therefore a major concern of functionalist analysis.

Marxism

Marxian theory offers a radical alternative to functionalism. It became increasingly influential during the 1970s, due partly to the decline of functionalism, partly to its promise to provide answers which functionalism failed to provide and partly because it was more in keeping with the tenor and mood of the times. Marxism takes its name from its founder, the German-born philosopher, economist and sociologist, Karl Marx (1818–83). The following account represents a simplified version of Marxian theory. It must also be seen as one interpretation of that theory. Marx's extensive writings have been variously interpreted and, since his death, several schools of Marxism have developed.

Marxian theory begins with the simple observation that in order to survive, man must produce food and material objects. In doing so he enters into social relationships with other men. From the simple hunting band to the complex industrial state, production is a social enterprise. Production also involves a technical component known as the forces of production which includes the technology, raw materials and scientific knowledge employed in the process of production. Each major stage in the development of the forces of production will correspond with a particular form of the social relationships of production. Thus the forces of production in a hunting economy will correspond with a particular set of social relationships. Taken together, the forces of production and the social relationships of production form the economic base or infrastructure of society. The other aspects of society, known as the superstructure, are largely shaped by the infrastructure. Thus the political, legal and educational institutions and the belief and value systems are primarily determined by economic factors. A major change in the infrastructure will therefore produce a corresponding change in the superstructure. Marx maintained that, with the possible exception of the societies of prehistory, all historical societies contain basic contradictions which means that they cannot survive forever in their existing form. These contradictions involve the exploitation of one social group by another. For example in feudal society, lords exploit their serfs, in capitalist society, employers exploit their employees. This creates a fundamental conflict of interest between social groups since one gains at the expense of another. This conflict of interest must ultimately be resolved since a social system containing such

contradictions cannot survive unchanged.

The points raised in this brief summary of Marxian theory will now be examined in greater detail. The major contradictions in society are between the forces and relations of production. The forces of production include land, raw materials, tools and machinery, the technical and scientific knowledge used in production, the technical organization of the production process and the labour power of the workers. The relations of production are the social relationships which men enter into in order to produce goods. Thus in feudal society they include the relationship between the lord and vassal and the set of rights, duties and obligations which make up that relationship. In capitalist industrial society they include the relationship between employer and employee and the various rights of the two parties. The relations of production involve the relationship of social groups to the forces of production. Thus in feudal society, land, the major force of production, is owned by the lord whereas the serf has the right to use land in return for services or payment to the lord. In Western industrial society, the forces of production are owned by the capitalist whereas the worker owns only his labour which he hires to the employer in return for wages.

The idea of contradiction between the forces and relations of production may be illustrated in terms of the infrastructure of capitalist industrial society. Marx maintained that only labour produces wealth. Thus wealth in capitalist society is produced by the labour power of the workers. However, much of this wealth is appropriated in the form of profits by the capitalists, the owners of the forces of production. The wages of the workers are well below the value of the wealth they produce. There is thus a contradiction between the forces of production, in particular the labour power of the workers which produces wealth, and the relations of production which involve the appropriation of much of that wealth by the capitalists. A related contradiction involves the technical organization of labour and the nature of ownership. In capitalist society, the forces of production include the collective production of goods by large numbers of workers in factories. Yet the forces of production are privately owned, the profits are appropriated by individuals. The contradiction between the forces and relations of production lies in the social and collective nature of production and the private and individual nature of ownership. Marx believed that these and other contradictions would eventually lead to the downfall of the capitalist system. He maintained that by its very nature, capitalism involves the exploitation and oppression of the worker. He believed that the conflict of interest between capital and labour, which involves one group gaining at the expense of the other, could not be resolved within the framework of a capitalist economy.

Marx saw history as divided into a number of time periods or epochs, each being characterized by a particular mode of production. Major

changes in history are the result of new forces of production. Thus the change from feudal to capitalist society stemmed from the emergence, during the feudal epoch, of the forces of production of industrial society. This resulted in a contradiction between the new forces of production and the old feudal relations of production. Capitalist industrial society required relations of production based on wage labour rather than the traditional ties of lord and vassal. When they reach a certain point in their development, the new forces of production lead to the creation of a new set of relations of production. Then, a new epoch of history is born which sweeps away the social relationships of the old order. However, the final epoch of history, the communist or socialist society which Marx believed would eventually supplant capitalism, will not result from a new force of production. Rather it will develop from a resolution of the contradictions contained within the capitalist system. Collective production will remain but the relations of production will be transformed. Ownership of the forces of production will be collective rather than individual and members of society will share the wealth that their labour produces. No longer will one social group exploit and oppress another. This will produce an infrastructure without contradiction and conflict. In Marx's view this would mean the end of history since communist society would no longer contain the contradictions which generate change.

In view of the contradictions which beset historical societies, it appears difficult to explain their survival. Despite its internal contradictions, capitalism has continued in the West for over 200 years. This continuity can be explained in large part by the nature of the superstructure. In all societies the superstructure is largely shaped by the infrastructure. In particular, the relations of production are reflected and reproduced in the various institutions, values and beliefs that make up the superstructure. Thus the relationships of domination and subordination found in the infrastructure will also be found in social institutions. In Marx's words, 'The existing relations of production between individuals must necessarily express themselves also as political and legal relations'. The dominant social group or ruling class, that is the group which owns and controls the forces of production, will largely monopolize political power and its position will be supported by laws which are framed to protect and further its interests. In the same way, beliefs and values will reflect and legitimate the relations of production. Members of the ruling class 'rule also as thinkers, as producers of ideas'. These ideas justify their power and privilege and conceal from all members of society the basis of exploitation and oppression on which their dominance rests. Thus under feudalism honour and loyalty were 'dominant concepts' of the age. Vassals owed loyalty to their lords and were bound by an oath of allegiance which encouraged the acceptance of their status. In terms of the dominant concepts of the age, feudalism appeared as the natural order of things. Under capitalism, exploitation is disguised by the ideas of equality and freedom.

The relationship between capitalist and wage labourer is defined as an equal exchange. The capitalist buys the labour power which the worker offers for hire. The worker is defined as a free agent since he has the freedom to choose his employer. In reality, equality and freedom are illusions. The employer-employee relationship is not equal. It is an exploitive relationship. The worker is not free since he is forced to work for the capitalist in order to survive. All he can do is exchange one form of 'wage slavery' for another. Marx refers to the dominant ideas of each epoch as 'ruling class ideology'. Ideology is a distortion of reality, a false picture of society. It blinds members of society to the contradictions and conflicts of interest which are built into their relationships. As a result they tend to accept their situation as normal and natural, right and proper. In this way a 'false consciousness' of reality is produced which helps to maintain the system. However, Marx believed that ruling class ideology could only slow down the disintegration of the system. The contradictions embedded in the structure of society must eventually find expression.

In summary, the key to understanding society from a Marxian perspective involves an analysis of the infrastructure. In all historical societies there are basic contradictions between the forces and relations of production and there are fundamental conflicts of interest between the social groups involved in the production process. In particular, the relationship between the major social groups is one of exploitation and oppression. The superstructure derives largely from the infrastructure and therefore reproduces the social relationships of production. It will thus reflect the interests of the dominant group in the relations of production. Ruling class ideology distorts the true nature of society and serves to legitimate and justify the status quo. However the contradictions in the infrastructure will eventually lead to a disintegration of the system and the creation of a new society.

Interactionism

Although functionalism and Marxism provide very different perspectives on society, they have a number of factors in common. Firstly, they offer a general explanation of society as a whole and as a result are sometimes known as macro-theories. Secondly, they regard society as a system, hence they are sometimes referred to as systems theories. Thirdly, they tend to see man's behaviour as shaped by the system. In terms of Talcott Parsons's version of functionalism, behaviour is largely directed by the norms and values of the social system. From a Marxian viewpoint, behaviour is ultimately determined by the economic infrastructure. Interactionism differs from functionalism and Marxism on these three points. It focusses on small-scale interaction rather than society as a whole. It usually rejects the notion of a social system. As a result it does not regard

human action as a response or reaction to the system.

Interactionism, as used in this chapter and in the main part of the book, covers a number of related perspectives. These perspectives will be differentiated and examined in detail in the chapter on social theory. As its name suggests, interactionism is concerned with interaction which means action between individuals. The interactionist perspective seeks to understand this process. It begins from the assumption that action is meaningful to those involved. It therefore follows that an understanding of action requires an interpretation of the meanings which actors give to their activities. Picture a man and a woman in a room and the man lighting a candle. This action is open to a number of interpretations. The couple may simply require light because a fuse has blown or a power cut has occurred. Or, they may be involved in some form of ritual in which the lighted candle has a religious significance. Alternatively, the man may be trying to create a more intimate atmosphere as a prelude to a sexual encounter. Finally the couple may be celebrating a birthday, a wedding anniversary or some other red-letter day. In each case a different meaning is attached to the act of lighting a candle. To understand the act it is therefore necessary to discover the meaning held by the actors.

Meanings are not fixed entities. As the above example shows, they depend in part on the context of the interaction. Meanings are also created, developed, modified and changed within the actual process of interaction. For example, a pupil entering a new class may initially define the situation as threatening and even hostile. This definition may be confirmed, modified or changed depending on his perception of the interaction which takes place in the classroom. The pupil may come to perceive his teacher and fellow pupils as friendly and understanding and so change his assessment of the situation. The way in which an actor defines a situation has important consequences. It represents his reality in terms of which he structures his action. For example, if the pupil maintained his definition of the classroom as threatening and hostile, he may keep to himself and speak only when spoken to. Conversely if he changed this definition, there would probably be a corresponding change in his actions in that context.

The actions of the pupil in the above example will depend in part on his interpretation of the way others see him. For this reason many interactionists place particular emphasis on the idea of the self. They suggest that an individual develops a self-concept, a picture of himself, which has an important influence on his actions. A self-concept develops from interaction processes since it is in large part a reflection of the reactions of others towards the individual. Hence the term 'looking glass self' coined by Charles Cooley. An actor tends to act in terms of his self-concept. Thus if he is consistently defined as disreputable or respectable, servile or arrogant he will tend to see himself in this light and act accordingly.

Since interactionists are concerned with definitions of situation and self, they are also concerned with the process by which those definitions are constructed. For example, how does an individual come to be defined in a certain way? The answer to this question involves an investigation of the construction of meaning in interaction processes. This requires an analysis of the way actors interpret the language, gestures, appearance and manner of others and their interpretation of the context in which the interaction takes place. The definition of an individual as a delinquent provides an example. Research has indicated that police are more likely to perceive an act as delinquent if it occurs in a low-income inner city area. The context will influence the action of the police since they typically define the inner city as a 'bad area'. Once arrested, a suspect is more likely to be defined as a juvenile delinquent if his manner is interpreted as aggressive and uncooperative, if his appearance is seen as unconventional or slovenly, if his speech is defined as ungrammatical or slang and if his posture gives the impression of disrespect for authority or arrogance. Thus the jive-talking Black American from the inner city ghetto with his cool, arrogant manner and colourful clothes is more likely to be defined as a delinquent than the White 'all-American boy' from the tree-lined suburbs.

Definitions of individuals as certain kinds of persons are not, however, simply based on preconceptions which actors bring to interaction situations. For example, the police will not automatically define the Black juvenile involved in a fight as delinquent and the White juvenile involved in a similar activity as non-delinquent. A process of negotiation occurs from which the definition emerges. Often negotiations will reinforce preconceptions but not necessarily. The young Black may be able to convince the policeman that the fight was a friendly brawl which did not involve intent to injure or steal. In this way he may successfully promote an image of himself as a high spirited teenager rather than a malicious delinquent. Definitions and meanings are therefore constructed in interaction situations by a process of negotiation.

The idea of negotiation is also applied to the concept of role. Like functionalists, the interactionists employ the concept of role but they adopt a somewhat different perspective. Functionalists imply that roles are provided by the social system and the individual enacts his role as if he were reading off a script which contains explicit directions for his behaviour. Interactionists argue that roles are often unclear, ambiguous and vague. This lack of clarity provides actors with considerable room for negotiation, manoeuvre, improvisation and creative action. At most, roles provide very general guidelines for action. What matters is how they are employed in interaction situations. For example, two individuals enter marriage with a vague idea about the roles of husband and wife. Their interaction will not be constrained by these roles. Their definition of what constitutes a husband, a wife, and a marital relationship will be

negotiated. It will be fluid rather than fixed, changeable rather than static. Thus, from an interactionist perspective, roles, like meanings and definitions of the situation, are negotiated in interaction processes.

In summary, interactionism focusses on the process of interaction in particular contexts. Since all action is meaningful, it can only be understood by discovering the meanings which actors assign to their activities. Meanings both direct action and derive from action. They are not fixed but constructed and negotiated in interaction situations. From their interaction with others, actors develop a self-concept. This has important consequences since the individual tends to act in terms of his definition of self. Understanding the construction of meanings and self-concepts involves an appreciation of the way actors interpret the process of interaction. This requires an investigation of the way in which they perceive the context of the interaction and the manner, appearance and actions of others. While interactionists admit the existence of roles, they regard them as vague and imprecise and therefore as open to negotiation. From an interactionist perspective, action proceeds from negotiated meanings which are constructed in ongoing interaction situations.

Positivism and phenomenology

The previous section has briefly examined three theoretical perspectives in sociology. These perspectives will now be considered in terms of one of the major debates within the discipline: the positivist versus the phenomenological approach to the study of man and society. Many of the founding fathers of sociology believed that it would be possible to create a science of society based on the same principles and procedures as the natural sciences such as chemistry and biology. This approach is known as positivism. Auguste Comte (1798–1857), who is credited with inventing the term sociology and regarded as one of the founders of the discipline, maintained that the application of the methods and assumptions of the natural sciences would produce a 'positive science of society'. He believed that this would reveal that the evolution of society followed 'invariable laws'. It would show that the behaviour of man was governed by principles of cause and effect which were just as invariable as the behaviour of matter, the subject of the natural sciences.

In terms of sociology, the positivist approach makes the following assumptions. The behaviour of man, like the behaviour of matter, can be objectively measured. Just as the behaviour of matter can be quantified by measures such as weight, temperature and pressure, methods of objective measurement can be devised for human behaviour. Such measurement is essential to explain behaviour. For example, in order to explain the reaction of a particular chemical to heat, it is necessary to provide exact measurements of temperature, weight and so on. With the aid

of such measurements it will be possible to accurately observe the behaviour of matter and produce a statement of cause and effect. This statement might read $A \times B = C$ where A is a quantity of matter, B a degree of heat and C a volume of gas. Once it has been shown that the matter in question always reacts in the same way under fixed conditions, a theory can be devised to explain its behaviour. From a positivist viewpoint such methods and assumptions are applicable to human behaviour. Observations of behaviour based on objective measurement will make it possible to produce statements of cause and effect. Theories may then be devised to explain observed behaviour.

The positivist approach in sociology places particular emphasis on behaviour that can be directly observed. It argues that factors which are not directly observable, such as meanings, feelings and purposes, are not particularly important and can be misleading. For example if the majority of adult members of society enter into marriage and produce children, these facts can be observed and quantified. They therefore form reliable data. However, the range of meanings that members of society give to these activities, their purposes for marriage and procreation are not directly observable. Even if they could be accurately measured, they may well divert attention from the real cause of behaviour. One individual may believe he entered marriage because he was lonely, another because he was in love, a third because it was the 'thing to do' and a fourth because he wished to produce offspring. Reliance on this type of data for explanation assumes that individuals know the reasons for marriage. This can obscure the real cause of their behaviour.

The positivists' emphasis on observable 'facts' is due largely to the belief that human behaviour can be explained in much the same way as the behaviour of matter. Natural scientists do not inquire into the meanings and purposes of matter for the obvious reason of their absence. Atoms and molecules do not act in terms of meanings, they simply react to external stimuli. Thus if heat, an external stimulus, is applied to matter, that matter will react. The job of the natural scientist is to observe, measure, and then explain that reaction. The positivist approach to human behaviour applies a similar logic. Men react to external stimuli and their behaviour can be explained in terms of this reaction. For example they enter into marriage and produce children in response to the demands of society. Society requires such behaviour for its survival and its members simply respond to this requirement. The meanings and purposes they attach to this behaviour are largely inconsequential.

It has often been argued that systems theory in sociology adopts a positivist approach. Once behaviour is seen as a response to some external stimulus, such as economic forces or the requirements of the social system, the methods and assumptions of the natural sciences appear appropriate to the study of man. Marxism has often been regarded as a positivist approach since it can be argued that it sees human behaviour as a reaction

to the stimulus of the economic infrastructure. Functionalism has been viewed in a similar light. The behaviour of members of society can be seen as a response to the functional prerequisites of the social system. These views of systems theory represent a considerable oversimplification of complex theories. However, it is probably fair to say that systems theory is closer to a positivist approach than the views which will now be considered.

Phenomenological perspectives in sociology reject many of the assumptions of positivism. They argue that the subject matter of the social and natural sciences is fundamentally different. As a result the methods and assumptions of the natural sciences are inappropriate to the study of man. The natural sciences deal with matter. To understand and explain the behaviour of matter it is sufficient to observe it from the outside. Atoms and molecules do not have consciousness. They do not have meanings and purposes which direct their behaviour. Matter simply reacts 'unconsciously' to external stimuli; in scientific language it behaves. As a result the natural scientist is able to observe, measure, and impose an external logic on that behaviour in order to explain it. He has no need to explore the internal logic of the consciousness of matter simply because it does not exist.

Unlike matter, man has consciousness – thoughts, feelings, meanings, intentions and an awareness of being. Because of this, his actions are meaningful, he defines situations and gives meaning to his actions and those of others. As a result, he does not merely react to external stimuli, he does not simply behave, he acts. Imagine the response of early man to fire caused by volcanoes or spontaneous combustion. He did not simply react in a uniform manner to the experience of heat. He attached a range of meanings to it and these meanings directed his actions. For example he defined fire as a means of warmth and used it to heat his dwellings; as a means of defence and used it to ward off wild animals; and as a means of transforming substances and employed it for cooking and hardening the points of wooden spears. Man does not just react to fire, he acts upon it in terms of the meanings he gives to it. If action stems from subjective meanings, it follows that the sociologist must discover those meanings in order to understand action. He cannot simply observe action from the outside and impose an external logic upon it. He must interpret the internal logic which directs the actions of the actor.

Max Weber (1864–1920) was one of the first sociologists to outline this perspective in detail. He argued that sociological explanations of action should begin with 'the observation and theoretical interpretation of the subjective "states of minds" of actors'. As the previous section indicated, interactionism adopts a similar approach with particular emphasis on the process of interaction. Where positivists emphasize facts and cause and effect relationships, interactionists emphasize insight and understanding. Since it is not possible to get inside the heads of actors, the discovery of

meaning must be based on interpretation and intuition. For this reason objective measurement is not possible and the exactitude of the natural sciences cannot be duplicated. Since meanings are constantly negotiated in ongoing interaction processes it is not possible to establish simple cause and effect relationships. Thus some sociologists argue that sociology is limited to an interpretation of social action and phenomenological approaches are sometimes referred to as 'interpretive sociology'.

A number of sociologists have argued that the positivist approach has produced a distorted picture of social life. They see it as tending to portray man as a passive responder to external stimuli rather than an active creator of his own society. Man is pictured as reacting to various forces and pressures, to economic infrastructures and the requirements of social systems. Peter Berger argues that society has often been viewed as a puppet theatre with its members portrayed as 'little puppets jumping about on the ends of their invisible strings, cheerfully acting out the parts that have been assigned to them'. Society instils values, norms and roles, and men dutifully respond like puppets on a string. However, from a phenomenological perspective man does not merely react and respond to an external society, he is not simply acted upon, he acts. In his interaction with others he creates his own meanings and constructs his own reality and therefore directs his own actions.

The distinction between positivist and phenomenological approaches is not as clear cut as this section has implied. There is considerable debate over whether or not a particular theory should be labelled positivist or phenomenological. Often it is a matter of degree since many theories lie somewhere between the two extremes. The debate will be dealt with throughout the text and examined in detail in the closing chapters.

Sociology and ideology

The positivist approach assumes that a science of society is possible. It therefore follows that objective observation and analysis of social life are possible. An objective view is free from the values, moral judgments and ideology of the observer. It provides facts and explanatory frameworks which are uncoloured by the observer's feelings and opinions. An increasing number of sociologists argue that a value-free science of society is not possible. They maintain that the values of the sociologist directly influence every aspect of his research. They argue that the various theories of society are based, at least in part, on value judgments and ideological positions. They suggest that sociological perspectives are shaped more by historical circumstances than by objective views of the reality of social life.

Those who argue that an objective science of society is not possible maintain that sociology can never be free from ideology. The term

ideology refers to a set of ideas which present only a partial view of reality. An ideological viewpoint also includes values. It involves not only a judgment about the way things are but also the way things ought to be. Thus ideology is a set of beliefs and values which provides a way of seeing and interpreting the world which results in a partial view of reality. The term ideology is often used to suggest a distortion, a false picture of reality. However there is considerable doubt whether reality and ideology can be separated. As Nigel Harris suggests, 'Our reality is the next man's ideology and vice versa'.

Ideology can be seen as a set of beliefs and values which express the interests of a particular social group. Marxists use the term in this way when they talk about the ideology of the ruling class. In this sense ideology is a viewpoint which distorts reality and justifies and legitimates the position of a social group. Karl Mannheim uses the term in a similar way. He states that ideology consists of the beliefs and values of a ruling group which 'obscures the real condition of society both to itself and others and thereby stabilizes it'. Mannheim distinguishes this form of ideology from what he calls 'utopian ideology'. Rather than supporting the status quo, the way things are, utopian ideologies advocate a complete change in the structure of society. Mannheim argues that such ideologies are usually found in oppressed groups whose members want radical change. As their name suggests, utopian ideologies are based on a vision of an ideal society, a perfect social system. Mannheim refers to them as 'wish-images' for a future social order. Like the ideologies of ruling groups, he argues that utopian ideologies are a way of seeing the world which prevents true insight and obscures reality.

Mannheim's ideas will now be applied to two of the major theoretical perspectives in sociology, Marxism and functionalism. It has often been argued that Marxism is largely based on a utopian ideology, functionalism on a ruling ideology. Marxism contains a vision and a promise of a future ideal society – the communist utopia. In this society the forces of production are communally owned and as a result oppression and exploitation disappear. The communist utopia provides a standard of comparison for present and past societies. Since they inevitably fall far short of this ideal, their social arrangements will be condemned. It has been argued that the communist utopia is not a scientific prediction but merely a projection of the 'wish-images' of those who adopt a Marxian position. Utopian ideology has therefore been seen as the basis of Marxian theory.

By comparison, functionalism has often been interpreted as a form of ruling class ideology. Where Marxism is seen to advocate radical change, functionalism is seen to justify and legitimate the status quo. With its emphasis on order and stability, consensus and integration, functionalism appears to adopt a conservative stance. Rapid social change is not recommended since it will disrupt social order. The major institutions of society are justified by the belief that they are meeting the functional

prerequisites of the social system. Although functionalists have introduced the concept of dysfunction to cover the harmful effects of parts of the system on society as a whole, the concept is rarely employed. In practice, functionalists appear preoccupied with discovering the positive functions, the beneficial effects of social institutions. As a result, the term function is associated with the idea of useful and good. This interpretation of society tends to legitimate the way things are. Ruling class ideology has therefore been seen as the basis of functionalist theory.

This section has provided a brief introduction to the question of the relationship between sociology and ideology. It is important to note that the above interpretation of the ideological basis of Marxism and functionalism is debatable. However, a case can be made to support the view that both perspectives are ideologically based. The relationship between ideology and sociology will be considered in detail throughout the text. Each chapter in the main section of the book will conclude with an interpretation of the ideological basis of the views it covers.

APPENDIX 8

TASK 4

MODELLED EXTENDED READING

TEACH-TEST-TEACH
COMMON SENSE AND GOOD SENSE.

An adaptation of ideas from an article by Geertz : Common Sense as a Cultural System. (1983.)

Jill Bradbury.

In the "Interrogating Text" exercise, many students pinpointed a key issue in the Gramsci text: How does common-sense get transformed into good sense? How does common sense relate to good sense ? Why is common-sense inadequate?

Geertz investigates common sense, as an aspect of culture. He argues that common-sense is a complex, constructed interpretation of reality. His important contribution is to recognise common sense as a systematic, cultural body of knowledge, or set of ideas about the world, held jointly by a group of people and which they use to interpret and explain the world. However, common sense does not appear to be an interpretation; it is presented as is if it is a self-evident, direct representation of reality.

...it is an inherent characteristic of common sense thought precisely to deny this, [ie. that it is an 'organised body of considered thought',] and to affirm that its tenets are immediate deliverances of experience, not deliberated reflections upon it. ... Religion rests its case on revelation, science on method, ideology on moral passion; but common sense rests its case on the assertion that it is not a case at all, just life in a nutshell. The world is its authority. (p 75)

Common sense is authoritative in tone, and is persuasive in its own terms without reference to other sources of authority. In contrast, good sense is self-conscious about the fact that it is an interpretation / construction about reality, and not reality itself; and relies for its authority on sound evidence and argument. It is therefore always consciously an expression of thought or a human response to the world, rather than claiming to represent the world as it is.

Geertz highlights the fact that common sense is not identical in content across cultures, but is marked by the same "stylistic features, marks of attitude, tonal

shadings". (p 85) In other words, the same kind of language, and the same kind of argument is used to make common sense claims about knowledge. Common sense makes assertions about "truths" as self-evident, as directly derivable from actual experience, as the necessary and obvious conclusions from lived reality. Commonsense ideas are interpretations of reality - as indeed all thought or language is; but are presented in such a way as to conceal this very interpretation, to convey the sense of reality in words, "just life in a nutshell".

An example of common sense used by Geertz is : "Knowing that rain wets and that one ought to come out of it". This statement has all the markings of common-sense actuality : It asserts that of course this is so - rain wets, and therefore of course one should come inside when it rains. There is no room for debate on the issue. However, Geertz points out that even this statement is an interpretation: "No-one...doubts that rain wets; but there may be some people around who question the proposition that one ought to come out of it, holding that it is good for one's character to brave the elements". (p75)

The fact that common-sense is different across cultures should alert us to question the "commonness" of this knowledge about the world. If different groups of people have different common-sense ideas about the same world, it is not possible to argue that the world itself contains this knowledge - the knowledge must be constructed in people's heads. Geertz demonstrates, through Anthropological examples of "out-of-the-way cases", that different societies have constructed different common-sense understandings of the world they live in.

The common-sense system of knowledge operates in conjunction with other systematic bodies of knowledge - e.g. religion or natural science. He illustrates this by the example of Zande witchcraft which is only called upon as an explanatory force where common-sense fails to account for an event. "It is when ordinary expectations fail to hold, when the Zande man-in-the-field is confronted with anomalies or contradictions, that the cry of witchcraft goes up." (79) Witchcraft thus does not really try to open up further questions about reality, (to explain beyond what we see); rather it simply "block(s) such questions from view; seal(s) up the common-sense view of the world" - ie. tries to complete the sense of evident reality, by accounting even for that which is not immediately obvious.

Common sense can be "transculturally characterised" (p 85) in terms of its central assertion to proclaim self-evident truths, to deliver a direct commentary on the world "as it is", ie. it conveys an element of "naturalness" : reflecting the natural world. However, this natural characteristic of common-sense may be derived from other quite unnatural stories which become absorbed by a particular community, as the assumed : e.g. religious / superstitious explanations or scientific theory. e.g. : most people in our society have some common-sense notion of how germs are spread, and what cleanliness precautions to take in order to prevent this. While there is certainly scientific proof for this understanding, most ordinary people do not understand it, and it is not necessary for them to fully understand the scientific explanation for mothers to tell children to "wash their hands before supper/ after going to the toilet". What distinguishes common-sense from its possible scientific or other sources, is that its reasoning is not explicit and not open for investigation or debate. We simply "know" it is so.

Common-sense is also "practical", and this is highly valued - and academic knowledge is often criticised for being impractical. As Geertz argues, the practicalness of common-sense is part of our definition thereof : ie. only that which we consider practicable is absorbed into our common-sense, other knowledge is discarded as unuseful.

Common-sense is conveyed in simple or literal¹ language, representative of its simple / literal relation with reality : the assumption is that "the really important facts of life lie scattered openly along its surface, not cunningly secreted in its depths." (p 89) In other words, common-sense is concerned with the obvious meaning, and does not see the need to go beyond this.

Common-sense is "immethodical" and in fact celebrates this characteristic as evidence of its truthful reflection of the "intractable diversity of experience" (p 90) - ie. it does not claim to offer explanations or abstractions from the diversity of life - but to simply reflect that complex, and often contradictory reality. Common-sense has no method for discovering/ creating / developing meaning - it does not need to, as from this perspective of understanding, meaning is simply "there".

¹ Look up the meaning of "literal" in your **Conceptual Dictionary**.

Opposing or contradictory common sense ideas can be held jointly without any demand to resolve the conflict between these ideas : e.g. : "He who hesitates is lost", but also "Look before you leap". Good sense would require some resolution of these opposing assertions, a struggle to create new meaning or go beyond the level of this tension, or qualify each of these claims with reference to particular contexts.

The final characteristic of common sense discussed by Geertz is "accessibleness", by which he means that it does not require any special intelligence to understand and accept common-sense - it is, as its very name implies, the common property of members of a society, whether young/old, rich/poor, clever/stupid.

Geertz argues that common-sense is a systematic and identifiable body of knowledge held by a group of people, which enables them to make sense of their world. It is a complex and developed set of ideas, which although giving the impression of simply recording and reflecting "reality", contains a common interpretation of reality.

WHAT DOES THIS MEAN FOR US: THE NEW INTELLECTUALS WHO HAVE ORGANIC LINKS WITH THE MASSES, AND WHO MUST TRANSFORM COMMON-SENSE INTO GOOD SENSE ?

-- How can we use our common-sense in a university context ?

It is important to recognise that Geertz's discussion of common sense illustrates that the distinction between common and good sense, is not in terms of the content which belongs to each, and is not even in terms of right / wrong, but in terms of the form that knowledge takes, and the method of investigation and argument for "good sense".

In summary, the characteristics of common sense are as follows :

1. authoritative
2. naturalness
3. practicalness
4. simplicity / literalness
5. immethodicalness
6. contradictory
7. accessibleness

The nature of the ideas about reality with which we deal in the arts/social sciences are not "common sense". Although the content of our study is often the same as the world described and "explained" by common sense, the "good sense" of Arts/Social Science discourse displays none of the characteristics of common sense - and you must check your own work to ensure that you do not deal with material in a common-sense way. "Good" sense is explicitly ² an interpretation of reality, and does not try to pass itself off as reality itself. It does not concern itself with "practicalness" - although practical applications may arise from good sense sources. Good sense is methodical, and displays its method for others to analyse and criticise. Good sense must attempt to resolve and explain contradictions, or set limits or a particular context for particular claims, rather than hold contradictions simultaneously. The development of good sense is specialist in nature in that it requires training in the "discipline" of looking at the world in a particular way, ie. you need to enter the Anthropological / Sociological / Historical / Psychological way of investigating an aspect of reality.

This does not mean that common and good sense cannot feed into one another, nor does it mean that common sense is wrong or useless or "bad". In fact Gramsci argues that one of the key conditions for change, (and he meant this in a political sense, but the same is the case for cognitive/ mental change,) is that common sense needs to be transformed into good sense. This is possible through holding up the assumptions of common sense for scrutiny, for explication and interpretation, rather than leaving them submerged, and then to systematise and subject to the necessary "resolution of conflict" these interpretations in relation to other theories and interpretations of the meaning of the world.

² Look up the meaning of "explicit" in your **Conceptual Dictionary**.

TEACH-TEST-TEACH

QUESTIONING "COMMON SENSE AND GOOD SENSE".

Jill Bradbury.

1. What is the relationship between reality and a) common sense, and b) good sense ?

2. What is the role of **interpretation** in a) common sense and b) good sense ?

3. Where does a) common sense and b) good sense get **authority** for its claims ?

4. How does Geertz use Anthropological evidence to explain the nature of common sense ?

5. What is the connection between common sense and science ?

6. What is the method of good sense ?

7. How does good sense deal with contradictions ?

8. What is the important implication of the fact that different communities have **different** common sense understandings ?

9. What is the relationship between common sense and good sense with regard to :

a) content :

b) form :

c) possibilities for transformation :

10.a) Use Geertz's characteristics of common sense to develop a similar set of criteria for good sense :

b) What is the application of these criteria to the task of writing an essay in the Arts / Social Sciences :

TEACH-TEST-TEACH

FEEDBACK ON QUESTIONING COMMON SENSE & GOOD SENSE

Jill Bradbury.

The marks for this task were on the whole very low. The most useful way for you to interpret and use your marks, is to look at your score on each question rather than paying too much attention to your overall mark. It is very important that you use this feedback sheet to understand where you went wrong and to clarify misunderstandings of the text. The distinction between common and good sense can be a useful tool for you to examine your own work.

The model answer will follow below, but firstly some overall comments on the nature of the questions. Most of the questions focused your attention on a particular characteristic / criterion for distinguishing between common and good sense - in other words the opposition set up in the title of the article "Common Sense and Good Sense" provides the framework for your reading. Questions 1, 2 & 3 all asked for a comparison of common and good sense - in terms of relation to reality, the role of interpretation and authority respectively. The answers to all 3 questions appear on page one of the text.

Question 5 deals with the relationship between common sense and science (which is a specific type of good sense) : the answer to this question is to be found on page two of the article. Many people responded with the details of the example used in the article, instead of explaining what this example tells us in general, about the relationship between science and common sense.

Questions 6 & 7 both focus specifically on the characteristics of good sense; answers are found in the description of good sense on page three.

Question 9 again looks at the relationship between common and good sense : firstly in a) & b) asking for comparison; and then in c) moving beyond this conflict between the two forms of knowledge, to look at how they can be brought together, through the transformation of common sense. Refer to page 2 for a) pages 1,2 & 4 for b) and page 4 for c).

Questions 4 & 8 highlight the key criticism of common sense : ie. although it *appears* to be directly a mirror of reality, ***it is not really***. All communities understand the world in a common sense way, but do not come to the same conclusions or understandings. Therefore it is clear that common sense is also an interpretation (or a system of understanding or making meaning about the world). The problem with common sense is that it is difficult to argue, or debate with, or to change it - and thus it is not easily open to new evidence / understandings or improvement. It is this "closed" character which good sense challenges.

Question 10 demands that you apply what you understand of the text and go beyond what is given you. Question 10 a) asks for you to use the opposing characteristics of common and good sense discussed throughout the article, and create a summarised list of criteria for good sense, of the same form as those for common sense on page 4. (The similarity between the criteria is in terms of **form not content** - compare question 9 which illustrates the similarities and differences of common and good sense in these terms.) Be careful to be **exhaustive** in response to this type of question - in other words to give as many criteria as possible - the article has 7 common sense criteria, you should have used this as the basis on which to formulate the opposite characteristics of good sense.

Question 10 b) requires the further application of these general criteria to the specific task of writing an essay. It is this applied list of criteria which I hope you will be able to use for yourself. Read through the list in the model answer and try to apply them to checking your own work. Often students write and re-write their essays several times, but make only surface (language or editing) changes - you need to look deeper into the kind of knowledge which you have produced to ensure that it is "good sense" - the best possible answer to the problem.

MODEL ANSWER

1. What is the relationship between reality and a) common sense, and b) good sense ?

a) Common sense *appears* to record reality as it is, but in fact it is an interpretation of reality. (2)

b) Good sense interprets reality explicitly and gives evidence for this particular view of reality, recognising that there are other competing views. (2)

2. What is the role of interpretation in a) common sense and b) good sense ?

a) Common sense interprets reality but conceals / hides this fact - people are unaware / do not acknowledge that this is an "interpretation". (2)

b) Good sense explicitly / self-consciously interprets reality, and it is this interpretation which must be evaluated in terms of evidence, against other possible claims. (2)

3. Where does a) common sense and b) good sense get authority for its claims?

a) Authority for common sense claims is grounded in reality, ie. claims are made with direct reference to reality / the world / experience. Common acceptance by a group of people of these claims lends authority to these claims. The language or tone of common sense carries its own confident claim of authority. (Any two of these three points - 2)

b) Authority for good sense is in terms of sound evidence and argument. (2)

4. How does Geertz use Anthropological evidence to explain the nature of common sense ?

Anthropological evidence, in particular reference to "out-of-the-way" cases, shows that different societies have different common sense. This highlights the fact that our own common sense is in fact not "common", and therefore must be an interpretation.(2)

5. What is the connection between common sense and science ?

Common sense may be derived on scientific findings / use science as the basis for its claims, but science always makes explicit its method and provides evidence for its claims, whereas common sense assumes its own correctness, and is not open for debate. (2)

6. What is the method of good sense ?

- Explanation / interpretation / argument
- Abstraction on reality

- Resolution of conflicts / sets limits or contexts for certain claims
- Weighs evidence
- Explicates its own method

(Any four of the above - 4)

7. How does good sense deal with contradictions ?

Contradictions are resolved by abstracting to a higher level of theory / explanation.

Claims are limited by being applied to limited contexts. (2)

8. What is the important implication of the fact that different communities have different common sense understandings ?

If different communities have different common sense, it cannot be viewed as really common, it cannot therefore be a natural part of the real world - it must be an interpretation constructed in people's heads. (2)

9. What is the relationship between common sense and good sense with regard to:

a) Content: Common sense and good sense can deal with the same content. (1)

b) Form: Common sense and good sense differ in form - common sense makes authoritative claims whereas good sense makes its argument explicit.

c) possibilities for transformation: Common sense can be transformed into good sense if it is held up for scrutiny, is itself opened up for interpretation, is subjected to searches for evidence, and if contradictions are contextualised/ explained in terms of wider theory. (2)

10.a) Use Geertz's characteristics of common sense to develop a similar set of criteria for good sense:

1. Authority in evidence.
2. It is aware that it is "artificial" ie. self-consciously an interpretation of reality.
3. Practicalness is not necessarily highly valued, although its applications may arise.
4. Interpretation of a particular view point.
5. It is methodical and this method is open for discussion / analysis.
6. Resolves contradictions.
7. Need specialised knowledge / the particular approach of a discipline to make good sense. (7)

b) What is the application of these criteria to the task of writing an essay in the Arts / Social Sciences :

- There is a need for evidence to substantiate your argument.
- Do not assume "facts" or conclusions as obvious - there is always another possible view / explanation / interpretation/.
- The logic of your argument is more crucial / important than direct reference to the world.
- Enter the way of the discipline / use the specialist way of "reading" / interpreting the world.
- Make your method explicit for the reader.
- Expect criticism / argument.
- Explain contradictions / qualify your answer with relation to specific circumstances or in terms of particular definitions.

(Any five of the above - 5)

APPENDIX 9

TASK 5

NON-SEQUENTIAL READING

TEACH-TEST-TEACH: SECOND SEMESTER 1990

QUESTIONING AND QUESTIONS¹

TASK ONE.

When one writes one starts on the left-hand side of the page and jots down, letter after letter - forming word after word and sentence after sentence - until one gets to the right-hand-side, then one stops there only to start again at the left, and so on and so on until the page is full or until one has finished. The mechanical act of reading also happens sequentially, that is, from a beginning to an end; and is temporal, that is, it has a start and a finish in real time. That which one writes about, and the meaning which one gets from that which one reads, is something else again.

Before discussing this, a few questions for you to answer.

1. What do you understand by the assertion that "reading is sequential and temporal"?

2. There is a hint in the passage above, to a contrast between writing and reading on the one hand, and _____
on the other hand.

¹ This task was designed by A.P. Craig.

The meaning events, people, animals and things have for us, accumulates over time. Meaning is, therefore, not something fixed and absolute. We 'get' and 'make' meaning through the interpretation of those events, people, animals and things we encounter in our daily living. The act of interpretation "must inevitably do violence to the sequential nature of reading. Patterning is, by definition, a process of pulling some things out of their sequential position".

3. If you were given a text (book) to interpret, what process would you engage in, in order to 'get' or 'make' meaning from it?

TEACH-TEST-TEACH 1991

FEEDBACK : QUESTIONING TASK : PATTERNING TEXT.

Jill Bradbury.

1. "sequential" - Reading occurs linearly from left to right / beginning to end. It must follow the chronologically ordered pattern of writing. (2)

"temporal" - Reading is an activity which occurs in time; it is a fixed measurable event. (2)

2. The contrast is between the acts of writing and reading and meaning / the construction of meaning. Whereas reading is sequential and temporal, meaning is **not**. Making meaning requires moving out of the chronological order of the written text, re-ordering information and constructing a new whole. It is also does not occur once and once only - it is an on-going process which is always being added to and changed. (This is the crucial point of the short text on the process of reading and making meaning. (2)

3. Of greatest importance is some indication in your answer that meaning is made through a process of "patterning" the information in the text - ie. pulling things out of their position in the text, and forming links with other pieces of information. This can be done through : using beginnings and endings, focusing on tensions / oppositions, extracting key ideas / re-organising information / shifting backwards and forwards in the text. (2)

Two more marks were allocated for possible techniques / strategies which you could use in reading. (In general, people lost marks on this question for not being as **exhaustive** as possible, you need to follow through to think of all possibilities, rather than simply writing your first response down.)

- write on the text
- refer to other texts, dictionaries etc.
- question oneself and the text
- use headings / titles as clues, to organise information.
- number points
- underline important terms / points
- write own notes
- create categories / new headings for parts of the text

(For two of the above - 2)

Total = 10.

APPENDIX 10

TASK 6

THE ESSENTIAL QUESTION OF ENQUIRY: FEEDBACK

TEACH-TEST-TEACH

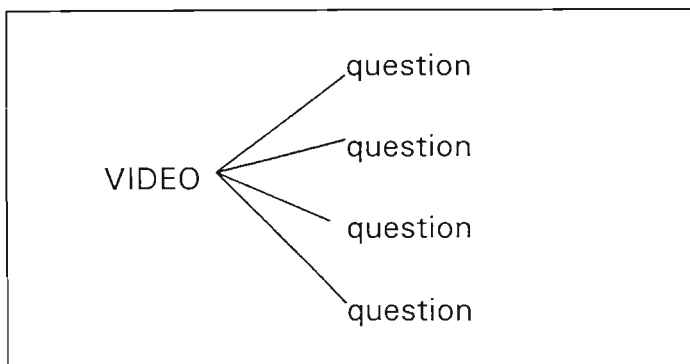
FEEDBACK: QUESTIONING TASKS "POETRY OF THE PEOPLE"

Notes to Students : Jill Bradbury.

There were two parts to your task in watching the video "Poetry of the People".

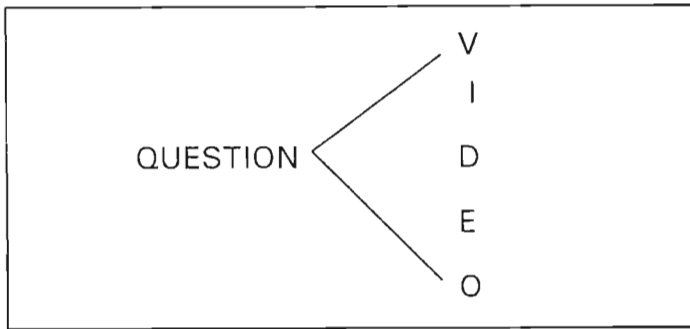
1. Write down questions as you watch the video.

The purpose of this task was to help you to focus your mind critically on what you saw and heard. This attitude of questioning information is part of what it means to be "critical" / or to "analyse critically".

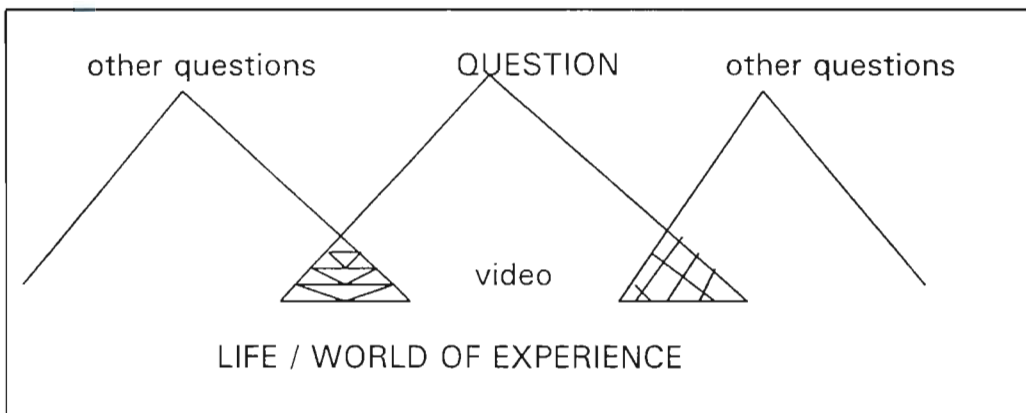


2. Write down the question which you think prompted / motivated the making of the video; in other words, the question which this video was produced to answer.

The purpose of this task was to illustrate for you that all knowledge, (or products of knowledge as in a lecture, book or film), is produced in response to a question or a questioning process. Further, this task was the first of a set of tasks which will help you to analyse questions set for you to answer, and to answer particular questions.(In this case you were working backwards from the answer to the question.)

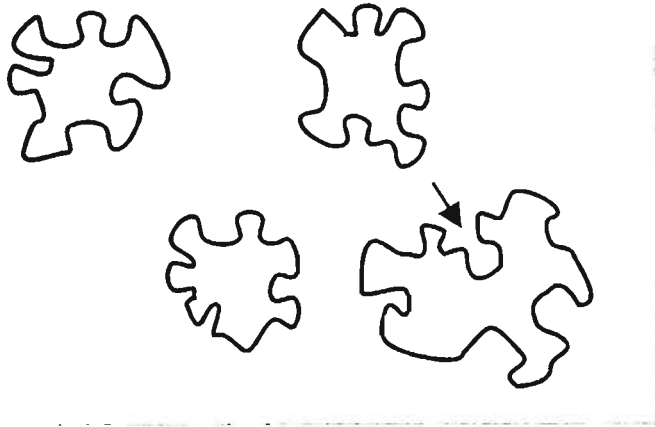


A question is a **particular way** into the world of knowledge - it sets up limits/ boundaries which makes certain answers both necessary¹ and appropriate. The video, **Poetry of the People**, was an answer in response to a particular question : the question was to do with the relationship between poetry, (art) and society, (politics / South African society.) Many of you responded with questions which were contained in the video, or came from the video, rather than the question which acted **behind** the video, and gave the boundaries for the video's answer. e.g.: questions about Apartheid, or why people suffer, or police brutality.



The relationship between questions and answers involves establishing the best "fit" or match - it can be; likened to a jigsaw puzzle where the shaping of the edges of one piece must complement those of the piece into which it must fit. Other pieces may help to make up the whole picture, but pieces can only be placed where they fit.

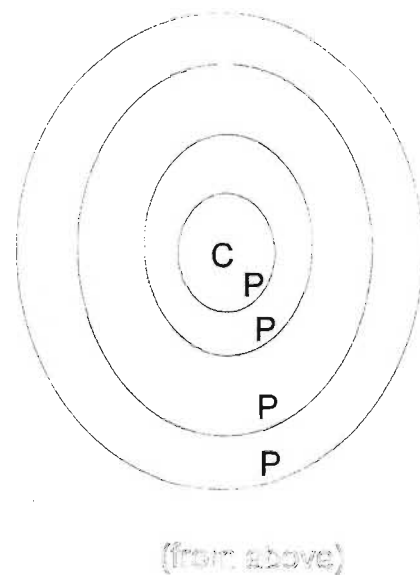
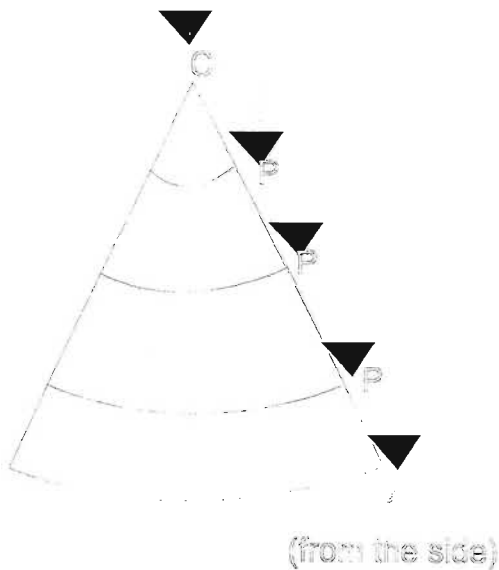
¹ If something is necessary, we mean it cannot be otherwise, given all the factors, it must inevitably be thus.



A question acts like a pair of binoculars, to focus your attention on a specific area in the wider field of knowledge. You need to train your binoculars to focus where the question directs you, and not allow the binoculars to wander off to other interesting sights.

Of course knowledge is a network (or a big jigsaw puzzle picture, or is part of the broad area in which you must focus your "binoculars") and so somewhere along the line all other possible questions have a relationship with the central question being asked - it is clear that many other side/peripheral questions do come out of the video.

CENTRAL QUESTION



However, to say that questions are peripheral rather than central, does **not** imply that they are less important or interesting - in fact many of you may argue that these questions about suffering are more important than the issue about poetry and society - however, this video is not a response to those questions, although it contains them or points to them as interesting issues for discussion.

Check yourself by asking these questions:

- Was there information / knowledge in the video which is **not** to do with your question ?
- Is the answer to your question best found by looking at this video or would you need to look elsewhere (to your general knowledge, to books, "experts"), to answer it fully ?

Use these same questions to check your response to an essay question:

- Is there information in your answer which is not necessarily to do with the question ? (If you think this peripheral information strengthens your argument you must tell your reader exactly how the link is made.)
- Is your answer the best response to the question, or would the reader have to search for additional information elsewhere ?

APPENDIX 11

TASK 7

THE CIRCLE OF KNOWLEDGE

THE CIRCLE OF KNOWLEDGE

(Extract from *The Production of Knowledge* by AP Craig 1989)

Question



In Arts and Social Sciences, there are many old and also new questions; there are questions about individual persons, groups and society as a whole; there are questions about the places and spaces in which people live; we consider the effects of poverty and oppression, the relationship between good and evil; and some very particular questions like, "Which books/magazines do 50 year old men, living in Hillbrow, read?" - the list can go on and on ! The important point about the question asked is the way it **directs your attention** or research. There are some criteria by which you can evaluate a question, and focus your inquiry/exploration of it. These are as follows:

1. Is it an important question ?

Why is this question important; will the answer(s) to it help any particular person or group of people or humanity in general? Who else has asked this question ? Where and when did they ask it ? How did they search for an answer and what claims did they make ?

2. What is the meaning of the different terms/labels/words in the question ?

You will often find that the words we use in everyday conversation (the meaning of which you can find in a dictionary) differ from the way those words are used in academic texts or discourse (see Witz, 1989: *The Conceptual Dictionary*). It is important to check the meaning an

author associates with the terms in her/his question, since these meanings will determine the exact nature of your inquiry into a topic. For example, a question such as: "What is the relationship between mind and culture?" could be interpreted very differently depending on what the author means and what a reader understands by the terms 'mind' and 'culture.'

3. How could information about the question be obtained ?

Whenever you set out to find an answer to a question, the following phases are involved: **planning, acting, observing, reflecting.**



The circle of making knowledge

These phases are like the segments in a circle. You start by planning, that is, you make a plan, then you act on the plan; after that you observe the results of your actions, and then you reflect on the results, the observations, your actions and the plan. This last segment, reflection, gets you back to the beginning: You can now re-plan, act again, and so on until you can satisfy yourself or your colleagues or the examiner/lecturer with the proposed solution to the problem.

Before considering each of these phases in turn, think about the following questions:

"Does God exist?"

"What psychological effects does living in a shack settlement have on children between the ages of 2 to 7 years?"

- "How many people live in the greater Durban area ?"
- "How did I (the author) feel when writing this text ?"
- "What caused the European Witch Craze ?"
- "How could the rise in the price of bread be explained ?"
- "What is the relationship between hereditary and environmental factors in school performance ?"
- "Is Picasso a good painter ?"
- "Should all first year students do a course in English literature ?"
- "Did the sun rise this morning ?"
- "Should all people have the vote ?"
- "Is schooling good for people ?"

Each of these questions directs the attention of the researcher in specific ways; and each relies on a particular domain of knowledge (or a discipline) for the theories and claims of experts that may inform the research. Some of these questions are within reach of common sense, others are only accessible through the knowledge and methods typical of Arts and Social Science; some questions probe our values, and others, our factual knowledge; some our hopes and others, our imagination. In order to answer any one or all of these, you need to **reason** and **argue** for your point of view or **prove** your **claim(s)**.

Exercise V:

Think of some questions emphasised by the lecturers on this programme, or those which puzzle you and list them below.

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Planning

Planning your research is crucial; it will save you time and direct your inquiry. It involves **unravelling the question** (undertaking a thorough task analysis), that is, breaking the whole into smaller but important parts, then **ordering these parts** from most accessible (where information is within easy reach) to least accessible, and from elementary (or basic) to most essential to a solution of the whole; and lastly, conceptualizing the relationships between different parts, and between one (any) part and the whole. Write this ordering down in detail and use it to **plan** your inquiry, exploration or investigation; when to do what, where to search for relevant information, and how to undertake an analysis of the information at your disposal.



If we use 'catching fish' as our metaphor (analogy) for doing research, the plan involves deciding which rod or hooks or bait to take to the sea, which net to use in the river and so on. You can only make such a plan in academic research if you have undertaken a thorough **analysis of what the task demands**; that is, what the question means and what parts it consists of.

- This whole text, **The Production of Knowledge**, is meant as a resource for you to use to discover what the task demands are of university learning in the Arts and Social Science.

If you have a good plan which tells you which tools to use (eg. a rod, fishing line, hook and sinker or a fishing net) and when and how to use them (it is best to fish at dawn or dusk), you will catch plenty of fish. If you have a plan which is not good enough, it is like going fishing with a net with very big holes (in which case most of the fish will get away), or like using a fishing rod without a hook !

Either way, you lose something; fish or, in the knowledge game, important information.

Acting

Acting (or action) is a word that can mean thinking silently (that is mental action), doing things like asking people something, observing something or someone, listening to a lecture, reading books, and so forth; acting refers, therefore, to **thinking, doing, saying and writing**. In terms of research, your action must be directed at obtaining information about an issue. While checking the available information (eg. reading texts, discussing your questions with colleagues and lecturers or tutors, reading further, etc.) note the evidence you find for certain claims; what experts claim, their data as well as the proofs they advance. Also keep a record of your own developing ideas, how you have come to certain conclusions, and what evidence you have for these conclusions. It is also important to **act on your acting or think about your thinking**; that is, you must always be critically aware of your ideas as they develop through the process of research. This ability to monitor your own action or assess and evaluate your own thinking and doing or judging your own claims, reason and argument is central to the task demands of university studies. A good student does not only think with concepts (ideas) but also about them.



Imagine your mind consisting of many different 'individuals' each with his/her own set of beliefs, values, desires and knowledge, and each looking at the issue from a different perspective (angle). Your task as a student is to function like a chairperson to all these 'individuals'; that is, note 'their' points of view, compare the different points of view and then synthesize and co-ordinate these into a new whole - a reasonable solution to the problem; one that creates the best fit with our current knowledge about an issue. If you can learn to imagine all possible angles on an issue, and learn to express these in the written form when you argue for a solution, you are already well on the road to acting like a good student.

Observing

People (because they are people - organisms who solve problems and use language) perceive (or see) what they want to or can see, and the fishing nets they make, determine the fish they will catch. While acting on your plan, you will look and see, and do and understand as much as your knowledge allows. As researchers, we have constantly to remind ourselves that we all look at the world **through** our knowledge and past experiences (think again about the different kinds of knowledge discussed above). It is as if our learning histories provide us with coloured spectacles through which to observe things, people and events. Moreover, since each person's spectacles are different in some ways from others' (because **our experiences are unique**), we all observe things differently. This demands that we furnish (provide) proof for our claims and, furthermore, that we be critical of our own and others' data, claims and evidence. If research can be useful in any way, it must allow us the distance from our experiences to be critical.



People, because they are people, also have a lot in common. That is, we **share some understandings**. What we share makes it possible to communicate (talk) - to agree and disagree and to reach an understanding of why we agree or disagree. If all our observations were totally different, we could not even start a discussion.

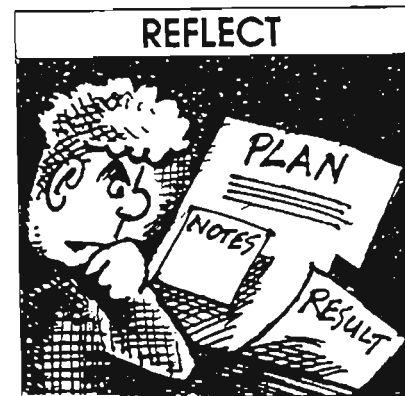
We have also to learn, however, to become critical of shared understandings; we must be willing, as students, to talk, argue, debate, discuss, check, re-check, negotiate and re-negotiate our observations. Moreover, because people forget easily (and change their minds rapidly), we have to **record** or make notes or write down what we think and see, hear and do, agree and disagree about.



Reflect

Research can never be fully critical if we are not willing to think, and think again - ponder even our deeply and dearly held convictions - over and over again, and above all, think about our thinking and doing. In other words, reflecting on our plans, actions and observations is crucial to the knowledge game. Reflecting on all this implies the following:

1. Weighing-up or **checking** our understanding or knowledge both against ordinary and expert understanding and knowledge, and from as many different angles as we can imagine;
2. Being **critical** of our own and others' understanding and knowledge;
3. Being willing to use our reflection to re-plan, act again, and observe **over and over again** on the basis of all the phases in the process of research.



Think about your plan, your actions, your results and your records...

When you have enough evidence and expert knowledge and feel comfortable enough to use these to reason, you are in a position to present your solution to the problem in a coherent argument. This final version of your answer is that part for which you will (usually) get a mark. We could spend days on this part of the research; that is, **writing well**. You have to express your solution to the problem or your answer to the question as fully, and as best as you possibly can. If your answer to the question is to be taken seriously, if you are to obtain a good mark for it, you have to plan, act, observe, and reflect also on this final - written - answer or essay or exam question. At the start of your university studies, this will take a lot of time but be patient; the more you write, the easier (and faster) it becomes.

APPENDIX 12

TASK 8

ANALYSING ACADEMIC QUESTIONS

THE CIRCLE OF MAKING KNOWLEDGE: READING QUESTIONS

Analyse the components of the following questions. Break them up into the essential parts which an answer would need to address, and outline the connections/oppositions which are set up between these different parts. **NB: These relationships between the parts will be implied rather than explicitly stated. Part of the task of reading a question is to pull out these implications.**

Use these steps to analyse the questions:

1. Write down the components which the question can be broken down into.
2. Note and then look up in the dictionary any words which you do not know (or unsure of) the meaning of.
3. Try to state what you see as the implications of this question. (It may help to think in terms of: what is the key issue this question is dealing with, or why is this an important question to ask).
4. Write down a series of smaller questions which you need to answer for yourself in order to answer this BIG question.

1. "All whites are born racist." Critically discuss this statement.
2. "Racism usually functions as part of an ideology that helps to explain (or rationalise) a situation of inequality in society." Relate this statement to the early development of a racially-divided working class in South Africa.
3. There is a necessary connection between private property, the labour market and the market for goods. Discuss.
4. Describe the nature of adaptation to the environment typical of subsistence pastoralism in Africa and analyse why many pastoralists have experienced difficulty in the face both of socio-political change and various forms of development planning done on their behalf by government and international agencies.
5. "The construction of French Absolutism was that of a convulsive progression towards a centralised monarchical State, repeatedly interrupted by relapses into provincial disintegration and anarchy." Trace the development of French Absolutism in the light of this remark.

TEACH-TEST-TEACH: FEEDBACK ON READING QUESTIONS TASK

Your task was to analyse the following question using a series of steps.

Describe the nature of adaptation to the environment typical of subsistence pastoralism in Africa and analyse why many pastoralists have experienced difficulty in the face both of socio-political change and various forms of development planning done on their behalf by government and international agencies.

1. Components / Parts of the question :

The parts of the question which you must identify in order to analyse the question, must be the key ideas / concepts which will enable an answer to be built - **NOT** parts of a sentence.

- Subsistence pastoralism
- Adaptation
- Change : created by development agencies & politics
- The effects of change
- The role of government & agencies

2. Small questions:

Questions which would help you to gather information in the process of answering the question could be phrased around each of the "parts" identified in Task 1, for example:

- What is pastoralism ?
- What were the effects of change ?
- What was the role of development agencies ?

It may be easier to think about these smaller questions as the basis for identifying the parts of the Question - a piece of sentence which has been grammatically identified, cannot easily be turned into a question to guide the search for information.

3. Implications / Key issue for debate :

This question as it is stated claims that *Pastoralists had effectively adapted to the environment and that the change created by politics and development agencies creates difficulties for them.*

The alternative / conflicting view is that political & developmental change is progressive and completely positive for people who have been living a traditional lifestyle.

The big issue of the question is to deal with the nature of the difficulties which change can introduce to a community which has developed adaptive ways of living in a certain context.

HINTS

PLEASE LOOK AGAIN AT THE FEEDBACK SHEET WHICH YOU RECEIVED ON THE VIDEO TASK - PAY PARTICULAR ATTENTION TO THE SECTION ON CENTRAL AND PERIPHERAL QUESTIONS.

1. Try to think of the question as the statement of an argument, as establishing an issue for debate.
2. Sometimes the question will give you two possible views on an issue, but mostly the question will be the statement of one half of the argument. Try to establish clearly the possible opposite / alternative / conflicting view to that stated - this will help you to identify the issue for debate.
3. Remember your answer must be "good sense" - it must recognise that there is another possible way of viewing the issue, (ie. more than one possible answer), and it must make clear to the reader the method (steps in your argument), by which you reach your conclusion.

APPENDIX 13

**MODEL ANSWERS FOR PHASE TWO
EXAMINATION QUESTIONS**

**PSYCHOLOGY IA 1996
MARK SCHEDULE**

SECTION B: INTRODUCTION TO PSYCHOLOGY

1. Discuss the relationship between the content and form of the discipline of psychology.

10 marks

Describe / define (4)

A maximum of 4 marks can be awarded for defining / describing of the content and form of the discipline in general:

- study of behaviour, mental processes & experience (1)
- non-material natural reality (1)
- known through resistances (1)
- scientific (1)
- naturalistic observation (1)
- experimentation (1)
- content = what; form = how / method (1)

Illustrate (4)

Any perspective clearly described in terms of the relation between content and form may obtain 2 marks.

e.g. behaviourism --- method / form (science = observation & measurement) determines content (only observable phenomena can be studied) (2)

psychoanalysis --- content (unconscious) determines form / method (dream analysis; free association) (2)

Link (2)

The particular form (method) and content of perspectives is dialectically related. Clear statement that content may determine form or form determine content.

**PSYCHOLOGY IA 1996
MARK SCHEDULE**

SECTION C: EVOLUTION

1. Give two reasons why the natural process of adaptive change does not lead to perfection. Illustrate each of these reasons with an example.

5 marks

1. Natural selection can only operate on what is given (1)

e.g. giraffe / human neck structure (1)

2. The environment may change and thus a feature which may have had adaptive advantage in one context, may no longer be advantageous. (1)

e.g. peppered moth (1)

Alternate mark:

recessive genes; mutation (1)

Link: Therefore, it can be seen that adaptive change is an imperfect process occurring through natural selection. (1)

2. Compare Darwin's theory of evolution through natural selection with the earlier theories of Cuvier and Lamarck.

10 marks

Define & / Describe (6)

Cuvier: Catastrophism (2)

The theory accounts for a process of change but fails to accord with geological evidence about the age of the earth and indications in the fossil record that the process of change was gradual rather than dramatic.

Lamarck: Inheritance of acquired characteristics (2)

This theory described a more gradual process of change in accordance with fossil and other geological evidence, but failed to provide a mechanism whereby features described as "acquired" could be passed on.

Darwin: natural selection: competition, variation and inheritance (2)

Link / compare (4)

The combination of the three central factors of heritability, competition and variation demonstrate the random process of adaptation, as opposed to the idea of "effort" necessitated by Lamarck's view. The gradual process of natural selection effects change in the gene pool over many generations, accounts also for the gradualism reflected in the fossil record, as opposed to Cuvier's account of a series of dramatic changes.

The strength of Darwin's theory lies in its ability to account for ("fit" with) all evidence.

Alternate marks

A maximum of two "linking" marks may be allocated where a response effectively uses an **example** to demonstrate the strength of Darwin's theory over the earlier positions; i.e. where the example emphasises the heritable process as determined by survival to reproduce.

**PSYCHOLOGY IA 1996
MARK SCHEDULE**

SECTION D: INTELLIGENCE

1. Define the concept of g and explain its significance in the construction of models of intelligence.

5 marks.

General intelligence underlying performance (1)
Concept suggested by Spearman in a two factor model (1)
Correlation demonstrates the degree to which aspects of intelligence might be "general" or specific. (1)

The central idea was that intelligence primarily consist of "g" and thus models and tests of intelligence were focused on a single, unitary phenomenon. (2)

Alternate mark

A maximum of one mark might be awarded for the inclusion of a statement of the opposite position, e.g.:
Others claimed that intelligence consisted rather of specific abilities which needed to be conceptualised and tested discretely.
Description of any other model (Vernon, Guildford, etc.)

**2. EITHER: Draw a diagram which summarises Piaget's theory of intelligence.
OR: Write a summary discussion of Piaget's theory of intelligence.**

10 marks

Description (6)

Adaptation occurs through the complementary cognitive functions of assimilation and accommodation. (1)

Explanation of concepts(2):

assimilation = whereby new information is incorporated into existing mental structures

accommodation = whereby mental structures are altered in terms of new information

Schemes / operations/ structures (1)

A series of developmental stages: sm; preop; cop; fop (4 x ½ = 2)

Illustrate (2)

Any descriptive detail / key concepts which might illustrate each of these stages e.g.: object permanence classification, conservation, imitation, fantasy, pendulum experiment, sensory motor sub-stages. (4 x ½)

Link / overall statements (2)

Action / transactions between the individual and the environment. (1)

qualitative change between stages / constructed nature of intelligence / universal theory (1)

**PSYCHOLOGY IA 1996
MARK SCHEDULE**

SECTION E: FORMS OF KNOWLEDGE

1. Discuss the constructed nature of knowledge in social science in terms of the concepts of intertextuality, conceptual frameworks and theory-laden facts.

10 marks

Define / describe:

Intertextuality: our understandings are based on the texts and images which others construct about the world rather than simply directly on information received from the world through our senses (2)

Conceptual frameworks: language creates a grid / structure which enables us to analyse the world, to select and label aspects of reality and to construct relationships between these aspects in particular ways (2)

Theory-laden facts: Theory drives us to identify particular facts (rather than others) and provides the conceptual language through which we describe reality. Facts are not theory-free but permeated by / shaped by / structured by theory (2)

Illustrate:

Theoretical concepts: Evolution, Piaget, Marxism, Psychoanalysis. (2)

(Other "smaller-scale" examples rhino; language (Inuit, Hopi, Zulu comparisons with English / refer to Whorf) can receive a maximum of 1 mark.)

Link:

Knowledge in the social sciences is **made** or constructed through the theories which shape our search for evidence or enable us to "read" the world in particular ways; not copied or discovered directly. (2)

**PSYCHOLOGY IA 1996
MARK SCHEDULE**

SECTION E: FORMS OF KNOWLEDGE

1. Discuss the constructed nature of knowledge in social science in terms of the concepts of intertextuality, conceptual frameworks and theory-laden facts.
10 marks

Define / describe (6)

A maximum of 6 marks can be allocated for the following points:

Intertextuality:

understandings are based on the texts, stories, images of others (1)
we “see” / perceive the world through these ideas (1)
not simply information received directly from the world (1)
an example: rhino / horses / core texts ... (1)

Conceptual frameworks:

language creates a grid / structure for our thinking (1)
enables us to analyse / “cut up” the world and make sense of it (1)
select and label aspects of reality (1)
construct relationships between these aspects in particular (cultural) ways (1)
Whorf example (1)

Theory-laden facts:

Theory drives us to identify particular facts (rather than others) (1)
provides the conceptual language through which we describe reality (1)
Facts are not theory-free but permeated by / shaped by / structured by theory (1)

Illustrate (2)

An example of a theory from social science and a demonstration of the role of theoretical concepts in the construction of knowledge: Evolution, Piaget, Marxism, Psychoanalysis.

Link (2)

Knowledge in the social sciences is **made** or constructed through the theories which shape our search for evidence or enable us to “read” the world in particular ways; **not** copied or discovered directly.
A statement of this general claim (a top-down approach) and the demonstration of how the given concepts highlight the constructed nature of knowledge.

APPENDIX 14

**SEPARATE DATA FOR
RELATIONAL AND CONCEPTUAL QUESTIONS**

PHASE TWO

Table 18A. The frequency (f) and percentage (%) of passing and failing responses for each transformation of each relational question.

		Relational Questions					
		Introduction ¹		Evolution ²		Total	
		F	%	f	%	F	%
Inappropriate							
Ground							
	Fail	25	57	24	69	49	62
	Pass	19	43	11	31	30	38
		44	100	35	100	79	100
Flatten							
	Fail	77	61	45	52	122	58
	Pass	49	39	41	48	90	42
		126	100	86	100	212	100
Substitute							
	Fail	45	80	37	84	90	80
	Pass	11	20	7	16	22	20
		56	100	44	100	112	100
Total							
	Fail	147	65	106	64	261	65
	Pass	79	35	59	36	142	35
		226	100	165	100	403	100
Appropriate							
	Fail	6	12	7	6	13	8
	Pass	42	88	102	94	144	92
		48	100	109	100	157	100
Total							
	Fail	153	56	113	41	274	49
	Pass	121	44	161	59	286	51
		274	100	274	100	560	100

¹ "Discuss the relationship between the form and content of the discipline of psychology."

(10 marks)

² "Compare Darwin's theory of evolution through natural selection with the earlier theories of Cuvier and Lamarck."

(10 marks)

Table 18B. The frequency (f) and percentage (%) of passing and failing responses for each transformation of each conceptual question.

		Conceptual Questions							
		Evolution ³		Intelligence ⁴		Forms of knowledge ⁵		Total	
		f	%	f	%	f	%	f	%
Inappropriate									
Ground									
	Fail	97	97	0	0	46	88	143	94
	Pass	3	3	0	0	6	12	9	6
		100	100	0	0	52	100	152	100
Flatten									
	Fail	0	0	21	81	0	0	21	81
	Pass	0	0	5	19	0	0	5	19
		0	0	26	100	0	0	26	100
Truncate									
	Fail	18	95	128	85	43	80	189	85
	Pass	1	5	21	15	11	20	33	15
		19	100	149	100	54	100	222	100
Substitute									
	Fail	84	98	54	93	122	92	260	94
	Pass	2	2	4	7	11	8	17	6
		86	100	58	100	133	100	277	100
Total									
	Fail	199	97	203	87	211	88	613	91
	Pass	6	3	30	13	28	12	64	9
		205	100	233	100	239	100	677	100
Appropriate									
	Fail	24	48	5	21	0	0	34	35
	Pass	26	52	19	79	24	100	64	65
		50	100	24	100	24	100	98	100
Total									
	Fail	223	87	208	81	211	80	642	83
	Pass	32	13	49	19	52	20	133	17
		255	100	257	100	263	100	775	100

³ "Give two reasons why the natural process of adaptive change does not lead to perfection. Illustrate each of these reasons with an example.

(5 marks)

⁴ Define the concept of 'g' and explain its significance in the construction of models of intelligence.

(5 marks)

⁵ Discuss the constructed nature of knowledge in social science in terms of the concepts of intertextuality, conceptual frameworks and theory-laden facts.

(10 marks)