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GIFTED EDUCATION AND IDEOLOGY : THE GROWTH OF THE GIFTED EDUCATION MOVEMENT IN SOUTH AFRICA

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by

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I hereby declare that this dissertation is my own unaided work. It is being submitted for the degree of Master of Philosophy at the University of Cape Town. It has not been submitted before for any degree or examination in any other University.

Signed Signed by candidate

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this 14th day of March 1986.

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"The importance of ideologies lies in the fact that they are ways of interpretation which limit possibilities or conceiving of alternatives."

(Sarup, 1978, p 63).

PREFACE

Although the provision of education for gifted pupils has been widely criticised as elitist by liberals and radicals alike, this charge has never been specifically substantiated. In this thesis, the relationship of giftedness to social power is explored through analyses of the ideology in the informing theory of gifted education and the history of the practice of gifted education in South Africa. To the best of my knowledge, this represents the first systematic analysis of ideology in the informing theory of gifted education. In addition, the case study of gifted education in South Africa has been compiled from primary sources.

A B S T R A C T

Although the provision of education for gifted pupils has been widely criticised as elitist by liberals and radicals alike, this charge has never been specifically substantiated. In this dissertation, the relationship of socially defined giftedness to social power is explored from two major directions. The first is through an analysis of the ideology in theory conventionally informing gifted education, including selected information-processing models of intellect and creativity, theories of emotional and intellectual development, and justifications for gifted education in terms of social benefits. The second direction is through a historical analysis of the dramatic growth of the gifted education movement in the South African social and political context. Explanations for this growth are suggested and are explored through examining four selected issues in the South African context :

(i) the rhetoric of the gifted education movement,

(ii) the changing role of the private associations advocating gifted education,

(iii) the process of official acceptance of gifted education,

(iv) the role of the HSRC, including discussion of the proposed national policy for gifted education.

In these analyses, it is demonstrated that gifted education is contributing to the complex reproduction of social relations and therefore inhibiting significant social change. It is concluded that a case can be made for the provision of gifted education but that there is an urgent need for gifted education theory which is adequately formulated in terms of South African social reality, and for specific interventive strategies to offset the elitist function of gifted education and to redistribute its benefits.

SECTION 1

INTRODUCTION

Chapter 1.

LOCATING THE PROBLEM

There is as yet no universally accepted definition of giftedness. Examination of the history of interest in giftedness will quickly indicate the difficulties involved in defining and identifying giftedness. Nonetheless, running through all the past and present definitions of the concept is an underlying notion of socially valuable ability or achievement which occurs statistically infrequently. This notion originated from the first scientific investigation into "genius" in the mid-nineteenth century, in which Francis Galton used the term to mean eminence only rarely attained : "The rank of first in 4000 or thereabouts is expressed by the word 'eminent'" (Galton, 1892, p 28) and "I use the term 'illustrious' when speaking of ... men who are 'one in a million, or one of many millions'" (Galton, 1892, p 53). These rankings were defined in terms of social recognition of persons "to whom the world deliberately acknowledges itself largely indebted" (Galton, 1892, p 71). Although Galton described genius as occurring at the highest level of the normal curve of ability, he was more concerned with the manifestation of genius than its nature or prediction, and consequently, in spite of being a pioneer of formal mental testing, did not use psychometrics to define his test sample.

It was Lewis M. Terman who, inspired by Galton's work, first adopted the term "gifted" in his multi-volume Genetic Studies of Genius (Terman, 1925). Historically, Terman's work marked the inception of the gifted movement in the U.S.A., and for many years, his conception of giftedness dominated the study of the gifted. He defined giftedness

as the ability to score in the top percentile on the Stanford-Binet test, and thereby established the intimate interweaving of intelligence quotient into the social meaning of the term "giftedness". Even within conventional positivist thinking, the dominance of this link with intelligence is being challenged : "There is need for some re-education of psychometrists, whose preparation limits them to perceive giftedness in terms of intelligence only. The validity of this is now repeatedly questioned, even as the sole criteria of intellectual giftedness" (Khatena, 1982, p 400).

It is salutary to remember here that, as C.W. Taylor has pointed out, I.Q. is itself a concept created by Western culture that stresses important Western values (Taylor, 1959, p 54). This aspect has largely escaped popular notice, leading to a strong tendency towards reification of the term intelligence.

This reification of the concept of intelligence has obscured the social class function of intelligence viz. that the very definitions of intelligence tend to favour Western white middleclass individuals, and that intelligence has been used to reproduce and legitimize a meritocracy favouring certain interest groups in society. This important ideological aspect is further discussed in Simon (1971), Esland (1971), Halsey (1958) and Henderson (1976).

The next major shift in thinking on the gifted after Terman came from J.P. Guilford's famous factor-analytically derived model of the structure of the intellect (SOI), (Guilford, 1950). This influential model introduced two new emphases :

i. intellect was no longer conceived of as unitary and global but as multiple and complex, consisting of a variety of abilities that included divergent production or creative thinking;

ii. intellect was conceived of in an information-processing and problem-solving setting.

From this point on, the study of giftedness and of creativity mushroomed in an inter-dependent fashion (Gowan, 1978), greatly enriched by advances in developmental psychology.[1.]

The three major current research perspectives on giftedness have been described by Tannenbaum as :

(i) from the point of view of its associated psychological attributes;
(ii) from the utilitarian point of view of its value to the world of work (manpower-planning);
(iii) in relation to domains of high-level productivity or performance within fields of knowledge, usually with a view to curriculum design. (Tannenbaum, 1983, pp 61-84).

Each perspective views the construct of giftedness slightly differently, thus compounding the difficulty of defining the term. Subsumed in these three perspectives are four categories of talent or ability which are differentially valued by society at any one time, viz. scarcity, surplus, quota and anomalous talents (Tannenbaum, 1983, p 57). Tannenbaum describes scarcity talents as referring to abilities which allow great leaps forward in knowledge and understanding, of the order of a Salk or an Einstein, ie. abilities treated by society as vital. Surplus (not to be confused with superfluous) talent refers to abilities which are

commonly thought to be related to enhancing the quality or meaning of life as opposed to being concerned with preserving life - abilities treated by society with deference, eg. those of artists, musicians, poets, actors and writers. Quota talents are those where demand creates job openings, eg. the professions, politics, orchestral players, commercial artists. Finally, anomalous talents are those which are recognised as testing the limits of mind and body, but are not particularly valued by contemporary society, eg. sporting abilities, speedreading, trapeze artistry. Also included here are abilities which are recognised as prodigious but are socially disapproved, eg. demagoguery and forgery, and more anachronistic abilities like manual craftsmanship and oratory. While reasonably specifiable criteria can be devised for scarcity and quota talents, surplus and anomalous talents can only be identified by critical judgement (Tannenbaum, 1983, p 60). These normative problems of identification and differential perceived social value bedevil the clarification of the complex hypothetical construct "giftedness".

The problem becomes exacerbated when dealing with children. Giftedness, being a hypothetical construct, can only be inferred from behaviour and, strictly, can only be thought of as related to achievement in a particular field. However, when dealing with children who seldom if ever demonstrate such achievement directly, the problem for all three major current research perspectives of defining and identifying giftedness transforms to one of locating the attributes or characteristics and the interventive strategies that are associated with future achievement in socially desirable talent areas. The aforesaid attributes are increasingly considered to transcend the purely intellectual, e.g. Renzulli's Enrichment Triad Model (1977) gives "inspiration and perspiration" (creativity and task-committment) equal weight to demonstrated high-level ability.

It is against this general background that current thinking on giftedness must be viewed. The early emphasis on high general intelligence as sole criterion of giftedness has given way to an expanded concept which recognises many different areas of ability, including creativity. The most widely used definition in current use is that devised by the U.S. Office of Education (USOE) :

> "Gifted and talented children are those identified by professionally qualified persons who, by virtue of outstanding abilities, are capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contribution to self and society.
>
> Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or in combination :
>
> 1. general intellectual ability
> 2. specific academic aptitude
> 3. creative or productive thinking
> 4. leadership ability
> 5. visual and performing arts
> 6. psychomotor ability
>
> It can be assumed that utilization of these criteria for the identification of the gifted and talented will encompass a minimum of 3 to 5 percent of the school population."
> (Marland, 1972, p 10, 11).

The term "talented" appearing in this definition is used in the literature in three ways (Hagen, 1980) :

i. to denote areas of ability which are presumed to be less dependent on high intelligence than general or specific intellectual ability, such as music, the creative arts and the psychomotor areas;

ii. to distinguish between individuals with high ability in several areas and those with a single ability, such as mathematics;

iii. to indicate the degree of exceptionality shown by individuals on some appraisal procedure, usually a standardized test of cognitive abilities.

These usages of the term do not add anything to our understanding of the nature of giftedness, and furthermore carry value-judgement connotations of relative worth. The distinction is therefore not meaningful or useful (Hagen, 1980, p 2). In this thesis, therefore, the term "talent" will be used as simply synonymous with "area of ability".

The aforementioned USOE normative multiple-talent definition of giftedness clearly reflects those areas which are socially valued in modern Western society. The last category, psycho-motor ability, was discontinued in the United States in 1978, as it is now considered anomalous, presumably due to increasing U.S. emphasis on instrumental vs. intrinsic values. The 1978 USOE definition is widely used as a guide-line to defining giftedness, and has strongly influenced thinking on giftedness and its educational implications in many countries, including the Republic of South Africa (1984 HSRC Report, p 25), although many researchers in the field now feel that the definition is inadequate (Renzulli (1978), Gallagher (1979)). Renzulli (1978) for example, criticises the definition on the grounds that :

i. it omits non-intellective factors which are vital in characterising giftedness;

ii. the categories of giftedness are nonparallel in that two (specific academic aptitude and visual and performing arts) refer to fields of accomplished performance, while the others refer to cognitive processes thought to underlie superior achievement;

iii. it strongly implies the mutual independence of the categories and this has led to the development of separate identification systems for each category.

In an attempt to circumvent these criticisms, Tannenbaum, for one, recently proposed an alternative definition:

> "Keeping in mind that developed talent exists only in adults, a proposed definition of giftedness in children is that it denotes their potential for becoming critically acclaimed performers or exemplary producers of ideas in spheres of activity that enhance the moral, physical, emotional, social, intellectual or aesthetic life of humanity."
> (Tannenbaum, 1983, p 86).

While not necessarily definitive, this recent formulation is interesting for several reasons. Firstly, it appears far less operational in form, moving away from the psychometric emphasis of the USOE definition, and hence avoiding prescription of identification methodology. Secondly, it is phrased as a true hypothetical construct, so that while losing a certain apparent precision of definition, it has acquired a linguistic richness which appears to add to the clarification of the concept. Thirdly, it introduces moral and emotional dimensions as being valuable, and does not imply the primacy of intellectual ability. Nonetheless, it remains as normative, instrumental and ethnocentric as the USOE definition.

Despite the fact that definitions of giftedness are not rooted in a social context, it is generally recognized that such context is critical in the emergence of giftedness. As Tannenbaum has stated,

> "Those who have the potential for succeeding as gifted adults require not only the personal attributes that are often mentioned in definitions of giftedness, but also some special encounters with the environment to facilitate the emergence of talent." (1983, p 86).

He goes on to suggest that there are five factors that "mesh" into excellence, viz. general ability, special ability, environmental factors, chance factors and non-intellective factors, and that these must all be taken into account in nurturing or facilitating ability.

At this point it is interesting to note the fourteen category definition of giftedness proposed in the 1984 HSRC Report of the Work Committee : Education for Highly Gifted Pupils, in which is formulated a national policy for the official provision of gifted education (g.e.) in the R.S.A. (The ideological implications of this Report, Ministerial reaction to which is currently pending, will be discussed later in this thesis.) The definition proposed is very detailed :

> "Die aanbeveling is dat begaafde leerlinge soos volg gedefinieer word : Begaafde leerlinge is daardie leerlinge wat op grond van hulle latente of verwerklikte superieure intellektuele vermoëns en ander persoonsmoontlikhede in staat is om voortdurend uitmuntend te presteer, en wat hulle op grond van hul uitmuntende prestasies, self kenbaar maak.
>
> Vanweë die diversiteit van die manifesteringswyses van begaafdheid word aanbeveel dat die volgende kategorieë begaafde leerlinge vir identifiserings- en onderwysvoorsieningsdoeleindes onderskei word :
>
> "(a) Leerlinge wat superieure algemene of spesifieke intellektuele moontlikhede openbaar;
>
> (b) leerlinge wat voortdurend buitengewone, uitmuntende prestasies op skolastiese of kulturele gebied lewer;
>
> (c) leerlinge wat 'n buitengewone aanleg, belangstelling en bevoegdheid ten aansien van 'n spesifieke akademiese terrein toon waaraan hulle besondere aandag skenk;
>
> (d) leerlinge wat buitengewone kreatiewe moontlikhede, asook merkwaardige soepel en produktiewe denkprestasies openbaar deur met die invoering van nuwighede vorendag te kom;
>
> (e) leerlinge wat buitengewone leierskapmoontlikhede en invloedrykheid toon, op grond waarvan hulle die respek van hul makkers afdwing;
>
> (f) leerlinge wat 'n buitengewone aanleg en beheersing ten aansien van taal en 'n skeppingskrag in hierdie verband openbaar om as prosaïs of digter te kan ontluik;

(g) leerlinge wat buitengewone aanleg vir toneelspel, die skryf of regisseer van toneelstukke openbaar;

(h) leerlinge wat buitengewone moontlikhede of bevoegdheid openbaar om as redenaar te kan ontluik;

(i) leerlinge wat buitengewone sangaanleg openbaar, sangkompetisies wen en die moontlikhede toon om byvoorbeeld as operasanger te ontluik;

(j) leerlinge wat buitengewone musiekaanleg toon wat kan lei tot meesterlike uitvoering of komponering van musiekstukke;

(k) leerlinge wat superieure aanleg, belangstelling en motoriese en ritmiese vaardighede openbaar om vertolkende kunsvorme soos ballet en ekspressiewe danse uitmuntend te kan beoefen;

(l) leerlinge wat superieure kunssinnigheid openbaar wat daarop dui dat hulle skeppende kunsvorme soos onder andere grafiese, boetseer-, keramiek-, skilder-, beeldhou-, houtsnee- en houtbrandkuns op meesterlike wyse sal kan beoefen;

(m) leerlinge wat superieure aanleg, insig, kunssinnigheid, vindingrykheid, bevoegdhede en handvaardigheid openbaar om meganiese of ander ontwerpe, konstruksies, modelle of uitvindings te kan voortbring, en

(n) leerlinge was superieure kinestetiese (psigomotoriese) bevoegdhede openbaar, waaronder buitengewone spoed, krag, liggaamsbeheer, soepelheid, vlugvoetigheid, oog-handkoördinasie, grasie, balbeheer en die vereiste persoonskenmerke, ten einde uitmuntende sportprestasies te kan lewer en roem hiermee te verwerf" (Gouws, 1983, pp 128-129)."

(1984 HSRC Report, pp 19, 20).

The lack of reference to social context in this definition obscures its normative, ethnocentric and social character. There is not even reference to the potential value of the ability areas to the wider society. This obscuring is strengthened by the very detailed form of the definition, which reflects a bureaucratic concern for completely determined compartmentalisation. By the use of such non-open-ended specification, a strong impression is created that only these categories of ability or achievement are valid, and, furthermore, that these categories are final and absolute, and not subject to redefinition according to changing social circumstances. In addition, by excluding moral, emotional or ethical behaviour from the definition, these dimensions of human existence are devalued. But above all,

the essence of the hypothetical construct of giftedness has been lost in the process of over-specification.

This essence is perhaps best expressed by Tannenbaum :

> "One basic premise is that gifted children are the tiny minority we suspect may someday produce important new theories, inventions, discoveries, artistic masterpieces and solutions to monumental problems in order to enhance the human condition. Included also are those who show promise as exemplary performers in drama, medicine, teaching, politics and diplomacy, social and clinical service, and in any other way that preserves, prolongs or adds meaning to life. Excluded are those who can do no more than consume and appreciate ideas, even though they score well on familiar measures of mastery and constitute the best known pool from which the gifted are most likely to be located". (1983, p 422).

To summarise this brief preliminary analysis of the concept of giftedness : (i) there is no universally accepted definition of the concept of giftedness, (ii) it is a complex hypothetical construct, the dimensions of which change with changing needs and conditions, (iii) it refers essentially to normative socially valued performance or achievement which is statistically infrequent and of a so-called "high order", (iv) the predisposing attributes of giftedness, which are currently held to include normative cognitive and noncognitive abilities, differ in ease of definition, measurement and nurturance, with consequent implications for identification and intervention.

Having thus established that the concept of giftedness has a clear social referrent, it is therefore disturbing to observe that the literature on giftedness is strikingly lacking in true contextual sensitivity or relativism. This lack will be explored later in this thesis. Although the phenomenon of socially defined giftedness cannot be meaningfully studied independently of its social, economic, sexist, racial, cultural and political context, giftedness is usually approached as though it were

a finite objective, neutral reality, merely awaiting excavation by patient research to be revealed in its unchanging jewel-like clarity.[2] Most significantly, the literature is silent on the critically important relationship of socially defined giftedness to social power. It is this relationship which will be explored in this thesis, with particular reference to the South African situation.

The purpose and scope of this thesis

The purpose of this thesis is to demonstrate that g.e. is being conceived and executed in the R.S.A. in such a way that it is actively obstructing the reduction of racial, political, economic, cultural and sexist inequality in this country, and possibly even increasing it. At the outset, I wish to make quite clear that I do not accuse anyone or any authority of deliberate conspiracy or of conscious intent to oppress. I argue that g.e. is functioning in this conservative way because the assumptions and ideologies inherent in conventional thinking about giftedness and g.e. have never been carefully examined. "Ideology" is used here in the sense of that which conceals or resolves in an imaginary or idealistic way the problematic character of social life, a usage suggested by the Centre for Contemporary Studies at Birmingham (CCCS, 1981, p 25). I assume, with Popkewitz and Tabachnik, that ideology is inescapable, that it is in fact an essential aspect of all theory and research, and that the real problem is to understand how it exists and influences research communities (Tabachnik et al, 1981, p 4). I shall attempt such an examination of ideology in the theory which informs g.e. in technological societies, including the R.S.A., in Section II.

Section II falls into two parts. I shall begin in Part A, ch. 2, with a discussion of ideology in general educational theory, and proceed in Part B to an examination of ideology in conventional theory informing gifted education specifically. This theory can be loosely divided into static and dynamic models of intellect. Chapter 3 deals with selected illustrative examples of static models, and falls into two sections, the first on information-processing models of general intellectual function, the second on information-processing models concentrating on creativity. Chapter 4 concerns dynamic models of intellectual and emotional development. It will be demonstrated in these two chapters that the conventional informing theory of g.e. is inadequately formulated in terms of social reality, and therefore insufficient per se to inform curriculum and educational practice in S.A. or abroad. This must not be taken to mean that such theory is therefore irrelevant or useless. It is quite possible for conventional theory to be usefully integrated into more complex theoretical formulations which better reflect social reality. I must emphasize, however, that in this thesis I do not intend to attempt to derive such a formulation, nor to consider the relative merits of particular models.

Conventional justifications for g.e. are based on the informing theory discussed in Chapters 3 and 4, and also on assertions of the social benefits of g.e. In chapter 5, I shall show that these assertions are rooted in the modernisation approach to national development, and shall examine this approach for ideology. Alternative development models for social change will be briefly presented, and a case made for the possible role of g.e. in terms of these models.

In Section III, I move from the ideology of g.e. theory to the ideology of g.e. in practice in the R.S.A. G.e. has a very recent history in S.A.,

and the gifted education movement (g.e.m.) has mushroomed dramatically since 1976, to the point where a proposed centralised national policy for the official provision of g.e. is presently awaiting Ministerial approval. Why and how this dramatic growth in the g.e.m. has happened forms the main focus of this section. In chapter 6, I describe the growth of the g.e.m. from three interdependent perspectives. Firstly, I present a descriptive chronological history of the g.e.m. in S.A. This is intended to be read in conjunction with Appendix A, a tabular resumé of significant events in the history of the g.e.m. Secondly, I present a review of the current status of official g.e. provision across the various educational subsystems in the R.S.A. in order to ascertain who is actually benefitting in practice from g.e. at present. Thirdly, I sketch in the social and political context of g.e. in S.A. By "fusing" these three perspectives, I proceed in chapter 7 to a discussion of how and why the g.e.m. has grown so dramatically in the R.S.A. at this time, using a few selected issues which I feel are relevant to the understanding of the growth of the g.e.m. I then present some conclusions relating to the ideological function of the practice of g.e. in the R.S.A., which in my view are substantiated by the evidence available to me. In essence, I shall attempt to show that g.e. is acting to support the status quo, and is militating against the reduction of political and economic inequality in S.A.

Finally, in Section IV, I present a summary and conclusions.

SECTION II

AN EXAMINATION OF THE IDEOLOGY IN THEORY INFORMING GIFTED EDUCATION

PART A : IDEOLOGY IN GENERAL EDUCATIONAL THEORY

INTRODUCTION

"The battle over curricula* is also a conflict between different conceptions of social order and is therefore fundamentally moral". (Basil Bernstein, 1975, p 81).

*Note : Curriculum here is used in the sense of decisionmaking about what should be learned.

Current thinking on gifted education has been conventionally informed by contributions from several bodies of theory, viz. process models of intellectual function, models of intellectual and emotional development, and implicit models of knowledge or information. These contributions, examples of which will be discussed in Part B of this Section, have generated a variety of educational approaches and enrichment paradigms. There is, in addition, another area of theory which appears to me to be vitally important in the formulation of educational policy including that with respect to the gifted, but which receives little, if any, serious attention in the current literature, namely, theories of national development. This area will also be discussed later in this section. It is, however, of critical importance to ask why gifted education is informed only by the afore-mentioned bodies of theory. To understand this, it is necessary to first articulate the philosophical conceptions of education that underlie them, and to examine these for ideological content.[1.] "Ideology" is used in this thesis in the sense of that which conceals or resolves in an imaginary or idealistic way the problematic character of social life, a usage suggested by the Centre for Contemporary Cultural Studies at Birmingham.[2.]

Chapter 2.

EDUCATION AND IDEOLOGY

The Philosophy of Education, in conventional wisdom, is an objective and neutral fount of national guidelines for educational policy and practice. However, this conventional conception of educational philosophy has been effectively debunked by the sociologists of knowledge (e.g. Young (1971), Weber (1952), Bernstein (1975), Apple (1979)) who, by exposing its social construction (Berger and Luckmann (1967)) have rendered it publicly contestable. As Thomas Popkewitz (1978, p 28) has argued :

> "Educational Theory is a form of political affirmation. The selection and organisation of pedagogical activities gives emphasis to certain people, events and things. Educational theory is potent because its language has prescriptive qualities. A theory "guides" individuals to reconsider their personal world in light of more abstract concepts, generalisations and principles. These more abstract categories are not neutral. They give emphasis to certain institutional relationships as good, reasonable and legitimate." He elaborates elsewhere; "Visions of society, interests to be favoured, and courses of action to be followed are sustained in theory." (Popkewitz, 1984, p 17).

Max Weber's 1952 study of Confucian education forms a vivid illustration of the social nature of definitions of what constitutes legitimate academic study. He identified three characteristics of the education of the Chinese literati (or administrators) :

> "i. An emphasis on propriety and 'bookishness', with a curriculum largely restricted to the learning and memorising of classical texts;
>
> ii. This curriculum was a very narrow selection from the available knowledge in a society where mathematicians, astronomers, scientists and geographers were not uncommon. However, all these fields of knowledge were classified by the literati as 'vulgar', or perhaps in more contemporary terms 'non-academic'.

iii. Entry into the administrative elite was controlled by examinations on this narrow curriculum, so that the 'non-bookish' were for the purposes of the Chinese society of the time 'not educated'."

(Weber, 1952, quoted in Young, 1971, p 30).

This curriculum selection was legitimated by the administrative practice of referring to the classical text for justification.

Given that educational theory is socially constructed and legitimated, examination of such theory for ideological content therefore becomes essential. The case for such examination has been neatly summarised by Sarup :

> "The importance of ideologies lies in the fact that they are ways of interpretation which limit possibilities, or conceiving of alternatives. I now suggest that the following characteristics are the necessary conditions of an ideology. Ideologies start as a partial view of the world and remain unaware of their pre-suppositions. Second, they refract reality via pre-existing categories selected by dominant groups and acceptable to them. Third, they generate special and limited interests. Fourth, they have a significant part in maintaining order without force by securing the assent of the oppressed and exploited to their own situation. They do this by creating images for the dominant class or group." (1978, p 63).

In the sense of reflecting norms, beliefs and practices, ideology is inescapable. Popkewitz and Tabachnik maintain, moreover, that ideology is in fact an essential aspect to all research and the real problem is to understand how it exists and influences research communities (1981, p 4).

What then is the contemporary dominant image of an educated man ? In what way is this image ideological ?

The dominant Western conception of an educated man is rooted in the Greek notion of liberal education - "liberal" in the sense of "freeing the mind

to function according to its nature, freeing reason from error and illusion and freeing man's conduct from wrong" (Hirst, 1965, p 31). It is based on a Cartesian mind/body dualism, - "Cogito, ergo sum", equating identity with rational mind rather than with the whole organism embedded in its physical and social context. The assumptions underlying the Greek notion of liberal education were :

i. the distinctive characteristic of Mind is to pursue Knowledge
ii. through Reason, Mind can apprehend Reality
iii. Reality is separate from Mind, ultimate and immutable.

A liberal education, therefore, is one which is based on "truth", and has value for the fulfillment of the mind, independent of any utilitarian or vocational considerations. A liberally educated man, as opposed to a trained man, is not merely well-informed, but has a broad cognitive perspective. It is a term which relates to a condition of mind, as opposed to any specific end, function or mode of thought. "Soldiers, historians and cooks may be educated men; but men are not educated for fighting, as historians, or in cooking." (Peters, 1966, p 35). While proponents of the liberal tradition recognise that a liberal education is only part of the total education a person ought to have, "for it omits quite deliberately for instance specialist education, physical education and character training" (Hirst, 1965, p 51), any education which lacks the liberal educational aspect is viewed by them as insufficient and inferior.

The liberal tradition has been elaborated by Paul Hirst into a theory of education which according to Jane Martin (1981, p 38) "has become one of the paradigms in the field of philosophy of education". Hirst, whose main concern is with the nature of knowledge, maintains that a liberal education can only be achieved by initiation into all the public forms of

knowledge, each distinguishable by its concepts, the logical structure of its propositions and its criteria for truth. Using these criteria, he originally identified seven logically distinct forms : mathematics, physical science, literature and fine arts (aesthetics), religion, human sciences, history and philosophy (Hirst, 1965, p 46). Later, he replaced history and human sciences with moral judgement and interpersonal knowledge (Hirst, 1974, p 86).[3.] The Hirst paradigm assumes that the nature and structure of knowledge determines the nature and structure of a liberal education.

Although it is a paradigm with a dominant following among Western educationalists (Sarup, 1978, p 66), it is, as Jane Martin has pointed out, a paradigm in need of a revolution (Martin, 1981, p 41). Hirst's theory of education has many critics both within and outside the paradigm. Those within his general paradigm have questioned his classifications and his logical criteria for differentiating forms of knowledge (see Martin, 1981, p 40, for many examples). Far more telling criticisms, however, have been levelled at the epistemological fallacy contained in the paradigm itself : that a theory of knowledge can dictate the full range of what ought or ought not to be taught (Martin, 1981, p 47); a theory of knowledge, moreover, in which knowledge is reified by the liberal philosophers as "a set of unsituated, uncontexted meanings" (Sarup, 1978, p 55). Such an absolutist view of knowledge leads logically to a "deficit" view of pupils, and a "banking" model of education in which the teacher is the superior expert. It allows knowledge to be categorised as legitimate or otherwise, and hence leads to the stratification of knowledge into high-status/low status, expert/commonsense and abstract/concrete dichotomies. Furthermore, access to such knowledge, treated as property, is restricted (Young, 1971, Ch. 1). In addition, the epistemological fallacy contained with the Hirst and

Peters' approach fosters the illusion that curriculum can be determined without asking moral questions about the social, historical and economic context of education. In this way, the Cartesian framework underlying the popular image of an educated man dictates a narrow mechanistic world-view akin to tunnel-vision, focussed solely on disembodied knowledge. In Sarup's words,

> "Liberal philosophers are ethnocentric, remaining unconscious of the normative nature of their presuppositions, and on the basis of these presuppositions are both evaluative and prescriptive. ... Moreover, they have not recognised the inescapable social character of philosophy. ... Inevitably, the combination of their particular view of the nature of man, of knowledge, of society, produces a view of social life that is hierarchical, elitist and oppressive. ... The philosophy of education propagated by Peters and Hirst is an ideology that supports the existing pattern of power and privilege." (1978, pp 66-67).

Tightly bound in with the liberal conception of an educated man is a set of beliefs relating to social position or occupation. Status, income and personal autonomy depend largely on occupational position, and these positions have become associated with educational credentials. Education is seen by the liberal philosophers as having equalising effects that can counter the disequalising forces inherent in the free-market system, and education is therefore seen as part of the solution to the problems of poverty, racism and other forms of social inequality - i.e. to the achievement of social justice by significant amelioration. This set of beliefs forms a cornerstone of the dominant image of an educated man, and is a major legitimation for public education. Mass schooling is hence popularly considered to implement objective selection procedures for the establishment of a meritocracy in which the only qualification necessary for personal advancement is ability.

Related to the supposed strongly ameliorative function of liberal education is a further belief that schooling positively affects the level of national

or even global economic growth and progress through its link with technology (technology is assumed to be a major determinant of economic growth). This is apparently achieved in three ways by the educational system :

(i) it produces thinkers who can extend the boundaries of technology or otherwise innovate for capital accumulation

(ii) it produces a diversely skilled and qualified work force in response to the manpower demands of the increasingly technological workplace

(iii) it facilitates the consolidation of technological advances into the everyday life of its students (Dale et al, 1976, pp 1, 2).

These images of liberal education have played a dominant and decisive role in the formulation and legitimation of educational and curricular policy (Dale et al, 1976, p 1). Criticism of this dominant conception of education in Western technological societies has come from many sources, which can be loosely divided into three main camps - a. the sociologists of knowledge; b. the "new" historians of education; and c. the radical critics of education.

a. Sociologists of knowledge have argued that the dominant images of education have encouraged the ideological treatment of education as merely a product with exchange value, thus obscuring its nature as a set of conscious or unconscious choices from the available social knowledge at a particular time and place - a particular set of emphases and omissions (Williams, 1961, p 145, and Apple, 1979, p 16). The social construction of reality or knowledge is obscured (Berger and Luckmann, 1967), and consequently so is the social reification and stratification of knowledge into high-status/low-status, expert/commonsense, abstract-concrete, mental/physical, subjective/objective dichotomies. Also obscured is how access to knowledge is related to social control and power.

The reification of knowledge has allowed it to be treated as independent of its social context, as a presumed autonomous force for positive social change. Also obscured is the ideological character of curriculum choice and school practice, including "hidden" curricula.[4] As Williams has said " ... when this selection of content is examined more closely, it will be seen to be one of the decisive factors in its distribution : the cultural choices involved in the selection of content have an organic relation to the social choices involved in the practical organisation [of education]". (Williams, 1961, p 145).

One of the most significant characteristics of Western curricula that result from the Enlightenment-liberal ideology is the hegemonic transmission of a technological consciousness or technocratic rationality which, according to C.A. Bowers, Berger and others, is the episteme of Western culture.[5]

The characteristics of this positivist, mechanistic episteme are described by Bowers as :

(i) to think about experience in terms of an abstract-theoretical frame of reference

(ii) to segment experience into component parts that can be viewed as self-contained units

(iii) to conceptually organise the component parts into systems that can be represented in models, flow charts and diagrams

(iv) to use only observable phenomena as a basis for measurement, which in turn serves as the primary basis for legitimating knowledge

(v) to view experience as an ongoing opportunity for problem-solving and inventiveness or innovation (Note : "In ... modern societies, abstract thinking and innovative problem-solving are linked to superior intelligence." (Sarup, 1978, p 29))

(vi) to judge the effectiveness of rational activity in terms of efficiency

(vii) to orient one's activities as being on the cutting edge of progressive change

(viii) to defer to the power and legitimacy of experts whose knowledge is based on an increasing segmentation of reality

(ix) to assume that theory and rationally organised systems are reproducible in a variety of social settings, i.e. that they are psychologically and culturally context-free and therefore universally acceptable.

(Taken from Bowers, 1980, p 303).[6.]

In essence therefore,"the patterns of thought that characterize a liberal-technocratic culture, and separate it from other forms of culture that use technological phenomena, include a view of rationalism as the basic mode of knowing and means of controlling the natural world, a secular view of the world that has led to the privatizing of religious belief, an anthropocentric view of the universe that legitimates the power of the individual to appropriate the physical world for his own ends, a linear sense of time that orients the individual toward controlling the future and his own progress, the autonomy of the individual as the source of decision-making and moral responsibility, and finally, a belief in political and social equality and toleration of individual differences." (Bowers, 1982a, pp 530-531).

This taken-for-granted mode of rationality has three important consequences : (i) problems are seen as if they existed in isolation, detached from the social and political forces that give them meaning

(ii) ethical questions are neutralized

(iii) man is viewed as an essentially passive receiver and transmitter of knowledge / culture, and not as an active creator of meaning, value and culture. A consensus model of human action results, denying human agency or intentionality, social conflict, social injustice and institutional violence (Giroux, 1981, pp 46, 53). "Technicism" thus becomes possible - the unwarranted domination by technological rationality in areas not its proper or exclusive preserve.[7.]

As Bowers has remarked, "When expert knowledge can be legitimated in terms of being rational, efficient, educated, progressive, modern and enlightened, what metaphors can members of other speech communities use to challenge them?" (1982a, pp 531-532).

b. In addition to the sociologists-of-knowledge criticisms of the dominant image of educated man, it has also been criticised as obscuring the social control function of education, by the "new" historians of education (eg. Karier (1967), Katz (1968), Feinberg (1975)), who have documented the relationships between the growth of American mass education and changing patterns of the economic system. Karier contends that the primary function of American schooling is actually the transmission of values necessary for the maintenance of á business ethic through :

(i) a training function, which in cooperation with business and industry assist youth to fulfil occupational requirements in an increasingly complex economic system;

(ii) a holding function, for the maintenance of a viable manpower pool for capital;

(iii) a testing and sorting function : selective differentiation in schools, legitimated by intelligence and achievement tests, prepares pupils for selected roles in society.

These historians' analyses have cast doubt on the supposedly autonomous nature of education by exposing the interdependence of education, economics and politics.

c. Stronger accusations of ideological content in the dominant images of education have come from the radical critics of education, such as Carnoy (1972), Bowles and Gintis (1976), Giroux (1981) and other Marxist and neo - Marxist theorists. Although there is no general agreement among these critics on theories of ideology, the State and the reproductive process, they all use a general Marxist framework for locating education in its social context. Their main assertion is that, far from being significantly ameliorative and democratic, education is a powerful conservative force acting in the interests of the State to legitimate, produce and reproduce the existing social and economic order, and cannot therefore be considered independently of its cultural, economic and political context. In other words, education is inextricably related to social power and control. Increasingly, radical critics of education are recognising that the role of education in producing and reproducing social relations is both partial and extremely complex. Education does not "merely" reproduce and legitimate a pre-existing pattern in the process of training and stratifying an obedient work-force in the interests of Capital. This "social engineering" approach denies man an active role in the reproductive process. That man is also a creator of his own culture has been most clearly shown in Paul Willis' (1977) seminal study of the complex and contradictory ways in which British working-class culture is actively and creatively perpetuated by the working-class itself (in the schooling process) through the voluntary incorporation of racism, paternalism, sexism and a manual labour ethic. Likewise, work such as Angela McRobbie's on the culture of femininity among British working-class girls has demonstrated that "these notions are not arbitrary beliefs imposed on working-class girls by ideological apparatuses (ideology as indoctrination); they provide resources for the girls' own creative negotiation of a contradictory ideological and material situation" (CCCS, 1981, p 159).[8].

The significance of this type of finding is that to regard education as a simple mechanistic transmission of values and practices which ensure social mobility and reduce inequality in society, is an ideological oversimplification of what actually happens in schooling. Furthermore, "the capitalist and patriarchal structuring of the social and sexual division of labour, allied to the necessary 'realism' of lived experience will continue to produce grossly unequal educational outcomes, so long as these structures themselves remain untransformed" (CCCS, 1981, p 247).

An essential element in understanding how an unequal society is produced and reproduced with the general assent of its members is the Gramscian concept of hegemony. Williams defines hegemony as "a whole body of practices and expectations. ... It is a set of meanings and values which as they are experienced as practices appear as reciprocally confirming." (Williams, 1976, p 205). Hegemony, in Apple's words, "saturates our very consciousness, so that the educational, economic and social world we see and interact with, and the commonsense interpretations we put on it, becomes the world tout court, the only world." (1979, p 5). Gramsci describes hegemony as "the spontaneous consent given by the great mass of the population to the general direction imposed on social life by the dominant fundamental group". (Gramsci, 1971, p 12, quoted in CCCS, 1981, p 248).

Apple contends that schools act as agents of cultural and ideological hegemony, or in William's words, as agents of selective tradition and of cultural "incorporation" (Apple, 1979, p 6). In Western societies, the cultural episteme of technological consciousness forms part of the dominant hegemonic belief-system produced and reproduced in schools. An associated hegemonic belief relates to the liberal political

ideology of individualism and autonomy, "the idea that causes for behaviour are laid within the person rather than within the society in which the person lives" (Biddle, 1981, p 43); that makes responsibility for what one becomes a personal matter, and creates "an illusion that the individual exists independent of social and historical contexts" (Tabachnik et al, 1981, p 8).

Given these ideological criticisms of the dominant liberal image of educated man, in what ways can this image be usefully redefined ?

Two general schools of thought, Radical and Ecological, are currently offering alternative images of educated man.

The Radical positions are rooted in general Marxist theory. Some of these positions are heavily structural, eg. Althusser (1972), others less deterministic e.g. Sarup (1978). What they have in common, however, is a view of man as essentially a social being, inseparable from his social context. "Man is in the most literal sense of the word a zoön politikon, not only a social animal, but an animal which can develop into an individual only in society" (Marx, 1857, quoted in Price, 1977, p 15). Man's full nature, radicals maintain, cannot be realised if he is alienated from his work, his products, his fellow-men, or from Nature. Price describes the Marxist aim as the achievement of self-conscious and self-determining human beings in a classless society (1977, p 72). The Marxist vision of a classless society leads to educational policy formulation aimed at the abolition of alienation through increasing social and class consciousness, through weakening capitalist hegemony.

That this image of man is also ideological has been pointed out by numerous commentators, eg. Popkewitz and Tabachnik (1981, p 4) and Bowers (1982a, p 545). In particular, "The main sources of epistemological orthodoxy in neo-Marxist educational thinking - structuralism, teleological thinking, and the power given to abstract-theoretical thinking - reflect the epistemological heritage that Marxism shares with technocrats, who appear to operate with equal facility in both capitalistic and socialistic countries" (Bowers, 1982a, p 544). In spite of the rhetoric of zoön politikon, Marxist societies are without exception as technocratic in practice as advanced Western societies. Bowers comments that "The political practice of Marxism ... reflects the same episteme, minus a commitment to democratic political institutions, that one finds in the more advanced Western technocratic societies" (1982a, p 544).[9.]

Another alternative image of educated man comes from the school of thought that can be described as the "deep ecology" movement :

> "whereas shallow environmentalism is concerned with more efficient control and management of the natural environment for the benefit of man, the deep ecology movement recognises that ecological balance will require changes in our perception of the role of human beings in the planetary ecosystem. In short, it will require a new philosophical and religious basis" (Capra, 1982, p 458).

Rejecting the prevailing mechanistic world view of Western society[10.] as inadequate for dealing with issues of social justice, ecological balance, self-realisation and spirituality, this movement postulates the need for a new vision of reality based on awareness of the essential interrelatedness and interdependence of all phenomena - physical, biological, psychological, social and cultural. This requires becoming aware of the taken-for-granted "natural attitudes" of the

individual's phenomenological world, and developing what Habermas calls "communicative competence" (Habermas, 1970). This is achieved through "developing the language competence that accompanies reflecting on the social-cultural formation of consciousness, particularly the ability to problematise the taken-for-granted aspects of everyday life, and developing the social and linguistic skills necessary to negotiate basic definitions and meanings." (Bowers, 1982a, p 548).

Strong support for this rejection comes from relatively recent developments in sub-atomic physics, which have forced physicists to recognise that "their basic concepts, their language and their whole way of thinking were inadequate to describe atomic phenomena" (Capra, 1982, p 64). "In contrast to the mechanistic Cartesian view of the world, the world view emerging from modern physics can be characterised by words like organic, holistic and ecological. The universe is no longer seen as a machine, made up of a multitude of objects, but has to be pictured as one undivisible, dynamic whole whose parts are essentially related and can be understood only as patterns of a cosmic process." (Capra, 1982, p 66).

In conclusion, it can be seen that the liberal, radical and ecological paradigmitic images of educated man have in common strong elements of the original Greek notion of man freed from error and illusion and in control of his own destiny. The ideological differences among the paradigmitic images issue from differing conceptions of social reality. Inescapably, therefore, to re-echo Popkewitz and Bernstein, Educational Theory is a form of political affirmation and is fundamentally moral. It cannot be meaningfully considered independently of its social, historical, economic and political context.

INTRODUCTION

As mentioned in the Section II Introduction, p 14, gifted education is currently specifically informed by contributions from several bodies of theory. For the purposes of this thesis, these have been subsumed into three general categories, viz. process models of intellectual function, models of intellectual and emotional development, and implicit models of knowledge or information. It is important to recognise that these three areas of theory have all developed within a general Western positivist episteme, and that they are therefore open to all the criticisms levelled at that episteme, as discussed in Part A of this section. This is not to say that such informing theories are thereby rendered totally useless. However, the problematic ideological character of these models should be fully recognised, and, furthermore, their application should be continuously and critically considered and evaluated to offset any tendency to reification. If the essential "as-if" nature of any model is not properly understood, the "then-what" consequences will not be seen in their true conditional fragility. Even the seasoned natural-scientific community, experienced in examining its meta-theoretical assumptions, is sometimes unwittingly seduced by its conceptual models (Capra, 1982).

Gifted education in South Africa has been largely informed by American and, to a lesser extent, British educational precedent.[1] This appears to have happened in the absence of a full understanding of the ideology in this conventional informing theory. In this section, an attempt will be made to analyse the ideology in the above-mentioned three categories of informing theory. However, as the models of information

or knowledge used in gifted education theory are all based on the traditional liberal education conceptions, the ideological implications of which have already been discussed in Part A, these models will not be discussed specifically, but will merely be incidentally referred to in the course of examining information-processing and developmental models of intellect and creativity.

This analysis of ideology in gifted education theory will not be concerned with issues of relative strength of particular models. It will deal only with the identification of ideology in the conventional informing theory. As there appears to be no precedent in the literature for this, specific illustrative models will need to be individually considered for ideology before general conclusions can be drawn. Unfortunately, to be done thoroughly, this will require a certain amount of repetition.

As mentioned before (p 14), justifications for gifted education are not, however, based only on these bodies of psychological informing theory, but also on assertions of benefits to society at large. The ideological basis of these assertions will be examined in Chapter 5.

SECTION II

AN EXAMINATION OF THE IDEOLOGY IN THEORY

INFORMING GIFTED EDUCATION

PART B : IDEOLOGY IN GIFTED EDUCATION THEORY

Chapter 3

PROCESS MODELS OF INTELLECTUAL FUNCTION

Most process models informing gifted education were not specifically designed for the gifted, but for all pupils. However, they have been appropriated for gifted education on the following rationale :

> "it is expected that the gifted will accomplish more than the non-gifted because they are better able to apply sophisticated thought processes to what is essentially the same substantive material." (Tannenbaum, 1983, p 421).

Information-processing models fall into two categories : general-intellect models and models concentrating on creativity. Examples of each category will be examined.

A. GENERAL INFORMATION-PROCESSING MODELS

1. Guilford's SOI model

The best-known information-processing model is that of J.P. Guilford (1977). Guilford's Structure of Intellect (SOI) model developed out of Thurstone's positivist multiple-factor "primary mental abilities" theory of intelligence. Further factor-analytically derived studies, together with increasing emphasis on creativity and on behavioural abilities culminated finally in the SOI model, "education's first formal theory of intelligence" (Meeker, 1969, p 183). Essentially a "static or structural model of acculturated intelligence" (Meeker, 1969, p 166), it is a three-way classification of intellectual abilities or functions, diagramatically represented by a three-dimensional cubic design. It

is based on a two-dimensional structure-of-information model, in which information is classified according to content and products - the content may be figural, semantic, symbolic or behavioural, and the products may be classified as units, classes, relations, systems, transformations and implications. This two-dimensional model, when combined with a third dimension of kinds of mental operation, results in the well-known SOI model. Mental operations are classified as cognition, memory, divergent (reoriented or invented) production, convergent (unchanged) production, and evaluation.

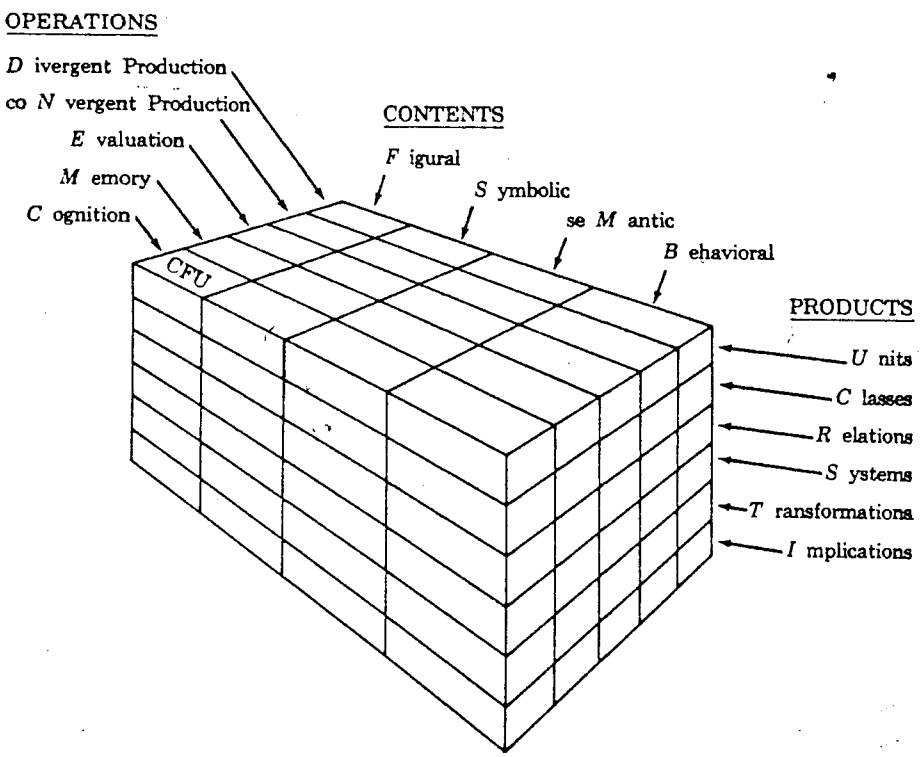


Figure 1 : Structure of Intellect Cube (from Meeker, 1969, p 8)

That Guilford himself was unaware of the normative presuppositions of the model can be clearly seen in his comment that the model is "a three-way classification of known and conceivable human intellectual abilities or functions." (1977, p 155). As Thomas Gladwin has commented with respect to psychologists such as Bruner, Guilford, Hebb, Piaget and their work on intelligence and intellectual processes :

> "Their work immediately strikes an anthropologist as culture-bound. Their starting point is our familiar symbolic logic and relational abstract thinking.[2]. They do not have before them a range of other possible basic approaches to thinking, learning and problem-solving." [In Keddie (1973, p 119), quoted in Sarup (1978, p 197)] .

The most striking aspect of Guilford's model is that it is absolutely a-contextual. It conforms in every respect to Bower's characteristics of technological rationality (see p 21). Consequently, although it reflects abilities which categorise the paper-and-pencil test performances of adults reared in a Western culture (Meeker, 1969, p 103), it is presented as universal. Furthermore, it is legitimated by its very form, viz. mathematically derived, and therefore "objective" and "true". In addition, because the three axes of the model are constructed as mathematically orthogonal, the psychological non-dependence of the three variables of content, product and operation is assumed. Its apparent neutrality and objectivity conceals not only the social construction of its content-matter, but also that the abilities it describes are most likely to be found in certain social groups. It does not reflect the original subject-matter selection from which the 120 abilities are generated, nor does it take cognizance of how, when and under what conditions the 120 abilities are developed, or even whether each is developed in a neat independent fashion. Being a-contextual, it allows questions relating abilities to social relations, to power, to remain

submerged. It specifies no educational aims in terms of social objectives, it is silent on the issue of moral and ethical implications of problem solutions. Its mechanistic conception of intellect ignores personal, ethical, social or ecological perspectives. In short, it encourages educators and pupils to think compartmentally about curriculum, thereby masking social reality. Its apparent "mathematical truth" has seduced educators into allowing it to assume an exaggerated importance in dictating what is taught. Indeed, in its own terms, the SOI model has had a powerful influence on curriculum design, as it has been widely used as a basis for apparently systematic and articulated curriculum design for gifted and non-gifted pupils : used as a "deficit" model[3], it allows areas of relatively poor performance to be identified and remediated.[4]

2. Bloom's taxonomy

A popular taxonomy of intellectual functioning is that proposed by Benjamin Bloom (1956). This taxonomy is not based on an information model. It is concerned merely with the hierarchical description of cognitive processes considered valuable in Western society. It can be diagramatically represented as a pyramid, the fundamental broad base of which is knowledge, defined by Bloom as the recall of specifics and universals, the recall of methods and processes, or the recall of a pattern, structure or setting. Upon this base is built, in sequence, abilities relating to comprehension, application, analysis, synthesis and evaluation.

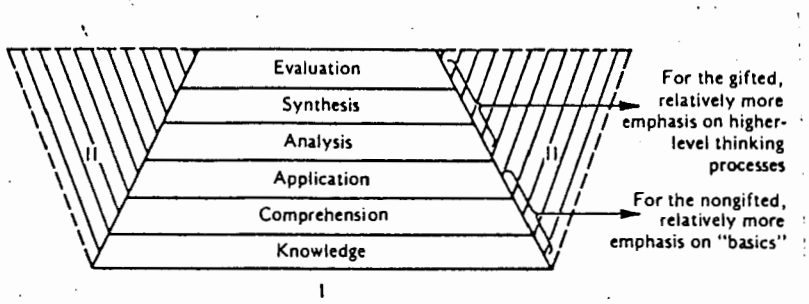


Figure 2 : Cognitive domain : Emphasis based on Bloom's taxonomy (from Tannenbaum, 1983, p 373)

A complete account can be found in Bloom (1956), excerpts from which are reprinted in Bracht et al (1972).

This model also operates as a deficit model for curriculum planning in general and gifted pupils in particular. Gifted pupils are assumed to be capable of functioning at higher than average cognitive levels, and the curricular implication of this is that they benefit from relatively greater emphasis on these levels of cognitive function.

This taxonomy is open to the same types of criticism as the SOI model - it reflects the differential value placed on intellectual products by Western capitalist society, with creative synthesis and critical evaluation at the pinnacle. It is clearly consonant with the Western episteme - it is a-contextual, with the same resultant ideological implications as the SOI model. It too, has been used to both reinforce and reify current notions of what is valuable in thinking and therefore curriculum, without consideration of the social, cultural, economic and political context of schooling.

The use of taxonomies as a basis for so-called reform programmes in schooling has been criticised by Popkewitz.

> "To apply abstract taxonomies to historically situated problems is to reify the social situation. The dynamics of interaction, social communication and institutional values are obscured. The abstract principles of change have no concrete meaning or particular bearing. As important, the model takes for granted the structure of the institution by declaring itself neutral to a system's goals and purposes. There is no conception of social structure by which one is to relate the possibilities and effects of change itself. One does a survey of perceptions or use of the technologies. Observations are made to assess levels of use. Change becomes the implementation of procedures to make established procedures more efficient. Motion and activity become a substitute for change."
> (Popkewitz, 1984, p 139)

3. Taylor's multiple-talent approach

Calvin W. Taylor's (1973) non-hierarchical multiple talent approach is another two-dimensional cognitive abilities (talents)/content model. The content dimension is based on the traditional liberal forms-of-knowledge categories, and the talent dimension expands the concept of intellect to include broad areas of activities other than the merely academic, viz. academic talent, creative talent, communication talents, planning talent, decision-making talent, forecasting talents and an open other-talent category. Taylor maintains that all of these talents are important in contemporary Western society and that traditional programmes, confined to a narrow band of intellectual abilities, are inadequate for fully developing human potential. This "deficit" model also allows for "remedial" individual curriculum planning, and has generated a variety of enrichment strategies, both cognitive and affective. The affective aspect of intellect is emphasised as it is thought to be important to creativity and other forms of high-level intellectual functioning. That affect is valued instrumentally and not intrinsically can be deduced from the fact that there is no such category as affect talent.

Taylor's model is also a product of the Western episteme, in that it too is ideological and a-contextual, and the type of criticisms advanced earlier against the Bloom and Guilford models apply equally. In addition, Taylor's apparent "democratisation" of talent by suggesting that every measurable skill is as much an indicator of excellence as any other, is misleading. The very selection of cognitive talent areas reflects selective social values; it is unlikely that the open category would be used in practice to identify talent held in low esteem by the education system. The classification of content likewise reflects the liberal ideology of knowledge discussed in Part A. It is ideological too, not to mention idealistic, in Taylor's expressed contention that it can help teachers move towards a goal of "zero reject", a situation in which every child can succeed in at least one area. Such an ameliorative model basically implies that school failure is located within the individual and that the schools per se are capable of "curing" this condition. To believe that any a-contextual model like this can have a significant ameliorative effect on social relations is excessively naive.

4. William's cognitive-affective interaction model

Another theorist who emphasises affect as an intellectual process is Frank W. Williams (1972). His non-hierarchical model is three-dimensional, viz. curriculum; pupil behaviours (both cognitive and affective); teacher behaviours (teaching strategies). The curriculum dimension follows the traditional liberal education subject-area divisions. The teacher behaviours are reminiscent of Hirst and Peters' conception of education as providing "immersion" in the forms of knowledge in order to explicate the logical concepts and statements peculiar to each form.

The pupil dimension combines cognitive and affective abilities. Williams intended this model to be morphological to enable educators to view affect and cognition as interacting. (This is not clear from the pictorial representation of this model). Although the implication is that affect and cognition are of equal status, the rhetoric of the model makes it clear that, as in the Taylor model, affect is considered instrumentally and not intrinsically. It is thought to be vital to an adequate self-concept and motivation to learn, and therefore important to creative or divergent thinking, which requires risk-taking. It is not an intrinsic educational objective; indeed, this a-contextual model, like the foregoing ones, is silent on educational objectives with respect to the wider society. It locates educational failure in either the pupil or in the technical issue of teaching strategies. (As mentioned in Part A, the hegemonic traditional liberal theory of knowledge, here the 'curriculum' dimension, is seldom challenged).

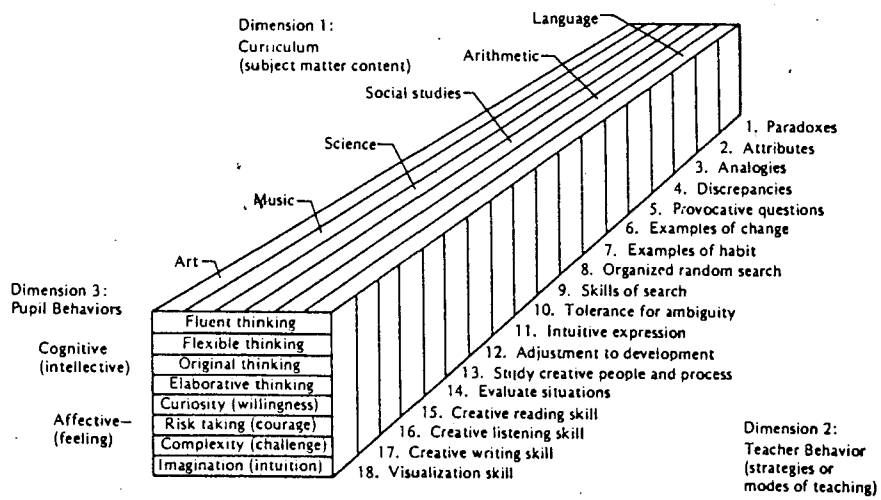


Figure 3 : A model for implementing cognitive-affective behaviours in the classroom (from Tannenbaum, 1983, p 398)

This model provides a conceptual basis for systematic curriculum design and practice, which is aimed mainly at encouraging creativity through the deliberate programming of cognitive and affective components. (A full discussion of its wide educational applications can be found in Williams (1972)).

The Williams model is ideological in its liberal definition of knowledge, in its selection of desired end-behaviours and in its limited equation of teacher impact with overt teaching strategies, i.e. its denial of the hidden curriculum in schooling and the realities of classroom and social experience. It is a-contextual, with the same ideological results as the models previously discussed.

5. Renzulli's Enrichment Triad Model

The process model which is probably the most widely applied curriculum model for the gifted in the U.S.A. today (Tannenbaum, 1983, p 374), is Joseph Renzulli's Enrichment Triad Model (Renzulli, 1977).

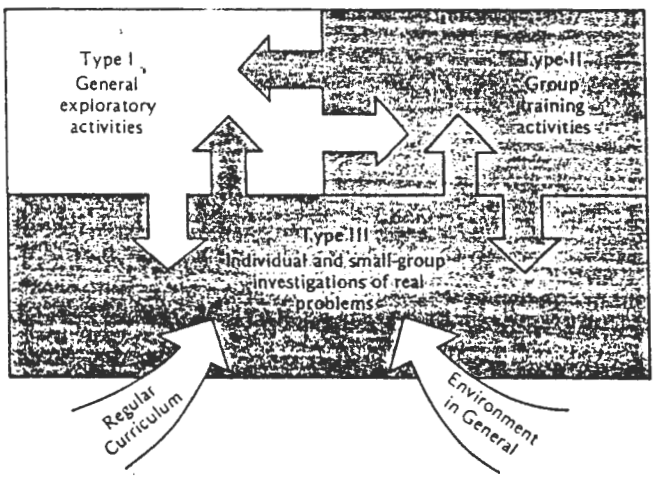


Figure 4 : The Enrichment Triad model (Renzulli, 1977 p 14)
(from Tannenbaum, 1983, p 376)

This model explicitly differentiates curriculum and practice for gifted and non-gifted students. Both groups are offered Type I and Type II enrichment, but only gifted pupils are expected to benefit from Type III enrichment. Type III enrichment involves learning experiences that are specifically designed to help gifted children achieve excellence, but which would be too demanding for the non-gifted. Renzulli's rationale for differentiated education is based on his belief that gifted behaviour can occur only when three pre-conditions are met : above average but not necessarily extraordinary cognitive ability, plus exceptional creativity and exceptional task commitment ("inspiration" and "perspiration"). In addition, children who meet these criteria require an education above and beyond the normal curriculum if they are to contribute to knowledge. Predesigned course-work is not enough in Renzulli's view, as "everyone ends up marching to the same drummer, albeit at a faster beat" (Renzulli, 1977, p 16). Differentiation therefore means to Renzulli programmes tailored to individuals and not groups.

This model is somewhat different from the usual deficit model -

(i) entry into gifted programmes has to be "earned" in terms of the assumptions of the model itself. The entrance qualifications for and the objectives of the programme are substantially the same - i.e. there is an element of self-fulfilling prophecy involved. A student does not merely march through the levels (Bloom) or cells (Guilford) of the model until he/she reaches a personal limiting ceiling

(ii) explicit recognition is given to individual learning interests and styles, and on these "strengths" are built ostensibly self-designed, self-directed student learning activities - i.e. it

is a 'partial' deficit model. By this is meant that some aspects of the reality of the pupil's phenomenological world are overtly recognised. However, this is not a guarantee that other conventional social definitions and attitudes of superiority cannot operate

(iii) the student is assigned a more active agency in this model - education does not merely happen to him or her. Enrichment is ostensibly elective (the Revolving Door Principle) and flexible with respect to particular configurations of interest and motivation. Curriculum is thus not simply imposed, but can be negotiated to some extent, albeit within traditional limits. Giftedness is viewed more dynamically than statically, and is seen as developable rather than as an absolute characteristic. This more active agency is further recognised in that 'real-life' (as opposed to 'merely scholastic') problems are examined in Type III activities, albeit that the problems must be "solvable" - i.e. constituted within the technological mode of rationality.

Despite its apparent openness of access to enrichment, and the apparent scope for active agency, the model remains ideological. Its a-contextuality obscures, among other things, questions of real access to such programmes : the qualifying characteristics are far more likely to be found in middle class students thoroughly familiar with the Western episteme than in other groups or classes. In addition, the objectives of the programme itself are far more likely to be achieved with such students. The qualifying characteristics, therefore, act to legitimate both the programme and, consequently, the preconditions for access to the programme.

The content guidelines of the programme also reflect the dominant Western episteme. Type 1 activities (general exploratory and group training activities) are designed to expose students to a wide variety of potential interests to enable them to select an interest area, formulate a "solvable" problem in that area, and begin to develop the appropriate training activities and resources needed to investigate those problems. Type I activities therefore amount to a general reinforcing of Western symbolic logic and technological rationality.

Type II activities (group training activities) are aimed at the development of (i) thinking processes, through activities involving critical, creative and productive thinking, problem-solving and inquiry training, and (ii) feeling processes, through awareness development and sensitivity training. Curriculum content for these activities is not specified, although Renzulli suggests Bloom's taxonomy, Guilford's SOI model, and Krathwohl's taxonomy of the affective domain as useful models for design of curriculum. These models are themselves ideological. In addition, the affective domain is viewed instrumentally, as Khatena recognises in his discussion of the Enrichment Triad :

> "Although it is true to say that at one level the learner is taught certain ways of thinking that are expected to enhance overall learning potential, the intent seems to be levelled at exciting the motivational emotive roots of mental functioning to bring about an involvement and commitment in the individual to escalate to higher stages of intellectual development." (Khatena, 1982, p 264).

The rationale behind Type II activities is that systematically teaching effective thinking and problem-solving skills that transcend mere subject-mastery will obviate "information obsolescence" (Tannenbaum, 1983, p 378). This decontextualising of problems is a characteristic feature of

technocratic rationality. The incorporation of the affective domain appears to stem more from concerns of efficiency than of intrinsic value another feature of technocratic rationality. Far from challenging this mode of rationality, the affective domain is incorporated within it. Type II enrichment activities thus effectively operate to deepen technocratic rationality and context-free thinking in students.

Type III enrichment (investigations of real problems) is basically concerned with heuristics - "the logistics by which knowledge is acquired and created" (Tannenbaum, 1983, p 379). It is intended specifically for use with potentially gifted pupils, and is presumed to benefit most those children with the requisite cognitive ability, task commitment and creativity characteristics that distinguish productive thinkers from all others. Essentially, "Type III enrichment shifts the emphasis by opting for innovation rather than recapitulation in learning in the curriculum for gifted children." (Tannenbaum, 1983, p 379). In Type III enrichment, children are encouraged to take an active part in formulating problems and research methods with the overt intention of making contributions to knowledge and of communicating their findings in a professional manner - "Indeed, one of the major characteristics of a real problem (as opposed to a training exercise or presented problem) is that the producer is attempting to inform, to entertain, or to influence a relatively specific but nevertheless real audience." (Renzulli, 1977, p 50). Self-directed behaviour towards a final product is required. By facilitating this process, teachers are presumably teaching students both innovative problem-solving skills and the behavioural characteristics associated with success - i.e. "personality" characteristics such as task commitment, acceptance of delayed gratification, communication skills, and independent

risk-taking behaviour. The emphasis on finished product ("meaningful outcomes" (Tannenbaum, 1983, p 383)) and its dissemination and critical evaluation in "real-life" fashion, presumably enables the "real audience" to positively reinforce innovative thinking, and in the process to convince the pupil of the desirability of earning such approval. This normative effect is likely to be further reinforced if Renzulli's input/ /process/ product model is used in Type III enrichment as he suggests. This model clearly reflects the prevailing technological rationality.

Input

A. The Input Operation

1. The Identification of Information Sources
2. The Acquisition of:
   a. Raw Data
   b. Summarized or Categorized Data
   c. Conclusions, Generalizations, Principles, Laws, Facts
   d. Opinion
3. The Use of Person (Existing) Knowledge

B. The Input Procedures

1. Empirical (First-Hand Experiences)
   a. Observing: Listening, Looking, Counting, Sketching, Note-taking, Charting
   b. Experimenting
   c. Interviewing
   d. Using Questionnaires
2. Normative or Authoritative
   a. Reading
   b. Listening
3. Aesthetic
   a. Sensing
   b. Feeling
   c. Valuing

C. The Input Sources

1. Reference Books
2. Non-Book Reference Material
3. People
4. The Environment in General

Process

A. The Manipulative Processes of Inquiry
   1. Comparing and Verifying Sources of Data
   2. Establishing Connections Between Data
   3. Recognizing Bias in Informational Sources
   4. Classifying Data
   5. Categorizing Data According to Function
   6. Identifying Strong and Weak Arguments, Conclusions, etc.
   7. Distinguishing Fact from Opinion
   8. Recognizing
   9. Establishing the Credibility of a Data Source
   10. Discovering Trends, Patterns, Uniformities, and Discrepancies in Data

B. The Creative/Productive Processes
   1. Designing Experiments
   2. Constructing Data Gathering Devices
   3. Analyzing Data and Drawing Conclusions
   4. Perceiving Possible Solutions
   5. Making Probability Statements
   6. Stating Generalizations
   7. Redefining Problems
   8. Planning and Organizing
   9. Creating Testable Hypotheses
   10. Making Valid Inferences and Tracing Logical Implications
   11. Specifying Evaluative Criteria
   12. Evaluating According to Internal Criteria
   13. Evaluating According to External Criteria
   14. Building Theories and Models

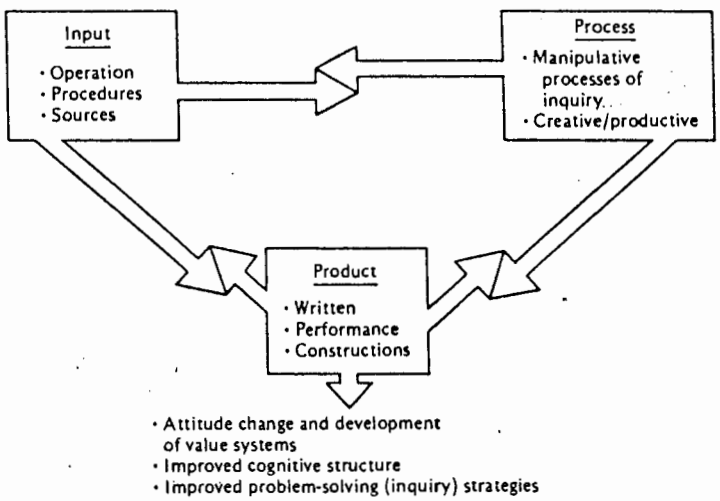


Figure 5 : Input/process/product model (Renzulli, 1977, p 65)

In common with Types I and II enrichment, Type III enrichment, through its a-contextuality, encourages the development of context-free thinking and a technological mode of rationality. Its definitions of "real-life" problems, "appropriate" research methods, "meaningful" final product, and its normative concerns with heuristics and innovation, are constituted within the normative Western episteme. The presented view of 'real-life' problems as being solvable, and of their solutions being applauded by 'real-life' society reflects ideological oversimplifications of the nature of society, research and knowledge. Pertinent here is Apple's comment on science-teaching in general :

> "..... scientific knowledge as it is taught in schools has, in effect, been divorced from the structure of the community from which it evolved and which acts to criticise it. Students are 'forced', because of the very absence of a realistic picture of how communities in science apportion power and economic resources, to internalise a view that has little potency for questioning the legitimacy of the tacit assumptions about interpersonal conflict that govern their lives and their own educational, economic and political situations. Not only are they presented with a view of science that is patently unrealistic, but .... they are not shown how critical interpersonal intergroup (and hence, class) argumentation and conflict have been for the progress of science. When this situation is generalised into a basic perspective of one's relation to the economic and political paradigms of activity in a society, it is not difficult to see how it can serve to reinforce the quiescence of students, lead them into 'proper channels' for changing these structures, or help justify this structural arrangement by providing the constitutive rules of thought that make any other perspective on knowledge seem unnatural" (1979, p 92).

The role of conflict in science, and its social character, is also discussed by Popkewitz, 1984.

From this discussion, it can be seen that the Enrichment Triad Model, in common with the previously discussed models, encourages the hegemonic liberal attitude to education by obscuring the real nature of what actually happens in the classroom and in society. Its ideological

overtones lead one to conclude that this model, too, should not be permitted to fully dictate curriculum.

6. The Taba Social Studies Curriculum

The final general process model to be discussed is one which is idiosyncratic in that (i) it focuses on a specific curriculum content area, and (ii) it is organised around key concepts in that area which are seldom systematically included in conventional curricula. At first sight it appears substantively different from other models, but closer examination will show that it is ideologically similar to them.

Sharing Renzulli's concern with transcending 'information obsolescence', Hilda Taba (1966, 1969) focuses her Social Studies Curriculum on developing high-level thinking skills (both cognitive and affective) to facilitate problem-solving, in this case through the systematic teaching of (i) concept development, (ii) inferring and generalising, and (iii) applying increasingly abstract generalisations, within a curriculum focused specifically on social studies. The model is legitimated through a rhetoric of positivism and liberalism : "Every objective is stated in terms of observable behaviours based on comprehension, analysis, attitude development, exploration of feelings, and a development of sensitivity and empathy, all of which are intended to move the child away from ethnocentrism and towards the world citizenship." (Tannenbaum, 1983, p 412). The model is unusual in that its rhetoric recognises ethnocentricity and cultural relativism, and deliberately attempts to illuminate these by studying key concepts such as causality, conflict, cooperation, cultural change, power, societal control, tradition and values.

However, as the model's own taken-for-granted assumptions are not part of its curriculum, these concepts are studied from within the Western episteme. Consequently, while apparently challenging some problematic aspects of the Western episteme, in effect the model acts to reproduce this episteme. For instance, as Apple has pointed out, in spite of being the only social studies programme to explicitly recognise conflict as a key concept, "its orientation is on the serious consequences of sustained conflict rather than on the many positive aspects also associated with conflict itself. Conflict ..... is viewed as 'dysfunctional', even though it is pictured as being ever present." (1979, p 96). Such social studies materials, far from challenging the Western episteme, "can contribute to the reinforcing and tacit teaching of certain dominant basic assumptions and, hence, a pro-consensus and anti-dissension belief structure" (Apple, 1979, p 96); a consensus view that is a characteristic of technocratic rationality (Giroux, 1981, p 53). For instance, Jean Anyou's analysis of elementary social studies textbooks concluded that the "knowledge which 'counts' as social studies knowledge will tend to be that knowledge which provides formal justification for and legitimation of, prevailing institutional arrangements and forms of conduct and beliefs." (Anyou, 1978, p 40). This consensus view of social reality permeates science teaching in general (see earlier quote from Apple (1979, p 92) (my page 46). The transmission of the dominant mode of rationality is facilitated by the fact that examination of social values and belief structures is normally discouraged in schools in technologically advanced societies. As Tannenbaum has observed with respect to American education :

> "Traditionally, schools have been as scrupulous in separating value systems from curriculum content as the country has been in separating church from state. Only the behavioral codes and judgements that are inherent in a democracy may be taught in the classroom to help children prepare for responsible citizenship." (1983, p 414).

He continues :

> "This separation of mentality from morals has affected standards of excellence, too ... Even the gifted, who often show special interest in such matters, quickly learn that they are off limits from discussion in class. There is certainly no educational reward for polishing one's profoundest convictions as there is for honing one's scholarly aptitudes." (1983, p 414).

In addition to the ideology of its subject-matter, the Taba model shares other ideological characteristics with the previously discussed models, such as its a-contextuality, (the fact that it talks about society doesn't mean that it is itself situated in a social context), normative definitions of valued thinking skills, the instrumental value given to affect in problem-solving, the implicit equation of educational failure with individual inadequacy, and the obscuring of the real complexity of the classroom experience and of the role of education in the production and reproduction of social relations.

From these representative examples of process models of intellectual function, it can be seen that they reflect current "Western" socially-valued dimensions of thinking. The models are invariably presented as a-contextual. They are premised on a "deficit" view of pupils which generates "remedial" interventive educational strategies. They are models of how people probably "ought" to process unproblematically defined information in order to arrive at the kind of thinking valued by Western technological society, and hence shift attention away from curriculum designed in terms of knowledge forms to curriculum designed

in terms of cognitive acts. Models such as these process models are easily reified to the point where they themselves are ideologically used to justify what ought to be valued in thought-processes, as well as to dictate what ought to be done to maximise these valued thought processes, without reference to moral or ethical considerations.

B. INFORMATION-PROCESSING MODELS CONCENTRATING ON CREATIVITY

In addition to the above examples of general process models which inform gifted education, there is a number of models concentrating specifically on creativity processes, which have contributed to conventional informing theory. Creativity is a concept which is looming ever larger in gifted education and in capital's demands for high-level entrepreneurial skills, and therefore merits examination.

"Creativity", like giftedness, is a complex hypothetical construct, in which are intertwined conceptual and phenomenological elements such as product and process, consciousness and the unconscious or preconscious, past and present, development and final state. There has been a great deal of research into defining and describing the creative process(es) and creative products, and into identifying creative individuals. As the vast majority of this work has been done in technologically advanced societies, it is hardly surprising that conventional thinking on creativity reflects the technological mode of rationality.

It is when one "steps back" to try to put the large field of creativity research in perspective that it becomes clear that only certain kinds of

theory or model are used. Taylor's (1975) hierarchical taxonomy of creative products indicates clearly the contemporary concern with intellect and the types of intellectual product society views as creative : in ascending order of value;

(i) expressive creativity, which involves developing unique ideas without consideration of quality

(ii) technical creativity

(iii) inventive creativity such as that of Edison or Marconi

(iv) innovative creativity, which involves innovative departures from established schools of thought, e.g. Jung or Copernicus

(v) emergentive creativity, involving paradigmitic shifts, such as that of Einstein (Taylor, 1975, p 307).

As Tannenbaum remarks : "The important component of creativity is the process of devising uncommon solutions or unusual adaptive responses to problems. In other words, the key intellective trait is originality, but intellect is only part of the story." (1983, p 258). Non-intellective factors are acknowledged in all creativity theories. However, these factors are all defined in relation to the individual, being limited to emotional, attitudinal, motivational, learning-style and life-style characteristics. The theories are thus compartmentalised off from political, economic, sexist, cultural and racist social reality. Where reference to society is made, it is always in traditional liberal terminology, with traditional approaches to self and the nature of society. For instance, Barbara Clark (1975) has suggested that there are four broad research approaches to creativity, and that these emphasise different types of personal characteristics, viz. thinking, intuitive, feeling and sensing (product-related) i.e. she assumes the automatic primacy of the individual in creativity theorising.

Using a different classification system, Gowan (1971) has identified a rational-psychedelic continuum underlying creativity theories, ranging from

(i) the cognitive, rational and semantic problem-solving views represented by Osborn (1953) and Guilford (1967)

(ii) theories focussing on personality traits and environmental conditions, usually emphasising originality, energy and positive self-concept, along with focus on childrearing practices (e.g. Gowan, 1979)

(iii) the humanistic mental health views of Maslow (1959) and Rogers (1959), dealing mostly with self-actualisation and openness to experience

(iv) psychoanalytic theories dealing with oedipal conflicts, pleasure and the pre-conscious (Kubie, 1958)

(v) the psychedelic or altered-states-of-consciousness view, which emphasises existential, non-rational and cosmic consciousness factors (Tart, 1969) e.g. research with drugs etc, and left-brain right-brain theory.

It can be seen from this that Gowan too is assuming the primacy of the individual in the very selection of his rational-psychedelic classification system. The concept of "society" does come into the theories in (ii), (iii) and (iv), but only in the conventional, compartmentalised, taken-for-granted normative consensus sense in which it is used in the Western episteme. This can be illustrated in the creativity theory in which the concept of society is most dominant, that of Arieti (1976). Arieti views creativity as a dynamic exchange of two open systems, the individual and society. He defines society as creativogenic if it

satisfies certain conditions that facilitate greatness.[5] This systems view of society, in common with all general systems theory, has the effect of flattening social reality. It is strongly infused by the liberal idea of society as benign and impartial, and is characteristic of a technological mode of rationality.

The creativity process theories which specifically inform gifted education fall into Gowan's two extreme categories. (The remaining theoretical approaches are not concerned with the actual process of creativity, but with the prerequisite conditions for its manifestation, and will be discussed in the next section.)

(a) The conventional rational approach

The conventional rational approach to creativity concerns itself with the phenomenology of the creative process. The classical four stages of the creativity process, as outlined by Wallas (1926), are : preparation, incubation, illumination and verification. These stages are basically represented in all creativity process theories, as being typical of most problem-solving behaviour.[6] Typical examples are Dewey's (1910) problem-solving and Rossmann's (1931) invention schemata, the Osborn (1963) creative problem-solving model, and the synectics approach of Gordon (1951) and Prince (1968).

Rossman (1931) (invention)	Wallas (1926) (creative production)	Dewey (1910) (problem solving)
1. Observation of need or difficulty (problem situation, area of concern)		1. Felt need or difficulty observed
2. Analysis of need; problem formulated and defined		2. Difficulty or problem situation located and problem defined (formulated)
3. Survey of all available information	1. Preparation (information obtained)	
Rudimentary incubation (unconscious work) possible, depending on problem complexity		
4. Formulation of many possible (objective) solutions		3. One or more possible solutions suggested
5. Critical analysis and examination of these solutions for their advantages and disadvantages		4. Consequences considered and evaluated
Sustained and ongoing incubation (unconscious work) probable, particularly for complex problems	2. Incubation (unconscious work occurring)	
6. Birth and formulation of new ideas, invention, or solution to problem	3. Illumination (one or more solutions emerging)	
7. Testing of most promising solution and selection and perfection of final embodiment of solution by some or all of the previous steps; more or less final acceptance of revised solution	4. Verification (solutions tested, judged for appropriateness, and elaborated upon)	5. Solution accepted at least tentatively

TABLE 1. Steps in Invention, Creative Production, and Problem Solving as perceived by Rossman, Wallas, and Dewey. (Michael (1977, p 157) in Stanley et al (1977).

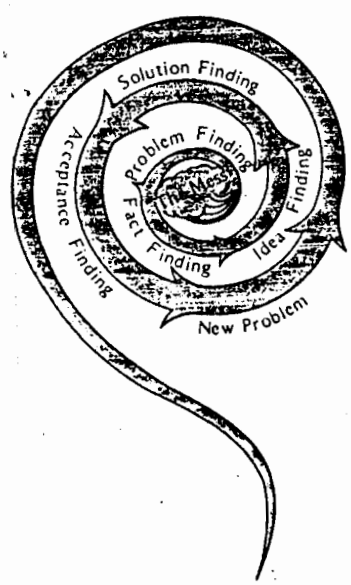


Figure 6 : Osborn's creative problem-solving model. (From Tannenbaum (1983, p 391).

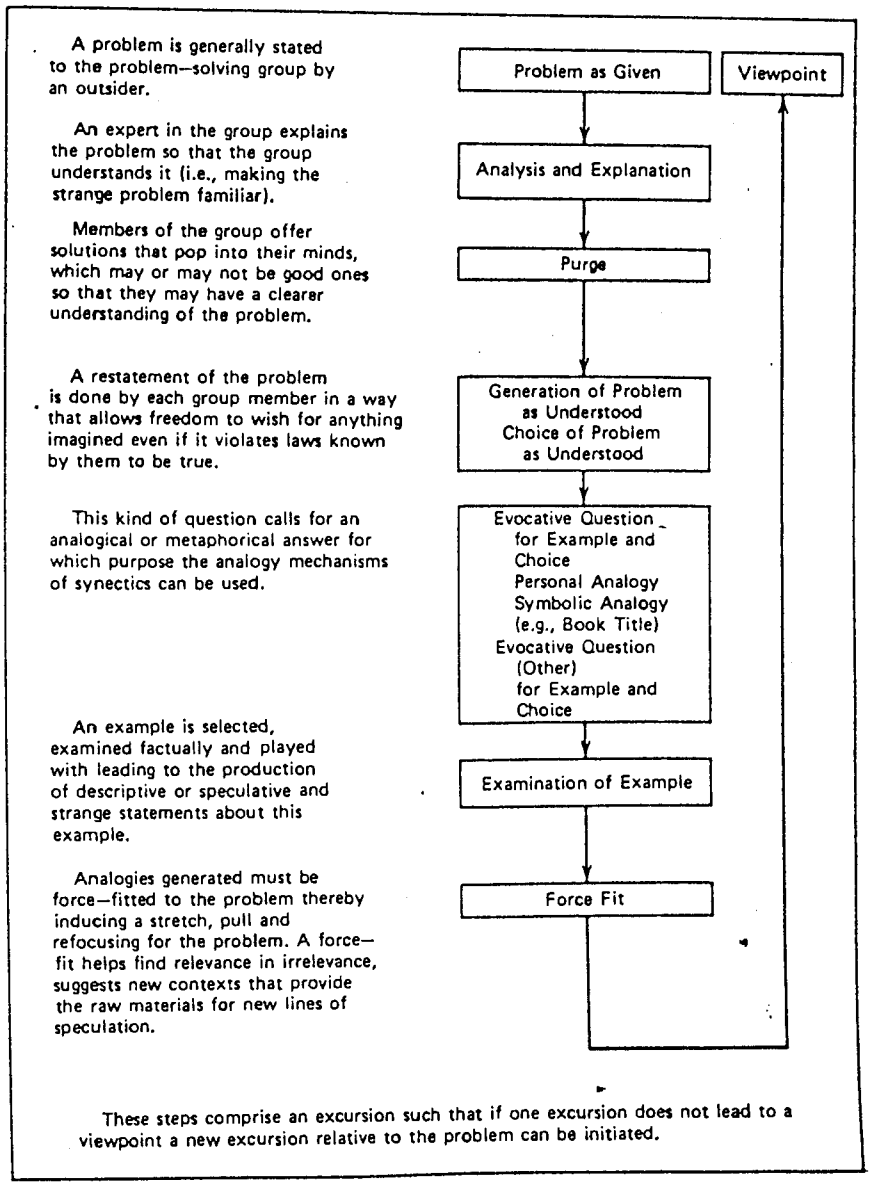


Figure 7 : Synectics problem-solving flowchart. (Prince, 1968, from Khatena, 1982, p 284).

The classic four stages can also be detected in de Bono's process model of creative problem-solving (1972), which distinguishes lateral and vertical thinking. Only vertical thinking is logical and sequential. Lateral thinking corresponds to idea finding, or incubation, and precedes verification.

In the R.S.A., Paul Torrance's work on creativity has probably been the most influential - it certainly dominates in C.E.D. thinking on creativity (Neethling, personal communication, 3.10.1985). Torrance's thinking clearly reflects the four stage schemata. He describes the creativity process as involving such human motivations as

> "Involvement with something meaningful. Curiosity and wanting to know in the face of wonder, incompleteness, confusion, complexity, disharmony, disorganisation, or the like.
>
> Simplification of structure or diagnosing a difficulty by synthesizing known information, forming new combinations or identifying gaps.
>
> Elaborating and diverging by producing new alternatives, new possibilities, etc.
>
> Judging, evaluating, checking and testing possibilities.
>
> Discarding unsuccessful, erroneous, and unpromising solutions.
>
> Choosing the most promising solution and making it attractive or aesthetically pleasing.
>
> Communicating the result to others."
>
> (Torrance and Myers, 1970, pp 23-24).

James Vargiu's (1977) sequential-step creative-problem-solving model also follows the classical form. It entails Preparation-Frustration-Incubation-Illumination of Solutions Avalanche-Elaboration. He describes the creative process as analogous to the behaviour of a layer of iron filings near a magnet :

> "At first the field is too weak to set the iron particles in motion. They are held in position by friction. As the intensity of the magnetic field increases, some of the iron particles overcome friction and begin to move, interacting with the nearby granules in a way that increases the overall magnetisation. This in turn sets other particles in motion, accelerating the process and starting an "avalanche effect" or "chain reaction" which causes the pattern to suddenly form itself, independently of any further approach of the magnet." (1977, p 23).

This approach to intellect as a mechanical[7]. process acting on disembodied knowledge is characteristic of technological consciousness. It implies that creative problem-solving is a technical exercise in which ethical, moral, social, political, and economic issues are irrelevant.

All of these models are concerned only with mental operations acting on information. They are abstract/theoretical, a set of generalisations from which all contextual reference is removed. The result is a compartmentalisation of model from social reality, a typical characteristic of technological rationality. To use such models as an exclusive basis for curriculum is to encourage technocratic reasoning in pupils and teachers, allowing the masking of the relationships between creativity and social relations, and knowledge and social relations, including who defines what is creative, what problems need solving, where the people with the creativity thus defined are found in society, whose creativity should be nurtured and by whom, and which social groups (class, cultural, racial, gender) are likely to have access to and to benefit from

(a) training in creativity, and

(b) the creative products themselves.

Above all, such approaches make it unlikely that the taken-for-granted attitudes to education are challenged by the question : is such training in creativity likely to contribute significantly to social change? In short, the rational approach to creativity shares the same set of ideological characteristics as the general process models discussed earlier.

(b) <u>The psychedelic or altered-states-of-consciousness approach</u>

The altered-states-of-consciousness theorists maintain that alternative levels of awareness are important to the release of creative behaviour,

analogous to releasing a dammed-up stream by removing a barrier.

This approach is premised on brain function models. It is difficult to discuss brain function without over-simplifying the complex interactive effects of any area of the brain in total brain function, or without falling into the trap of simple reductionism, i.e. confusion of one level of analysis with another that is hierarchically lower. Ornstein reminds us with respect to the currently fashionable left-brain/right-brain theory :

> "Although each hemisphere shares the potential for many functions, and both sides participate in most activities, in a normal person the two hemispheres tend to specialise." (1972, p 51).

Khatena summarises the rationale behind this altered-states-of-consciousness approach :

> "The left brain specialises in the handling of incoming perceptual information and processes it by means of language into a logical-analytical thought and decision in a continual stream of internal discourse that accompanies consciousness. By removal of left-hemispheric functions through relaxation, meditation, hypnosis, fantasy, daydreaming, sensory deprivation or similar states, right-hemispheric imagery can occur. The right brain specialises in the handling of divergent thinking operations, intuition, insight, investion, metaphor, analogy, and the production of creative imagination imagery." (Khatena, 1982, p 106).

Left-brain/right-brain theory can easily be misinterpreted in such a way that the brain is taken as functioning according to a simple mechanistic model instead of a complex and interactive holistic model.[8.] This over-simplification is vividly illustrated in Khatena's figural representation of intellectual abilities affected by energy fields corresponding to brain-hemispheres:

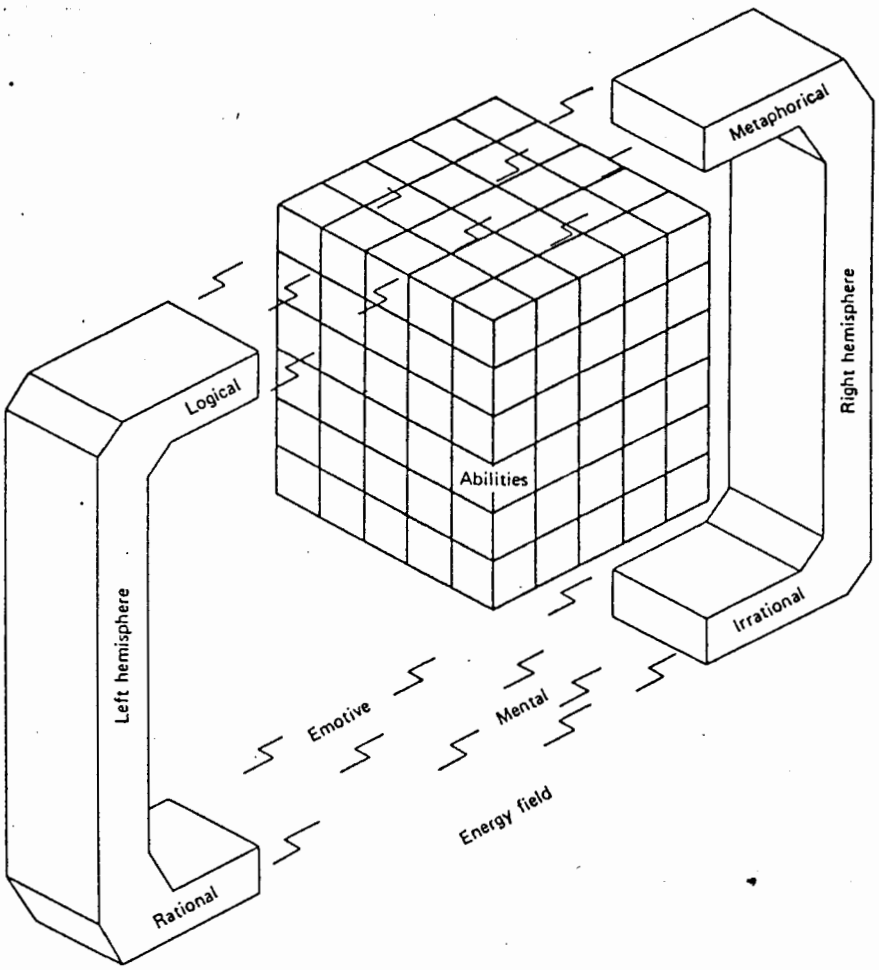


Figure 8 : Intellectual abilities activated by energy fields (From Khatena, 1982, p 111).

The model is strongly mechanistic, and demonstrates a confusion of two levels of analysis; the physiological correlates of cognitive abilities are depicted as influencing these abilities as though the two are logically separate entities and not merely two different levels of analysis of the same behaviour. This confusion stems directly from the Cartesian dualism of mind vs. matter which permeates our taken-for-granted attitudes and our language, and encourages mechanistic thought.

The altered-states-of-consciousness approach is ideological in that it is derived from a form of supposedly expert knowledge which is difficult to challenge and probably threatening to most people - i.e. the expertise

of brain-specialists and neurologists, who generate a means of social control through their definitions of normality. This form of knowledge, and its underlying mechanistic conception of reality, is virtually impossible to counter or discredit from an "inexpert" position. Such models encourage the location of failure to be creative, even with altered states of consciousness, in the individual, not within the social nexus of which the individual is part. Like the foregoing approaches, this kind of approach to creativity is a-contextual, with all the attendant ideology of technological rationality.

This overview of the ideological nature of creativity process theories indicates that basic to them all is a taken-for-granted mode of rationality and a set of attitudes to knowledge, self and society which fundamentally channels and limits thinking in this field.

In conclusion, it can be seen that the information processing models that inform gifted education, both of general cognitive abilities and those concentrating on creativity, are all characteristic ideological products of the Western episteme. This episteme "flattens" reality by ignoring the moral, racial, cultural, gender, economic and political complexity of social reality. Consequently, allowing such models to fully dictate curriculum for gifted children is tantamount to technicism.

Chapter 4

MODELS OF EMOTIONAL AND INTELLECTUAL DEVELOPMENT

In contrast to static and a-historical information-processing models of intellect, dynamic models of intellectual and emotional development are concerned with the process of development of intellect and personality. The gifted education literature contains a vast quantity of research into the intellectual and emotional development of gifted children, particularly in relation to the influence of environmental and personal attribute variables. It is not within the scope of this thesis to provide an overview of these research areas per se. This discussion will focus on some representative theories of development which are currently informing gifted education, in order to illuminate their general ideological character.

(a) THEORIES OF EMOTIONAL DEVELOPMENT

The theories of emotional development (usually referred to as theories of personality) current in Western psychology and psychiatry differ considerably in their relative emphasis on content dimensions such as purposiveness, unconscious determinants, the centrality of reward, concern with learning processes, the products of learning (personality structures), hereditary determinants, early developmental experiences, continuity/discontinuity of development, organismic emphasis, uniqueness of the individual, psychological environment, sociocultural determinants, and motivational variables:

TABLE 1.

DIMENSIONAL COMPARISON OF THEORIES OF PERSONALITY

	Purpose	Unconscious Determinants	Reward	Contiguity	Learning Process	Personality Structure	Heredity	Early Developmental Experience	Continuity of Development	Organismic Emphasis	Field Emphasis	Uniqueness	Psychological Environment	Self Concept	Group Membership Determinants	Interdisciplinary Emphasis: Biology	Interdisciplinary Emphasis: Social Science	Multiplicity of Motives
Freud	H	H	H	M	L	H	H	H	H	M	L	M	H	M	L	H	M	L
Jung	H	H	M	L	L	H	H	M	L	H	L	M	M	M	L	H	L	M
Adler	H	M	L	L	L	M	H	H	H	M	H	H	M	H	H	M	H	L
Horney	H	H	M	L	M	M	L	M	M	M	M	M	M	H	H	L	H	L
Fromm	H	M	M	L	M	M	M	M	M	M	M	M	M	M	H	L	H	L
Sullivan	H	M	M	H	M	M	M	M	H	H	H	M	H	H	H	M	H	M
Lewin	H	L	M	L	M	M	L	L	L	L	H	H	H	M	H	L	M	H
Allport	H	L	L	M	M	H	M	L	L	H	L	H	M	H	L	H	L	H
Murray	H	H	M	L	L	H	M	H	H	H	H	M	H	M	M	H	H	H
Sheldon	L	M	L	L	L	H	H	L	H	H	L	H	L	L	L	H	L	L
Eysenck	L	L	M	L	L	H	H	L	M	L	L	L	L	L	L	M	L	L
Cattell	M	M	H	M	H	H	H	M	M	L	L	M	L	H	M	H	L	H
Miller & Dollard	L	M	H	M	H	L	L	H	H	L	L	L	L	L	M	M	H	M
Angyal	H	M	L	L	M	H	M	L	H	H	M	L	H	H	L	M	L	L
Goldstein	H	L	L	L	M	L	M	L	L	H	M	L	H	H	L	H	L	L
Rogers	H	M	L	L	M	L	L	L	M	H	M	M	H	H	M	L	L	L
Murphy	H	M	H	H	H	H	H	H	H	H	H	M	M	M	H	H	H	H

Key: H high (emphasized). M moderate. L low (de-emphasized).

From Hall and Lindsey (1957, p 548)

All these theories are ideological in their liberal philosophy emphasis on self and individual autonomy, and in their taken-for-granted normative conceptions of society which "flatten" social reality. None has place for the role that social relations play in personality development. However, such theories have widely influenced twentieth century teaching practice in general by focussing attention on their various content variables. Gifted education in particular, especially in its concern with creativity and creative problem-solving, draws heavily on theories of personality development, particularly those indicated in Gowan's rational-psychedelic continuum mentioned earlier (p 52), viz. the humanistic mental health views of Maslow and Rogers, and psychoanalytic theories.

(i) The mental health approach of Maslow and Rogers

The conventional humanistic approach to creativity sees mental health as the source for creative impulses, and holds that self-actualisation is necessary for creativity to occur. One widely-used conventional definition of normality or mental health is Maslow and Mittelman's description of its manifestations as being :

(i) Adequate feelings of security
(ii) Adequate self-evaluation
(iii) Adequate spontaneity and emotionality
(iv) Efficient contact with reality
(v) Adequate bodily desires and the ability to gratify them
(vi) Adequate self-knowledge
(vii) Integration and consistency of personality
(viii) Adequate life-goals
(ix) Ability to learn from experience
(x) Ability to satisfy the requirements of the group
(xi) Adequate emancipation from the group
(Maslow and Mittelman, 1951, pp 14-15)

This definition of mental health is clearly intensely subjective and normative. It reflects a set of taken-for-granted attitudes to the individual and society.

According to Maslow (1959), self-actualising people are distinguishable by their independence, autonomy and self-directedness. The theories of both Maslow and Rogers are both teleological.[1]. They assume that "the organism is a purely monistic dynamic system in which one drive

suffices to account for all behaviour." (Hall and Lindsey, 1957, p 481). As Rogers puts it, "The organism has one basic tendency and striving - to actualise, maintain and enhance the experiencing organism" (Rogers, 1951, p 487). Maslow believes that creative productivity can only be achieved through self-discipline and hard work. (This is reminiscent of Renzulli's "inspiration" and "perspiration".) Rogers (1959) considers that human autonomy and resistance to excessive social controls are necessary conditions for creativity. In general, humanists hold that creativity can occur only when the individual and society interact in a mutually beneficial way - the creativity valued by society which results from self-actualisation can occur only if society provides the supportive latitude and freedom for creative persons to explore new ideas.

(ii) Psychoanalytic theory

The other main body of personality theory informing gifted education can be described as psychoanalytic, and stresses the role of the unconscious (Freud and Jung), or the pre-conscious in creativity (Kris (1952), Schafer (1958), Kubie (1958)). These models tend to be "hydraulic" in nature, i.e. stress at one point of the organism's psyche produces an effect or distortion elsewhere, e.g. a defence mechanism. According to this school of thought, for creativity to occur, facilitating personality conditions must exist; a secure sense of self, with healthy (trusting and adaptive) interactions with others.

The curricular implications of this type of emotional development theory revolve around means of providing a supportive or enabling environment which allows adequate emotional development to occur through encouraging the development of healthy autonomy, and allows the satisfaction of

what Rogers (1955) terms the need for positive regard by other people and the need for self regard.

Although these curricular implications are normally unquestioningly accepted by educationists, the theories themselves have ideological limitations of which educators should be aware.

Firstly, what constitutes mental health, autonomy and creativity is not absolute, but is normatively defined by society, moreover, by only certain groups and "experts" in society. These very definitions have a social control function which is not acknowledged within the theories themselves. The non-common-sense abstract "expertise" on which the definitions are based is the type which is possibly the most difficult to challenge - psychiatric and psychological knowledge. Possessors of this kind of knowledge "own" the means to negatively label and discredit non-conformists. It is not unknown for even well-educated academic critics of a particular personality theory to have their critical stance denigrated by the theories' proponents in the terminology of that very personality theory e.g. as a denial of reality or a defence mechanism etc. - rather like being told that if you reject Christianity you won't go to Heaven. What chance therefore has an uneducated person against these normative labels and definitions?

Secondly, these personality theories are based on traditional liberal views of self and society, which are themselves ideological. For example, the emphasis on teleological self which Bowers has identified as characteristic of liberal technocratic culture (see p 27) locates ultimate responsibility for mental health and creativity within the

individual, (this despite recognition of the importance of the individual's immediate social group) by masking the influence of the total social nexus on both the definitions and development of a so-called "well-adjusted" personality. In this way, the relationship of the definition of a term such as "self-actualised" to the social relations of society is obscured, including the empirical observation that the self-directed autonomous behaviour valued in technologically advanced societies is encouraged in middleclass homes, where parenting styles are based on rational persuasion, but discouraged in working-class homes, where parenting styles place more stress on obedience and conformity.[2].

In conclusion, the theories of emotional development which inform gifted education have ideological implications which raise doubts that they can contribute per se to significant social change, for they act to mystify social reality in ways congruent with liberal-technocratic rationality.

(b) THEORIES OF INTELLECTUAL DEVELOPMENT

As Mussen, Conger and Kagan have commented, to date the major research emphasis in child development psychology in general has been on preliminary observation as opposed to the testing of theoretically derived hypotheses (1963, p 14). Furthermore, "At present there is no single comprehensive theory encompassing the vast body of information which child psychology has accumulated." (Mussen et al, 1963, p 17). Where research is theoretically derived, it has stemmed mainly from two types of theory - psychoanalytic theories of personality and behaviour theory. The ideology of personality theory was discussed in the previous section. The latter type of theory must now be examined for ideology.

Behavioural science is characteristically empirical and analytical - i.e. observable human behaviour is separated into its constituent elements. The behavioural science approach to social science dominates the cultural outlook in the U.S., Australia and, to some extent, Britain (Popkewitz, 1984, p 31). Underlying all empirical analytic research are five assumptions :

(i) theory is universal and independent of specific content

(ii) science is neutral and disinterested, and distinct from moral theory (empirical theory is about what is, separate from moral theory, which is about what ought to be).

(iii) the social world exists as a system of analytically separate variables of an interacting system. Causality is therefore defined in terms of manipulable dependent and independent variables.

(iv) knowledge can be formalised. Concepts and generalisations are rooted only in what is operational.

(v) these four assumptions create a reliance on the primacy of mathematical models and formal logic (Popkewitz, 1984, pp 36-38).

These assumptions form the cornerstone of the dominant Western episteme. Behavioural science in general is therefore clearly open to the ideological criticisms of this episteme which were discussed in chapter 2.

Narrowing the focus to research on the intellectual development of children, one finds that here too "no comprehensive theory exists that . . . accounts for most of the developmental changes in the intellectual activity of the child." (Mussen et al, 1963, p 252). The most extensive

work and theorising in intellectual development was done by Jean Piaget,[3.] who was mainly concerned with the developmental sequences through which the child acquires the rules of formal logic, mathematics and physical phenomena. He suggested that intellectual growth is not necessarily smooth and gradual, but that there are qualitative differences in children's thinking in the different stages of intellectual development, and sudden shifts from one form of thought to the next, viz. sensori-motor stage (age 0-2 years), preconceptual (ages 2-4), intuitive (ages 4-7), concrete operations (ages 7-11) and formal operations (11 years and up) (Inhelder and Piaget, 1958). This theory has obvious curricular implications.

However, let us stand back from Piaget's work in order to discern its ideological character. His subject area, intellectual growth, is defined by Mussen et al as "(1) acquisition of language and number skills and the rules that govern the use of these symbols; (2) increased memory ability; (3) differentiation of perceptual experience; (4) learning the rules of logic and how to apply them to reason out problems." (Mussen et al, 1963, p 252). As Thomas Gladwin has commented, Piaget's work immediately strikes an anthropologist as culture-bound in its concern with "our familiar symbolic logic and relational abstract thinking" (in Keddie et al, 1973, p 197). Although Piaget's theory roots intellectual development in ongoing interaction with the environment, it is ideological in that "intellect" and the "environment" are never treated as problematic or socially constructed. Reality is treated as Absolute and Ultimately Knowable. This reification of one half of the interacting variables of self and environment increases the tendency to ultimately locate intellectual failure or slow development in the child.

After all, if one deliberately sets up remedial experiences derived from Piagetian principles, and no intellectual growth results, the fault or limitation must therefore lie with the child (the rest of the equation). The role of social relations in defining and determining intellectual growth is thus obscured. Further, the focus on intellectual growth as a separable study area leads to the paling of other aspects of the child's total personality. Piagetian theory is thus teleological, dualist, mechanistic and normative, and leads to the "flattening" of both individual and social reality, and of the complex and creative interaction of two systems - the child and the environment. Piaget's work can therefore be seen as characteristically empirical-analytic, and thus liberal-technocratic.

These ideological characteristics of Piagetian thinking mean that their uncritical application to curriculum design will operate to enhance the technological mode of rationality in teachers and pupils, and to contribute to the obscuring of the actual character of schooling and society.

As the remaining work in this research area tends to be of the preliminary observation type, rather than theoretically derived, its ideological analysis can best be approached via a general examination of the ideology of research in Western countries. This has been done for educational research in the U.S.A. by Tabachnik et al (1981). From this analysis it is clear that the dominant characteristic of U.S. research is its positivism - "a philosophical position which establishes a supremacy of method in scientific discourse by separating ethical and moral philosophy from a philosophy of science (because the former cannot be tested through empirical evidence)." (Tabachnik et al, p 10). According to Toulmin (1978), it is this lack of integration of philosophy, history

and culture which has resulted in what C. Wright Mills called abstracted empiricism : the continual collection of discrete variables by using statistical measures to see what correlations can occur, without giving attention to the theoretical derivation of falsifiable hypotheses (Popper, 1959). Popkewitz et al (1979), and Toulmin (1978) have argued that American educational research is dominantly characterised by abstracted empiricism :

> "A manifestation of the phenomenon of abstracted empiricism is found in many of the reviews of research literature that periodically appear in American research journals. These reviews of literature are attempts to give coherence to findings that, essentially, have no coherence. When one takes away the ceremonies of science in which the findings are presented, the research results are either commonsensical (if you teach a subject more, a student is more likely to learn more), nonsensical (a teacher should give 10 praises during a lesson), or absurd (in teaching, it makes no difference whether the teacher or students are present)." (Popkewitz and Tabachnik, 1981, p 13).

As Popkewitz has remarked,

> ".... the lack of situating concepts and techniques within their social and philosophical contexts produces knowledge that is often trivial and socially conservative. .... To filter out discussion of the social circumstances and cultural location that guide policy option is to mystify social arrangements." (Popkewitz, 1984, p ix).

These characteristics are strongly evident in what Gowan calls the personal attribute and environmental influences approach to creativity. Research focussing on personality traits and environmental influences such as child-rearing practices, is usually either characterised by "abstracted empiricism", or else sometimes derived from a-contextual creativity models such as Guilford's or Maslow's. For instance, Guilford (1959) has related four creative thinking abilities hypothesised in his SOI model, viz. fluency, flexibility, originality and

elaboration, to supposedly non-intellective traits. For example, individuals scoring well on associational fluency tend to seek adventurous experiences and to tolerate ambiguity extremely well; high scorers in ideational fluency tend to be more impulsive and self-confident, etc. Work such as that of Guilford, Barron (1963), Taylor and Holland (1964) and Torrance (1962) has indicated that non-intellective factors play a major part in the creativity process. However, being correlative work, there is an interpretative problem as to causal relationships with findings such as these.

In spite of this logical uncertainty, it is commonly accepted among educators that the curricular implications of the child development literature are:

(a) personal attributes or traits or environmental circumstances can be unproblematically used as important criteria to identify and select children for inclusion in gifted or creativity programmes (hence the many attribute checklists in use).

(b) creativity can be encouraged through using a deficit model approach to identify areas of relative weakness with respect to personality characteristics, e.g. by developing self-confidence or tolerance of ambiguity.

The abstracted empiricism of the attribute or environmental influences approach is ideological in that it acts to obscure social reality, or as Popkewitz puts it, to "mystify social arrangements" (1984, p ix).

From this examination of the ideology of the theories of intellectual development (or more properly, miscellaneous research findings relating to intellectual development) which inform gifted education in the West and the R.S.A., it can be seen that their uncritical application to curriculum will contribute to the mystification of social relations and hence retard significant social change.

To summarise this examination of the theory conventionally informing g.e., (both specific (chapters 3 and 4) and general (chapter 2)), it can be seen that the ideological character of this theory results in:

(i) the reinforcement of the hegemony of the Western technological mode of rationality in both teachers and pupils, including (a) definitions of high-status knowledge and occupations and the meritocracy of experts and (b) liberal-technocratic concepts of self, society, science, and education, all of which in turn act to legitimate the education system itself

(ii) serving the needs of dominant social groups by helping to maintain the status quo of social relations while apparently simultaneously increasing high-level and innovative skills for capital

(iii) the obscuring of the relationship of definitions of giftedness and knowledge and of access to gifted programmes to social class and social power

(iv) encouraging educators to ignore the real nature of classroom and social experience, and

(v) the non-addressing of sexist, racist, political, cultural and economic disparities.

In short, gifted education as currently conceived will not contribute significantly to social change - in fact, the analysis presented here causes concern that g.e. actively obstructs significant change through its ideological character. The inclusion in apparently open-access programmes of a relatively few individuals from social groups other than the dominant power groups cannot significantly alter the status quo, but will act to hegemonically legitimate the system. This highlights the serious need for gifted education theories which are adequately formulated in terms of social reality and social vision.

Chapter 5

MODELS OF NATIONAL DEVELOPMENT : SOCIAL VISIONS AND THE PROBLEM OF CHANGE

> "The problems of curriculum are those of philosophy (the nature of knowledge), ethics (what should be taught) and politics (in whose interests). Curriculum problems cannot be reduced to psychology." (Popkewitz, 1984, p 82).

From the preceding discussion of the ideology of conventional theory informing gifted education in the West and in the R.S.A., it can be clearly seen that curriculum issues have been traditionally located within the discipline of psychology,[1] and, moreover, predominantly within only one of the three theoretical paradigms identified in current social science research by Popkewitz (1984, ch 2), viz. the empirical-analytic or behavioural science paradigm. This is the dominant paradigm in the U.S., Australia and to some extent, Great Britain (Popkewitz, 1984, p 31). (The other paradigms are : the symbolic sciences paradigm (alias hermeneutic, microethnographic, interpretative) and the critical sciences paradigm (social relations as historical expression)).

Why only this type of theory informs gifted education is an interesting question in itself. Answering it requires the recognition that theory is itself a social artifact. Popkewitz speculates that each of the three paradigms in American social science responds to a different moment in the social circumstances being confronted in American research.

> "One needs to consider the dominance of empirical-analytic sciences in relation to the changing economic and social conditions in which major interests called for social engineering approaches in both physical and cultural production. The administrative focus of the empirical-analytic sciences provided one response to control the transformations that were occurring as a result of industrialisation, immigration, and more recently, the development of high-technology industry and finance capitalism" (1984, p 51).

In addition, the root values of individualism, pragmatism and technology took on specific meanings in American frontier society in the absence of strong humanistic traditions emphasizing the social group, such as those of Western Europe, and these values provided an underpinning for the emergence of the dominant empirical-analytic paradigm (Biddle, 1981). In a similar analysis within British educational history of the social basis of the concept of intelligence and the functions performed by the concept in a class society, Paul Henderson has suggested that the empirical-analytic intelligence-testing movement and the pressure for educational qualifications developed in a context of greatly increased pressure on educational resources and of a growing influx of working-class pupils into the grammar schools, as a mechanism of control over social mobility and as a legitimator of the allocation of high-status positions (Henderson, 1976). The dominance of the empirical-analytic paradigm in South African educational research and policy appears to be related to a similar set of local circumstances, which will be briefly discussed in the next section on the history of gifted education in the R.S.A.

As a consequence of the ideological location within the empirical-analytic paradigm of the conventional theories informing gifted education, gifted education as currently practised is open to serious criticisms of elitism

and vested interest. This raises two related questions :

(a) is gifted education inevitably elitist, and if so,

(b) can gifted education be justified.

If it is inevitably elitist, it would be common cause among those whose primary concern is positive social change that it would not be developmentally positive. If however, it contributes to the public good and reduces inequality, i.e. if it plays a mobilising role and contributes to the achievement of social justice, then it could be supported. This is the essential issue to be examined here.

Justifications for gifted education are usually couched in a-contextual terms, with a strongly individualistic emphasis. However, the formulation of educational policy does not occur in a vacuum, and can only be properly understood within its wider social, economic and political context. Likewise, the central issue of inequality in education can only be addressed in such context. Evaluation of educational policy, therefore, cannot be divorced from broader issues of national and regional development. Understanding the ideological dimensions of education thus requires an explicit examination of the relationship between educational policy and development issues.

Conventional justifications of gifted education, particularly in the Western technologically advanced societies, are of two related types. The first is based on humanistic grounds and couched in terms of self-fulfilment and self-actualisation of the individual, defined in the liberal-technocratic sense. The implicit assumption here is that the development of the individual will automatically benefit society.

The second type is couched in terms of social or national value,

usually in manpower and management terminology, for example, "children of gold", "problem-solving leaders of the future", "producers not re-producers", "society's most previous resource", "extenders of the frontiers of knowledge", and so on. Significantly, the validity of this assumed value[2]. has not been critically examined in the literature of gifted education. It is necessary to examine these assumptions for ideological content.

The primary underpinnings of the assumptions of social value can be found in the tenets of the modernisation paradigm, which dominated approaches to national development in most capitalist countries in the 1950's and 1960's and which still has widespread influence today. Based on the logic of neo-classical economics (Richardson, 1981), the central characteristics of this paradigm are:

(i) "national development" is largely synonymous with the achievement of "economic growth".

(ii) economic growth requires a transformation from "traditional" to "modern" conditions.

(iii) this transformation, in turn, involves increasing diversification of product, increasing specialisation and deepening divisions of labour, and

(iv) the dynamic of change derives largely from innovation, particularly entrepreneurial innovation.

In terms of this approach, economic development occurs largely on the basis of comparative advantage; countries and regions exploit their most competitive assets in an increasingly integrated world capitalist

system, based on trade. Significantly, in terms of this conception, the direction of development is from the top down. The primary assumptions of "top-down" approaches to development have been identified by Stohr (1980, p 4), as :

> "i. development in its economic, social, cultural and political dimensions can be generated only by some, very few, agents ...
>
> ii. the rest of the population are considered "incapable of initiatives in making improvements, consequently everything must be done for them" ...
>
> iii. these few agents are able and willing to allow all others to participate in this development within a reasonable time-span and on a reasonably equal basis.
>
> iv. these other groups are able and willing to adopt the same type of development
>
> v. the specific type of development (economic, social, cultural and political) initiated by the few select agents is the most suitable one for all other members of the increasingly interactive system and should therefore replace other existing notions of development
>
> vi. the (socially and culturally) new and the (economically and politically) more powerful notions of development are also the "better" ones and therefore the ones which the rest of society strives for." (Stohr, 1980, p 4).

However, since the late 1960s, there has been a series of shifts in thinking about the meaning of development,[3] the causes of underdevelopment and consequently about how development can be promoted.[4] These changes occurred in response to a variety of influences, including changing international economic and political conditions, shifts in lending policies of international lending and aid agencies and a growing concern about ecological considerations (Mesavoric and Pestel (1974), Schumacher (1973), Illich (1971), Turner (1976)). One of the most powerful influences however, was the increasing empirical evidence that,

despite the achievement of considerable success in economic growth terms, the position of the poorest section of the population, particularly in developing countries, in all dimensions of life, had worsened in both absolute and relative terms (Sandbrook, 1982); rather than being a self-correcting condition, inequality seemed to be increasing.

These and other factors led to increasing intellectual attacks on the modernisation paradigm, paralleled by attacks on its philosophic counterpart in education, liberal-education ideology. During the early 1970s, a new body of explanatory development theory was being popularised, which was to have a profound impact on national and regional planning. This theoretical perspective, commonly subsumed under the title of "the dependency paradigm", had its foundations in economic structuralism and was, at least in terms of some of its central concepts (Berger, 1974b), strongly informed by Marxist conceptualisations.

Economic structuralist interpretations in general argued that problems of underdevelopment were not simply a result of existing blocks to development but derived from the economic structural relations between underdeveloped and developed countries and regions under capitalism. The dependency paradigm, which initially was developed largely through the work of economists engaged in the United Nations Commission for Latin America and popularised by A.G. Frank (1971), built upon this position and, inter alia, mounted a broad-based attack on the very foundations of the modernisation paradigm, both conceptually and from the point of view of intervention.

Two of the assumptions of the modernisation paradigm which were attacked are of particular relevance to this discussion.

The first is the belief that increasing functional integration will bring with it benefits to all concerned (Dos Santos, 1973). This was rejected on the grounds that the world capitalist system is essentially characterised by a form of dependent development in which conditions of underdevelopment in less developed countries and regions are structural in that they are caused by the relationship between stronger and weaker economic entities. The relationship is thus an essentially exploitative one, whereby the growth of stronger entities ("cores" or "metropoles") occurs as a result of their ability to extract surplus from weaker entities ("peripheries" or "satellites")(Frank, 1971).

The second assumption is that of the positive downward and outward process of diffusion. In the dependency conception, diffusion occurs, but in the reverse direction. Rather than the benefits of growth spreading downwards and outwards to less competitive regions and groups, the strongest elements are seen to drain the most competitive resources of weaker entities to their own advantage, thereby increasing the underdevelopment of the latter.

Such contradictions raised, inter alia, doubts concerning the role of traditional education in development generally and its role in the reduction of inequality particularly.

Stemming from these criticisms of the modernisation paradigm, two general, broadly different, conceptions have emerged during the 1970s and 1980s of how the problem of stimulating development should be approached in policy terms. One school, the Accelerated Growth school (Wells, 1981), still emphasises the need for economic growth; it accepts

the general tenets of the modernisation paradigm and argues for an increasingly vigorous interconnection into a unified world capitalist system, supported by transnational flows of capital and based on increasing functional integration of economic activity. Significantly, however, important changes in thinking have occurred about precisely how this should be promoted, and monetarist economics and free trade rhetoric have gained increasing emphasis (Wells, 1981). The South African Government is generally committed to this development path.

The second school rejects many of the fundamental underpinnings of the modernisation paradigm and argues for "alternative" forms of development. (Ferguson gives one version of the differences between them (1982, pp 360-362). Under this general "alternative" rubric, a number of different schools of thought about how development should be promoted have emerged.

The first new approach advocated "redistribution through growth" (Chenery et al, 1974). While it accepted some of the tenets of the modernisation paradigm, it argued that a different form of growth that was more appropriate to developing countries should be instituted, and that this growth path should be explicitly concerned with issues of distribution. This approach, while widely criticised, provided an important foundation for subsequent approaches.

The second approach now generally labelled the "basic needs" approach (Streeten, 1981), emerged in part as a reaction to the problems encountered in the redistribution-through-growth approaches, and contains two main streams of thought : one sees a concern about poverty and

distribution as essentially supplementary to the need to promote economic growth; the other, usually termed "radical basic needs", argues that a basic needs approach should lay a basis for a qualitatively different form of development. In essence, this approach argues that priority in investment should be given to satisfying the basic needs (including literacy and basic education) of the population through policies directly targeted at the poorest and most disadvantaged groups and individuals. (Mbilinyi (1971), however, has argued that basic education itself can be exploitative when part of a capitalist dual education system.) Some proponents of the latter approach argue that a broad equalisation of access to resources and effective power is a precondition for sustained development; in short, that development requires the dismantling of capitalist relations and the socialisation of capital. In education, this view is taken by Bowles and Gintis (1976), among others.

The third approach, partly related to the radical basic needs approach but theoretically quite different, argues that development must be territorially defined in conjunction with the dismantling of local capitalist relations (Friedmann and Weaver, 1979). The emphasis in this approach is the mobilisation of local resources to satisfy the basic needs of all. This approach argues that development of poorer regions demands the utilisation of locally-plentiful and important resources - precisely those resources which are under-utilised in a system based on comparative advantage (Friedmann, 1980).

A tendency apparent in all these "alternative" approaches is the promotion of "bottom-up" as opposed to "top-down" approaches to development

(Stohr and Tödtling, 1977). Bottom-up ideas generally are based on the recognition that policy interventions in developing countries and regions often destroy more of value than they provide, not only materially, but culturally and institutionally (Goulet, 1979). "Bottom-up" approaches differ in two main ways from "top-down" approaches; firstly, development is seen not only as an economic concept, but as an enabling process dealing with the total human condition (see 3.). Secondly, many possible conceptions of development are accepted, and hence it is recognised that development objectives and paths must be appropriate to the context. These "bottom-up" approaches are reminiscent of Popkewitz's symbolic/microethnographic/interpretative/hermeneutic paradigm in their general humanistic concern with action at the level of the individual.

While it is clear that the social value ascribed to gifted education is compatible with "top-down" development approaches based on the modernisation paradigm, the question must now be raised as to whether gifted education is inherently incompatible with, or contradictory to the alternative social visions outlined here.

In all the "bottom-up" approaches, education is seen as an important element in development. However, education is not seen in its traditional liberal-ideology form. The alternative images of educated man (see chapter 2) are based upon a profoundly different view of man as an active agent in the creation of his own culture and of the dignity and validity of his phenomenological reality. The emphasis in education in these alternatives is on the construction of a learning process through which selfconsciousness and selfdetermination (Price, 1977, p 15)

can emerge, starting from context-specific issues at grassroots level, and in which meanings and definitions can be negotiated (Bowers, 1982a, p 548).[5] What is important here is that it is possible for innovation to diffuse both from the top down and the bottom-up. "Knowledge" gained in this way can be fed from both directions into the social system as a whole through local organisational structures for education, health, agriculture, etc. In developmental theory, this aspect is perhaps most clearly revealed in the agropolitan model of Friedmann and Weaver (1979).

Although the more socialist bottom-up approaches clearly place less emphasis on gifted education in terms of priorities than would approaches based on the modernisation paradigm, they need not necessarily reject gifted education on the grounds of being "elitist" or "anti-equality". There are a number of grounds for this assertion : firstly, the importance of individual development (in terms of rationality, self actualisation and selfdetermination) is commonly recognised by all approaches, despite the differences in the radical and ecological paradigmitic images indicated in chapter 2. Gifted education, insofar as it emphasises acts of cognition as opposed to mere transferals of information, in principle holds potential for education for liberation as opposed to education for domestication (Freire, 1972). Secondly, the importance of utilising to the full the most strongly endowed resources (both material and human), would not be disputed, nor would the role of innovation in stimulating positive processes of development in society. However, in these approaches, the value of resources is defined and measured only in terms of the degree to which they contribute to the general social good and to the mobilisation of the full range of resources available; their value is directly related to the degree to which they stimulate redistributionary processes, for it is precisely these processes of redistribution which underpin <u>sustained</u> positive long-term processes.

It can therefore be argued that in terms of these alternative approaches to development, the capitalisation of giftedness is inherently neither positive nor negative in societal terms. Its potential value is directly related to the degree to which it is consciously linked to, and contributes towards, an egalitarian social vision based in social justice[6]. and to the degree to which it addressed contextually specific manifestations of inequality. Conversely, the degree to which it is pursued in isolation or is linked to an inequitable social vision is the degree to which it will contribute to maintaining or increasing inequality.

It is neglect of precisely this redistributive dimension which has resulted in the elitist function of gifted education at present. Without specific actions to redistribute the benefits of gifted education, it is not likely as conventionally defined and practised to contribute per se to reducing inequality significantly. Indeed, it is far more likely to actively contribute via the deepening divisions of labour, to the production and reproduction of an elite meritocracy and to the worsening of the relative condition of the most fragile elements in society. As conventionally defined and practised, gifted education will generally act to reinforce the general faith that one's progress in life, including in one's career, is simply dependent on merit, competence, discipline and control. This focus on individual self-importance and achievement is ideological in its effect of distracting attention away from class structure as a major factor in influencing observable differences in living standards and expectations.

The issue of how to mitigate the complex reproductive effects of gifted

education is co-extensive with the issue of offsetting the general reproductive function of schooling. Although social transformation processes cannot be finessed, this recognition need not sterilise policy. In the final analysis, rationality and choice[7]. are still held to be the key to liberation and self-determination.[8]. In curricular terms, examination of the interrelationships of social vision and taken-for-granted assumptions of current modes of rationality, of the role of knowledge in social relations, of the social location of education itself, of political and ethical context, can help to empower social transformation through informed choice and a proper sense of society. However, education alone cannot achieve such transformation. Situation-specific interventive strategies to protect and empower the weakest and most marginal elements in society need to be negotiated. These include issues relating to equality of access (i) to productive wealth, including land and water and (ii) to the bases for the accumulation of social power, including education.

In common with national development policy,[9]. the educational policy arena (and in particular, the gifted education policy arena), should therefore have as its central concern the problem of promoting a broad basis for, and an upward spiral of development, but somehow managing to do so, not just without increasing inequality, but while actively reducing it. There can be no hope of achieving this resolution if the ideological character of the conventional theories and attitudes informing gifted education remains un-illuminated.

SECTION III

THE GIFTED EDUCATION MOVEMENT IN THE R.S.A. -

HISTORY AND IDEOLOGY

Chapter 6

THE GROWTH OF THE GIFTED EDUCATION MOVEMENT IN SOUTH AFRICA : THREE PERSPECTIVES

INTRODUCTION

The previous section was concerned with the ideology of the theory informing gifted education in technologically developed countries. This section will concern the ideological practice and function of gifted education in South Africa. This will be approached by examining the history and rhetoric of the gifted education movement (g.e.m.) in South Africa, and patterns of existing provision of gifted education (g.e.). By 'gifted education' is meant special educational provision for gifted pupils.

In the R.S.A., concerted effort to provide special education for gifted school children is a very recent development. The very recency of the rapid increase in concerted interest in gifted education in South Africa is itself significant. Although liberals and radicals alike have been highly suspicious of the elitist and undemocratic implications of differential provision for gifted pupils,[1] official reactions of the education authorities to g.e. have switched from hostile to enthusiastic within the space of a very few years. As I shall demonstrate, up till the mid 1970s, these authorities were unsympathetic to calls for special provision for gifted children, and considered that the existing system of differentiation catered sufficiently for the needs of these children. By 1981, however, the education of gifted children had been identified by the de

Lange Commission as one of the two top educational research priority areas,[2.] and plans were underway to develop a coordinated national policy for g.e.

What brought about this sudden and dramatic change? Answering this question requires examining the growth of the g.e.m. within its political and economic context. I shall approach this from three angles :

A. the chronological history of the g.e.m.

B. the current status of g.e. across the various education subsystems

C. the social and political context of g.e. in S.A.;

and shall then, by "fusing" these three perspectives, proceed to a discussion of what seem to be the important issues in understanding the growth of the g.e.m.

A. THE CHRONOLOGICAL HISTORY OF G.E. IN THE R.S.A.

Appendix A presents in tabular form a resumé of collected data relating to the growth of the g.e.m. in S.A. (including its political context), together with quotes or comments which are intended to help in the interpretation of this data, plus the sources for this information. To avoid lengthy discourse, I shall take Appendix A, an integral part of this subsection, as read, and present a conventional descriptive summary of the pattern which emerges, referring from time to time to the Appendix by entry date.

The g.e.m. in the R.S.A. is characterised by three distinct phases:

(i) a private association advocacy phase (1971 till 1976),

(ii) a phase of adoption by the official systems (late 1976 on)

(iii) a phase of centralised national control (1984 on).[3.]

Prior to the rise of the g.e.m. in the 1970s, there had been some sporadic interest in the 1950s and 1960s by individual research workers and white education departments in gifted children and their education; an interest which coincided with the growth of the testing movement in the U.S.A. The most significant of these research efforts was a longitudinal study by the Institute of Manpower of what is now known as the Human Sciences Research Council (HSRC), called "Project Talent Survey" (Entry 1965a). This study, which dealt with a cohort of 85 000 white Std. 6 pupils, is significant because it can be thought of as the thin leading edge of the now very substantial HSRC interest in g.e. research, an interest which, it will be shown, now dominates g.e. in S.A. However, in spite of these early investigations and isolated calls for special provision for gifted pupils (Entries 1960, 1964), no coherent movement advocating g.e. then existed. The white education authorities were unanimous at the time that the system of differentiation introduced in the fifties by the Transvaal and OFS Education Departments and extended nationally (in intent, at least) by the 1967 National Education Policy Act, was sufficient to cater for the needs of the highly gifted. The g.e.m. as a movement can be thought of as starting in September 1971, when, following a successful computer course for gifted children held at the University of the Witwatersrand (instigated by the parent of one of the children, Prof. D. Henderson of the Applied Maths Dept.), a private association of concerned parents and teachers was set up in Johannesburg to provide stimulating and enriching activities for gifted children. The reasons given for the establishment of this Association for the Education of Gifted

Children are couched in the rhetoric of reaction to perceived inadequacies in official provision for the educational needs of gifted pupils (see Entry 1971b).

The establishment of this Association thus marked the first concerted critical reaction to the existing system of differentiation. Not surprisingly, the Transvaal Education Department (T.E.D.) was "less than cooperative" towards the Association (Entry 1971b). In 1976 and 1977, a sudden increase occurred in the number of private sector advocacy groups for g.e., starting with the establishment of an Office for the Gifted and Talented in Port Elizabeth by J.L. Omond in February 1976 (following a study trip to the U.K. and U.S.A. and attendance at the First World Conference on Gifted Children in 1975). This was followed rapidly by the setting up with Omond's help and with private sector support (see 1979d) of private associations advocating g.e. in the Western Cape (August 1976), Natal (1977), Windhoek (March 1977), and Pretoria (1977). All were established in reaction to inadequacies in official systems which were creating boredom and frustration in gifted children - often to the point of reluctance to attend school at all. The establishment of the predominantly white middle-class private associations provoked reactions from the provincial education departments which varied from positively hostile (Transvaal, South West Africa and Cape)(see Entries 1971b, 1976a, 1976d, 1978b) to non-hostile but not supportive (Natal, Entry 1978b). As late as 10/11 August 1976, a request by Omond to a meeting of the Directors and Deputy-Directors of Education of the four white provincial education departments for special educational provision for gifted pupils was turned down on the grounds that "in the system of differentiation the necessary provision for

gifted children could be made" (Neethling, 1984, p 17), and the Cape Education Department (C.E.D.) declared in the same month that "a one-sided emphasis on giftedness and special provision for gifted children could harm the individual child as well as the community." (Neethling, 1984, p 18, quoting from C.E.D. files). In the face of this official attitude, further associations were later formed at Bloemfontein (1980) and Stellenbosch (1981).

The first phase of the g.e.m., therefore, is characterised by advocacy by predominantly white parents and pupils and some teachers for education more suited to the needs of the gifted, in the face of often hostile and defensive reaction from the authorities for white education. It appears that these demands represented a legitimation crisis for official white education, and contributed to the general legitimation crisis facing the entire South African educational system at the time. (This general crisis will be discussed later.)

The second phase in the g.e.m., one of official acceptance, began in Cape Town in 1976 and gained momentum with astonishing speed. The first official admission that existing educational provision was inadequate appeared to breach the dam wall of official resistance. The resulting flood of official action has engulfed and all but overwhelmed the private associations which had been chipping away at the defensive wall. Whatever relevance the private associations may once have had, has been effectively nullified. (This aspect will be discussed later). This second phase seems to have started after the Director of the C.E.D., Piet Meyer, began research in 1976 for a Ph.D. thesis on differentiation. In late 1976, "a more sympathetic and positive attitude towards gifted

education began developing" (Neethling, 1984, p 18). Although avowedly opposed to g.e. on 10/11 August 1976, by October 1976 the C.E.D. had appointed a departmental committee to investigate gifted education and devise an information manual for schools, training colleges and universities. What happened to change Meyer's attitude between August and October is probably the key question in understanding the history of the g.e.m. The appointment of this departmental committee marked the first "definite attempt to plan and structure specifically for gifted pupils" (Neethling, 1984, p 18) in the R.S.A. by an education department. The C.E.D. attitude to the private associations changed at this time (Neethling, personal observation, 4.7.1983, and Neethling, 1984, p 20). In late 1977, permission was granted for teachers to serve on the associations' committees, and school inspectors paid goodwill visits to the Western Cape and Port Elizabeth Associations (Neethling, 1984, p 20).

As can be seen from Appendix A, the g.e.m. mushroomed after 1976, and became increasingly taken over by the education authorities in close conjunction, especially after 1979, with the HSRC. The National Education Council requested the HSRC in 1977 to investigate g.e. (Entry 1977d) and in the same year the Chairman of the Board of Control for the Foundation of Education, Science and Technology (FEST), formerly President of the Council for Scientific and Industrial Research (CSIR) and Scientific Advisor to the Prime Minister, Dr S. Meiring-Naude, appointed a subcommittee which sponsored the establishment of an association in Pretoria to provide enrichment activities for gifted children (Entry 1977e). In 1978, the University of South Africa began offering a module on teaching gifted children (Entry 1978a). The T.E.D. began investigating g.e. (Entry 1979b), and immediately following (i) an HSRC

conference stressing the manpower crisis (Entry 1979h), and (ii) the approval by the Director of the C.E.D. of the post of Planner for Gifted Education in October 1979, a National Convention on the Gifted and Talented Child was held in Stellenbosch, the keynote address of which was given by the then vice-President and now President of the HSRC, Prof. J.G. Garbers. By 1980 there was a flurry of interest in and activities related to g.e. (Entry 1979d), and even the conservative O.F.S. Education Department had begun investigating g.e. (Entry 1980c).

Then came the Cabinet request to the HSRC to urgently investigate the provision of education in the R.S.A., and with it, the third phase in the g.e.m. The de Lange Report identified g.e. as a top priority research area, and subsequently, on the recommendation of Dr P. Meyer, newly appointed Director-General of National Education, to the Minister of National Education, a Work Committee : Education for the Highly Gifted was appointed under the aegis of the HSRC in 1981 to formulate (i) a coordinated national policy for g.e. in the R.S.A. and (ii) a national continuous research policy in regard to g.e. at universities and colleges (Entry 1981e, 1984 HSRC Report, p 12). Acceptance of the 1984 Report of this Committee by the Minister is still pending at the time of writing, but its implications will be discussed in detail later. The de Lange Report therefore marks the start of the third phase of the g.e.m. - a phase of centralised control of g.e. across all population categories by the education authorities and the HSRC. The history of the g.e.m. is therefore inseparably tied in with the events leading to the establishment of the de Lange Commission.

B. CURRENT STATUS OF OFFICIAL PROVISION OF GIFTED EDUCATION IN THE R.S.A.

INTRODUCTION

To understand the growth of the g.e.m. in the R.S.A., it is necessary to take cognizance of the fact that mass education in the R.S.A. has almost always been characterised by segregated subsystems for different population categories. This was legally entrenched in accordance with apartheid policy by the 1953 Bantu Education Act, the Coloured Persons Education Act of 1963, and the Indians' Education Bill of 1965. The rhetoric of justification for this separation was couched in terms of efficiency of ethnic self-determination within the apartheid structure (see Hansard 17.9.1953, 21.2.1963, 20.4.1965). This segregated approach was reaffirmed by the 1983 White Paper on the Provision of Education, and further formalised in the 1983 constitutional dispensation under "own affairs" categories. Cognizance must be taken too of the fact that for decades gross inequalities have existed in the provision of education for the various population categories, with whites substantially the most advantaged and blacks the least, and that black and more lately "Coloured" opposition to these inequalities has been widespread and vociferous.[4]. Consequently, any history of educational change in the R.S.A. has to include a comparison across the various subsystems. In the case of g.e., a review of its current status in the R.S.A. will show that g.e. has developed unevenly across the subsystems.

A review of existing provision of g.e. in the R.S.A.

Since the appointment of the R.S.A.'s first Planner for the Gifted in October 1980, at which stage no provision for g.e. existed in the R.S.A.

apart from extra-curricular enrichment activities offered by the various private associations, dramatic changes have occurred in the official provision of education for gifted white pupils.

In the C.E.D., an energetic programme began in 1981, with a one-year planning phase based on models operating in North Carolina, Washington, New Jersey and Georgia, U.S.A. (Neethling, 1984, p 24). The objectives of this phase were to develop programmes and resources. Phase 2 (1982) saw the introduction of : (i) modules on g.e. at all teacher training colleges in the Cape (ii) an afternoon extra-curricular science programme for gifted pupils within 15 km of a specific college (iii) a resource centre to disseminate information on giftedness and g.e. and to provide enrichment material (iv) two language fora for pupils' publications, viz. Wakening Word and Woordspore, (v) an experimental programme at 25 selected schools in which an additional post was created to coordinate gifted programmes (a great deal of flexibility in implementation was allowed), and (vi) compulsory inservice training courses for one teacher from every elementary school, plus every inspector and every school psychologist, plus follow-up courses for parents and other teachers.

Phase 3 saw (i) the establishment of Creata, (a local bilingual magazine on g.e.) and of a problem-solving bowl based on Torrance's model, and (ii) compulsory inservice courses for high school principals. "In reality this meant that by the end of 1983 every school in the Cape Province would have been introduced to gifted education." (Neethling, 1984, p 35, referring, of course, only to white schools). The problem-solving bowl and its associated teacher workshops now exist at regional and provincial levels.

During 1984 and 1985, substantial teacher training in g.e. has apparently occurred, "more than for any other aspect of education in the past five years" (Neethling, interviewed 3.10.1985). Seven regional coordinators for the gifted were appointed. In 1985, the C.E.D. entered the pre-primary arena, with inservice training courses for pre-primary teachers, thirty of whom will be trained in 1986 to run inservice courses for all departmental pre-primary teachers in 1987 (Neethling, interviewed 3.10.1985). From 1987, Graaff-Reinet Training College will offer an advanced diploma in g.e. The University of Port Elizabeth already offers a Master's degree in g.e. Musically gifted pupils are given tuition in orchestral instruments and orchestral and ensemble experience at the C.E.D. Beau Soleil Music Centre, established in 1983. A second such centre is to be established in 1986 in the Tygerberg area.

As a result of this energetic programme (further details of which can be found in Neethling (1984), the C.E.D. has a significant headstart over the other provincial authorities, and extensive material and skill resources are available to interested schools and teachers.[5.]

As for the other white provincial systems: (i) The T.E.D. founded extra-curricular centres to supplement classroom enrichment at Pretoria and Johannesburg in 1981, followed by another at Potchefstroom in 1982. A Planner for g.e. was appointed in 1981. (ii) The Natal Education Department (N.E.D.) also appointed a Planner in 1981, and g.e., initially offered at 18 project schools, was being extended to other schools at junior and senior levels by 1983 (1984 HSRC Report, p 24). Inservice training was initially offered by Belle Wallace of the Essex Education Department in 1981, and extended in 1982. Courses in g.e.

were introduced in 1982 at teacher training colleges (Neethling, 1984 p 38) (iii) The O.F.S. Education Department began its g.e. programme in 1984 with the appointment of a Planner for g.e., and is apparently considering providing g.e. through a system of week-long or week-end sessions in view of the scattered school population in that province (Neethling, interviewed 3.10.1985).

However, the situation is rather different for population categories other than white. In coloured education, no specific provision is yet made for gifted children, although optional modules on g.e. are to be introduced in coloured teacher training colleges in 1986. The Administration of Coloured Affairs, battling despite the legacy of an under-resourced and inferior education system to handle the "bulge" of increased numbers of pupils following the progressive introduction of compulsory education from 1974, had by 1979 set its sights no higher than providing conventional differentiated education for the coloured population in general, a mammoth task in itself (Entry 1979c). Since then, a limited withdrawal system of enrichment in Mathematics, Geography and English was briefly tried out in 5 project schools in 1983, under the direction of Dr H.J. Groenewald, Chief Education Planner, Education Bureau, who subsequently recommended the appointment of a Planner for g.e. This has not yet been implemented, pending the outcome of the 1984 HSRC report (Groenewald, interviewed 25.10.1985), and supported indirectly in Neethling, 1984, p 38).

By 1983, no special provision for g.e. existed for Indians, but an investigation into identification of gifted pupils had begun. Apparently

little else has been achieved (Neethling, interviewed 3.10.1985, 1984 HSRC Report, p 24).

Likewise, the Department of Education and Development Aid (was Education and Training), under which black education falls, makes no special provision for gifted pupils other than a Saturday programme started in Soweto under Stan Edkins, a retired private-school headmaster, and afternoon enrichment programmes at four magnet schools in Soweto. Given the severe resource and facility problems facing this Department at every level of black schooling, the lack of g.e. is not surprising. There is some private enterprise provision of g.e., e.g. at PACE School, established by the American Chamber of Commerce in South Africa, but this tends to be expensive.[6.] Significantly, the Department of Education and Development Aid has apparently never drawn on the freely available expertise of the C.E.D. That this expertise is freely available, can be demonstrated by the fact that Kwazulu, Transkei, Ciskei and especially Bophuthatswana have drawn on the C.E.D. for teacher training, and South West Africa/Namibia will apparently be provided with teacher training by the C.E.D. in 1986. In addition, in May 1985 the C.E.D. agreed to train the headmasters of a centre in Guguletu run by the Urban Foundation, which concentrates on pre-primary and Sub-A gifted pupils, but due to the 1985 unrest situation, this intended venture has not yet got underway (Neethling, interviewed 3.10.1985).

From this overview of existing official provision of g.e. in the R.S.A., it can be clearly seen that to date concerted provision of g.e. is effectively benefitting only the white population category, (which virtually amounts to the white middle-class). Insignificantly few pupils from other categories are benefitting from the growth of the g.e.m.

C. THE SOCIAL AND POLITICAL CONTEXT OF THE GROWTH OF THE G.E.M. IN THE R.S.A.

To understand the significance of the developments described in the above two sections, it is necessary to look at the context in which these developments occurred.

The 1960s and 1970s saw a substantial growth in monopoly capitalism in S.A., characterised by new divisions of labour between semi-skilled operatives and technical supervisory labour, and a shift away from unskilled labour. This changed demand imposed strains on the earlier racial divisions of labour and education. By the mid-seventies the shortage of skilled white labour had become acute in a climate of internal and international recession and insecurity. Initial strategies of "floating the colour bar" or job-redefinition were insufficient to handle this shortage, and modifications to the racial division of labour itself became necessary (Davies, 1979). Other factors motivating such reform action were : (i) increasingly militant industrial unrest among blacks, beginning with the Natal strikes in 1973, (ii) the June 1976 mass resistance in Soweto to "Bantu education" and subsequent boycotts of black and coloured schools until these were halted by massive state repression by the end of 1977, (iii) increasing pressure by radical blacks for major educational reform, (iv) increasing black unemployment and social unrest, (v) increasing international pressure against apartheid and renewed demands for economic sanctions, combined with decreasing foreign investment policies. All of these pressures combined to precipitate moves to ease restrictions on the education of blacks. As Kallaway has commented :

> "The schools were failing at the level of ideological control; they were not producing appropriate manpower for industry; and above all they were providing a key site for resistance. The schooling crisis was the manpower crisis, and it was a fundamental division of the political crisis" (1984, p 25).

Concomitant with the growth in monopoly capitalism, a shift in ideology occurred away from stressing white nationalism during the 1960s to a more instrumental approach to apartheid in the 1970s, coupled with shifts towards economic justifications as the main focus for legitimating ideas.[7]. Increasingly, manpower arguments were used to justify educational policy. Reforms motivated in manpower terminology were introduced, such as the introduction of progressive compulsory education for coloureds in 1974, and the introduction of differentiation in coloured education in depth of subject matter in March 1976 (as opposed to earlier differentiation in subject choice introduced by the 1967 National Education Policy Act). In addition, the Minister for Coloured, Rehoboth and Nama affairs reiterated Government policy to offer coloureds equal education.

However, these reforms were insufficient to divert coloured support for black demands after the Soweto riots, or to satisfy the demands of capital for skilled labour. Big business called for the creation of an enlarged black urban middle-class through increased labour mobility and training, and pressure by business interests for reform increased considerably after 1976. Black resistance to apartheid continued, especially in the arena of education. The State, concerned about antagonising its conservative white supporters, introduced limited improvements in black education during 1978, such as dropping Afrikaans as a compulsory third language, renaming the Department of Bantu Education

as the Department of Education and Training, increasing expenditure and teacher salaries and introducing industrial training. Furthermore, the Education and Training Bill of 1979 introduced inter alia, compulsory education. At the same time, however, the bill did not address black demands for a unitary non-racial education system and appeared to increase State control over teachers and pupils.

Criticism of the limited extent of these reform measures by blacks and the business community continued. Impatient with the slow pace of reform, the business community expanded its involvement in education, mainly through the Urban Foundation. Capitalist involvement in reformist-type projects increased significantly after 1979, when the State and Capital launched a multi-faceted "total strategy" of reform at a summit conference in Johannesburg, as set out in the earlier Wiehahn and Riekert Commission Reports, both of which recommended improved labour training. This strategy combined military measures with social reform, especially education reform, in order to satisfy black aspirations.

It was in accordance with this reform push, and in this climate of continuing crisis, that the State announced the June 1980 establishment of an HSRC commission of inquiry into all aspects of education, chaired by Prof. J.P. de Lange, Rector of the Randse Afrikaanse Universiteit.

This Commission was at the outset critically received by several educational organisations (including the Soweto Committee of 10) which refused to participate in the investigation on the grounds that it was a delaying tactic and conservative in its makeup (Davies, 1982, p 25). While

the Commission was sitting, the booming economy of 1980 increased the pressure for skilled labour. Criticism of State inactivity mounted, and at the end of 1980, a new outbreak of boycotts occurred in coloured schools. Coloured youth were becoming increasingly politicised, and partook in a series of political actions such as the red meat boycott, the Free Mandela Campaign and rent strikes.

It is against this political and economic context of crisis that the recommendations of the 1981 de Lange Report and its 1984 offshoot (Work Committee : Education for the Highly Gifted) must be understood. The de Lange Report reflects the process of negotiation between the interests of the State,[8.] the labour interests of capital, and the interests of education (including its avowed humanitarian objectives and actual allocative function). Morphet describes this clearly:

> "On the one hand the report advocates a number of steps towards establishing equality of access among all inhabitants thus ensuring a much broader initial 'warming-up' base for education. At the same time, the proposals for compulsory post-matric education, coupled with the very strong stress on vocational and career education, make it clear that through these processes the majority of students will be 'cooled out' into varying levels of industrial labour." (1982, p 118)

The Report has been extensively criticised for its ideology (Kallaway, (1984), Davies (1982), Chisholm (1982), Buckland (1982) and at the National Education Conference, Grahamstown, 1982), and will be further discussed in Chapter 7.

While the Report was well received by the business community, the State rejected its more controversial recommendations by reaffirming the parameters of separate development. Further State actions to enforce segregation in education were undertaken : Vista University was

established for blacks, enrolment controls of white universities and technikons were enforced, and the Financial Relations Bill provided for the reclassification as black of any white private school which admits black pupils.

In the face of these inadequate reforms, the business community expressed forceful criticism at a second State-Capital summit conference in November 1981, black militancy has been increasing, unemployment has grown, UDF and ANC support in schools and universities has increased, and trade unionisation of blacks increased more than eight-fold between 1980 and 1983 (Annual Reports, Department of Manpower). The massive social unrest and school boycotts of 1985 have led to a State declaration of a State of Emergency and massive repressive measures. Significantly, education is the primary arena of struggle. At the same time, however, there is also "continuing resistance to reformism by white reactionaries, including influential Afrikaans-speaking teachers' and educational organisations, who are currently voicing opposition to the cooptive aspects of the HSRC Report." (Davies, 1982, p 33). Clearly therefore, educational reform by the State has had to tread a narrow path through contending interests, and will reflect the compromises of politics. The recent changes in educational policy with respect to gifted pupils cannot be meaningfully considered independently of this turbulent context.

The three perspectives presented here have each focussed on a different set of descriptors of the growth of the g.e.m. in the R.S.A. When these perspectives are "fused", some explanations for this growth become apparent.

Chapter 7

UNDERSTANDING THE GROWTH OF THE G.E.M.

The three interrelated aspects relating to g.e. in the R.S.A. presented above, point to various levels of explanation of the growth of the g.e.m.

At a structural level, the growth of the g.e.m. can be seen to be a result of recent changes in economic and political demands. Calls for g.e. in the R.S.A. began to have an impact only when the prevailing ideologies in South Africa shifted away from political and towards instrumental and economic emphases as a result of the growth of monopoly capitalism. The increasing specialisation in labour that this growth required posed a legitimation threat for existing official education systems. Phase 1 of the g.e.m. (the private association advocacy phase) can be understood as a recognition of the inadequacies of education vis-a-vis high-level skills by those most likely to benefit from more refined differentiation based on intellectual ability, i.e. mainly middle-class white intellectually able children. Phase 2 can be seen as the recognition by the education authorities of the usefulness of the ideology of g.e. in helping to resolve the legitimation crisis facing the South African State in the related areas of education and labour; g.e. would enable the contradictory threat to the status quo posed by increasing black access to skills and skilled jobs to be offset by a refinement apparently based on ability alone, which would continue to advantage existing power groups in the white middle-class while simultaneously

allowing the controlled cooptation of some blacks into the middle-class. The data presented in chapter 6 on the current provision of g.e. indicates that g.e. is already functioning in this way. Finally, phase 3 of the g.e.m. can be understood as the formalised bureaucratic entrenchment of g.e. as a means of cooptation and control which will act to support vested interests.[1].

However, while this type of explanation provides an essential illumination of the growth of the g.e.m., it is by its structuralist nature rather glibly overdetermining. Bearing in mind Martin McLean's comment, "Too much attention is given to structuralist theories of social relations and insufficient attention is paid to the processes and contexts of policy formulation, adoption and implementation" (1981, p 162), we turn now to a finer-grain analysis of four selected issues[2]. which aid explanation of the growth of the g.e.m. in the R.S.A.

These are:

A. the rhetoric of the g.e.m.

B. the changing role of the private associations

C. the process of official acceptance

D. the role of the HSRC, including the de Lange Report and its offshoot, the 1984 HSRC Report.

A. THE RHETORIC OF THE G.E.M. IN S.A.

In any policy-making arena, it is illuminating to examine the ideological character of the public representation of such policy. As mentioned in Section II, the very nature of ideology is such that the problematic

character of social life is concealed or resolved in an idealistic or imaginary way, and this inevitably reflects the interests of the dominant social groups (CCCS, 1981), p 28). Locating ideology can be done in two ways : by examining the nature of the rhetoric itself, and by identifying the "gaps in the text". The ideological nature of g.e. rhetoric in developed countries in general has been discussed in Section II Part B, and it remains to demonstrate the nature of the rhetoric of g.e. in the R.S.A.

(i) The nature of the rhetoric itself

The rhetoric of the g.e.m. in the R.S.A. is clearly in human capital terms, consonant with modernisation theory and 'free enterprise' economics. The two themes identified in chapter 5 as characteristic of the rhetoric of g.e. in developed countries, viz. (i) humanistic concerns with self-fulfilment and self-actualisation of individual potential, and (ii) social or national concerns, usually in manpower and management terminology, can be clearly seen in local thinking about g.e. For representative examples, see Appendix A (Entries 1974b, 1975a, 1978c, 1979b). Furthermore, it can be seen that the first theme is viewed instrumentally rather than for its own sake. This is clearly demonstrated in statements such as this :

> "When you help people who are below the norm, you are assisting them to help themselves. But when you help gifted children, you are helping them to help themselves and to benefit mankind" (Neethling, quoted in The Argus, 30.1.1982).

This emphasis on instrumentality can also be seen in the use of the term "leadership". The Director-General of National Education, Dr P. Meyer, stated elsewhere that

> "... because the gifted are such truly special people they require special recognition and appreciation ... To deny them such attention is to turn our backs on our greatest natural resource, for from the ranks of the gifted should emerge, it is to be hoped, our future leaders in the sciences, the arts, business, industry and government. Through our commitment to these exceptional children we prepare the way for a richer tomorrow." (1983).

The assumed leadership ability of the gifted (Entries 1978c, 1979j, 1980c) seems to be considered useful in a social control sense.[3.] The President of the HSRC, referring to gifted pupils as "strategic instruments" due to their leadership and insight, stated in 1979 that g.e. for the socio-economically or "culturally disadvantaged" (i.e. technologically unsophisticated) gifted was of the utmost importance. On the same platform, the Director of the National Institute for Education Research of the HSRC rejected the provision of special schools for the gifted as this would deprive them of leadership opportunities and opportunities "om ander leerlinge positief te beinvloed" (Entry 1979j).

It can therefore be argued that the rhetoric of g.e. has found increasing acceptance in the R.S.A. because it is in line with the previously mentioned ideological shifts towards economic justification for policy decisions, accompanied by value shifts from intrinsic value towards instrumental utility and effectiveness. The underlying technocratic rationality of g.e. rhetoric, with its reliance on the measurement and control logic of science, fits in well with the increasingly managerial approach to schooling in the R.S.A.

(ii) <u>The "gaps in the text"</u>

As Brian Henderson has commented, "the relationship between questions asked and questions suppressed is always ideological". (1980, p 215).

The technocratic rationality of the rhetoric of g.e. in the R.S.A. facilitates a-contextual thinking so that the ethical and political nature of schooling is not confronted. The rhetoric (see Appendix A for some examples) is strikingly lacking in reference to the social, political, economic or historical context of South African education; to the technicist character of the modernisation theory upon which it is based; to the structural constraints to change imposed by the apartheid and world economic systems; to the many contradictory pressures on the State and parastatals such as the HSRC to maintain the status quo from different coexisting forms of capitalist business, contradictory class interests, international pressures, and changing alliances among contending interests. Nowhere in the rhetoric is the most important issue raised - who benefits? Even the 1984 Report, after reporting on the status quo of g.e. across all departments in all population categories, does not refer to why the discrepancies exist, nor does it indicate whether or how these are to be reduced.

These "gaps" have encouraged all of the education authorities, and probably most gifted children and their parents, to see the issue of g.e. as merely a technical flaw in the system of differentiation, amenable to scientific and managerial solution by the experts. It is illuminating to chart the use of the term "differentiation" in the history of the g.e.m. The system of differentiation into academic vs. practical streams, was introduced in white schooling in the 1950s and 1960s, in response to the needs of the developing economy. When it was widely attacked in the 1970s as being inadequate, initial reaction by provincial education departments was defensive and conservative (cf. Appendix A). When the education departments finally conceded that change was needed,

it was always seen merely in terms of modification of the existing system, e.g. "Can the existing system of differentiated education be further extended and developed to provide even more fully for these pupils?" (Entry 1979b). G.e. however, has a quite different emphasis from that of the old system of differentiation according to degree of abstractness of subject-matter - its objectives are related to the specific development of intellectual abilities, not to the mastery of graded subject-matter. Revealingly, the C.E.D. Planner for Gifted Education describes the official provision of g.e. as "a new dimension of differentiation" (Neethling, 1984, p 35). By this verbal sleight-of-hand, (i) the new system is not set in opposition to the old, and (ii) the relationship of g.e. to its social and political context is obscured. This has, inter alia, allowed the emergence of a suggested parallel administrative structure which is viewed as a mere management modification to facilitate a merely technical adjustment (this will be discussed further later).

In conclusion, analysis of the rhetoric of the g.e.m. in the R.S.A. shows that its ideology is hegemonically consistent with currently prevailing ideologies in South Africa.

B. THE CHANGING ROLE OF THE PRIVATE ASSOCIATIONS

Explanations by the private associations of why they formed to provide educational enrichment for gifted pupils are always given in the rhetoric of reaction to inadequate official provision for the needs of the gifted. No reference is made to the social and political context of these demands. However, all of the theoretically non-racial associations consisted

predominantly although not exclusively of middle-class professional white parents of gifted children.[4]. The establishment of these private associations represented a legitimation threat to the official education systems. These systems were patently not producing results in accordance with the expectations of the vocal white-dominated middle-class association memberships.

What could have caused this rise in militancy? Part of the explanation must lie in the general climate of thought prevalent in the 1960s and 1970s - the phenomenon Tom Wolfe (1976) refers to as the me-decade - when authority structures were increasingly questioned and the ideology of the individual was becoming increasingly entrenched in Western society. The role of parents and pupils in schooling has changed over the past twenty years, and as education is becoming increasingly identified with a product, so an attitude of consumerism and consumer rights has developed. However, this observation does not fully explain the growth of the g.e.m. in the R.S.A. Above all, it does not explain why g.e. is benefitting some population categories and not others. To explain the rise in parent advocacy of g.e., one has to take into account the political and economic context of this advocacy. Part of the reason for the establishment of the private associations seems to have been that in the 1970s the official systems were conspicuously failing to either motivate pupils to achieve at school or to ensure a privileged position for even the obviously brightest middle-class children, as measured by the very intelligence and other tests used to confer legitimacy on the allocative function of schooling. In the 1950s and 1960s, the education system was perceived as largely fulfilling the basic demands imposed on it by the economic system of production, distribution

and consumption (Morphet, 1982, p 109). In the 1970s however, this "sense of a reasonable fit between education and work" (Morphet, 1982, p 109) no longer applied, and the demands by monopoly capitalism for highly-skilled labour were not seen to be met by the official systems. Moreover, education and labour reforms in the 1970s threatened the exclusive access of whites to high-level jobs. Competition for good jobs was therefore increasing.[5].

It must be noted that in spite of the egalitarian rhetoric and non-racial constitutions of the private associations, their advocacy campaigns have been predominantly carried out in the arena of white education. How effective these campaigns were is not clear from the available evidence. It is my impression that the associations were not particularly effective in lobbying for g.e. While they originally represented an uncomfortable criticism of the education departments, once g.e. was officially accepted, the private associations seem to have been largely ignored. They do not seem to have been effectively involved in the planning or implementation of g.e., and seem merely to be humoured for their members' instrumental role as parents. This can be clearly seen in the 1984 HSRC Report (this will be discussed in more detail later): although nominally represented on the 17-member Work Committee by two private association members, the associations have been assigned no place in the proposed administrative structure for the provision of g.e. That parents are viewed instrumentally can also be deduced from the section on "gesindheidsvorming", in which the role of parents is described merely as one of creating the right home conditions for the nurturance of giftedness. Moreover, the term "parents" does not appear once in the entire chapter on "Onderwyskundige en Onderwysbestuurstruktuur

vir die onderwys van begaafde leerlinge". Even at the micro-administrative level of school principal and School Coordinating and Advisory Committee, parents and the private associations are not represented. One of the suggested functions of this Committee, however, is "Orientering van alle belanghebbendes by die onderwys van begaafde leerlinge" (1984 HSRC Report, p 395). If this function is meant to encompass parents and the private associations, it has clear implications of control of g.e. Even the involvement of the private sector in the suggested administrative and policy structure is limited - its contribution is apparently seen as providing mentors and facilities (p 393). The management plan is thus strongly "top-down", and whatever role the private associations may once have played is thereby effectively sterilised.[6] Their advocacy role has been increasingly surrendered with the take-over of g.e. by the official systems and the HSRC, (see Entry 1983d) and this is further testimony to the legitimating function of "expert" knowledge in the R.S.A.

C. THE PROCESS OF OFFICIAL ACCEPTANCE OF G.E. IN R.S.A.

As the history of the g.e.m. in S.A. shows, the change in official acceptance of g.e. occurred very rapidly. Why this should have happened, and why the g.e.m. mushroomed so dramatically, are probably the most interesting and important questions in the history of the g.e.m.

The first incumbent of the post of Planner for Gifted Education in the C.E.D., referring to the sudden change in attitude of the C.E.D. to g.e. in 1976, has commented :

> "The reasons for this change of attitude and approach are not completely obvious and clear. From the official files and from discussions with three of the officials who served as that first planning committee, no clearcut causes for this change of policy could be determined. .... apart from a general motivation, no specific reasons pertaining to a change of climate or attitudes were ever discussed with committee members." (Neethling, 1984, p 19).

In a personal interview (4.7.1983) and in his 1984 thesis, he suggested the following factors:

(i) the system of differentiation introduced in the Cape in 1974 was by 1976 showing "definite flaws" with respect to gifted children

(ii) more information on the need for g.e. was becoming available from overseas, some via the local associations

(iii) continuous visits by informed people were made to the Director and Education Planners, e.g. Jock Omond, L.K. van der Walt (Rector of the P.E. Onderwyskollege), and some Inspectors

(iv) at SATA and SAOU meetings "it became more obvious that the need existed"

(v) the Director of the C.E.D., Piet Meyer, had begun a doctorate on differentiation

(vi) "the historic accepted theory that, as the times change, we also change could have played a role."

This type of conventional explanation is clearly ideological in its a-contextuality, and therefore does not satisfactorily explain (i) the dramatic change in C.E.D. attitude within the space of two months after years of calls for g.e. (ii) the subsequent meteoric rise of g.e. in the R.S.A. or (iii) why only some educational authorities have implemented g.e. to date. I contend that a full explanation demands several levels of explanation. A structuralist explanation has been advanced earlier :

viz. that phase 2 of the g.e.m. can be seen as the recognition by the education authorities of the usefulness of the ideology of g.e. in helping to resolve the legitimation crisis facing the South African State in the related areas of education and labour. G.e. would enable the contradictory threat to the status quo posed by increasing black access to skills and skilled jobs to be offset by a refinement apparently based on ability alone, which would continue to advantage existing power groups while simultaneously allowing the controlled cooptation of some blacks into the middle-class.

In addition, an explanation has been advanced in terms of the appeal of the ideological rhetoric of g.e. in a climate of increasingly instrumental approaches to apartheid policy and the increasing use of economic, manpower and management rhetoric in the R.S.A.

The further possibility exists that the ideology of g.e. may have been deliberately appropriated for reasons quite separate from macro-issues of political economy. Little is known about just how one ideology is incorporated into a different ideological arena. Examination of the process of official adoption of g.e. raises the distinct possibility that g.e. may have been "hijacked" for the purpose of amassing power in the context of internal bureaucratic "petty politics".

The key figure in the process of official acceptance is Piet Meyer. In the absence of behind-the-scenes and personal information, one can only speculate whether Meyer was influenced by his 1976 doctoral research work or through connections with business, the HSRC and Government who recognised the need for high-level innovative and problem-solving talent

in a climate of threatened international sanctions, or by the upsurge in the number of private associations advocating g.e. One can also only speculate whether he recognised at the time that gifted education contained personal career-development promise, as well as possibilities for the establishment of a cadre of reformists in the stagnant[7] education institutions at a time of acute crisis in labour and education. In any event, by pioneering g.e. in a reform climate in which its rhetoric was acceptable, he must have improved his own career-promotion prospects. In creating the Post of Planner in October 1979, he may have improved his own position vis-a-vis internal departmental power politics, especially in view of his imminent promotion in 1980 to Director-General of National Education. Since then, several C.E.D. posts have been created to facilitate g.e., ranging from school coordinators to regional coordinators, and the proposed administrative structure extends to national level. G.e. is thus generating a new variety of management-oriented education careerists, with new avenues for promotion. Dr Meyer's key location as Director-General has undoubtedly helped to facilitate the acceptance of g.e. throughout the R.S.A., in particular through his recommendation to the Minister in 1981 that a Work Committee investigate a national policy for the provision of education. The 1984 Report of this Committee, which will be discussed in some detail later, recommends a new administrative "arm" to the nation-wide education systems. This recommendation, if accepted, may well increase the clout of reformists within the generally stagnant and conservative educational bureaucracies. In short, control of g.e. may be a means towards gaining executive control of the bureaucratic systems. Such "petty political" factors may well form part of the explanation for the sudden and rapid growth in g.e. in the R.S.A.

Undoubtedly, the location and influence of particular individuals such as Piet Meyer, J.G. Garbers and J.S. Neethling have influenced the course of events in the history of the g.e.m., an explanatory factor often overlooked by deterministic political economists. For instance, Neethling feels that the C.E.D. would not have created the Post of Planner two years later, once Meyer had left (personal interview, 3.10.1985). Clearly, Meyer had the personal ability, personality and influence to effect changes that others might not have achieved at the time.

Similarly, the scale of the C.E.D.'s achievements in g.e. since 1980 (which so impressed the ex-President of the World Council for Gifted Children that in 1983 he donated his library on g.e. to the C.E.D.), must undoubtedly be due to a great extent to the personal abilities of the incumbent of the post of Planner for Gifted Education, J.S. Neethling, whose energetic and creative American-influenced management style and leadership has done much to overcome bureaucratic inertia. Interestingly, Neethling has been freely providing information and support to those "homeland" authorities and individual black and coloured teachers who have approached him. In addition, in 1984, he completed a post-doctoral Masters degree at Atlanta, Georgia under Torrance, with special emphasis on the handicapped and "culturally disadvantaged" gifted. Furthermore, Neethling chaired the sub-committee of the Work Committee : Education for the Highly Gifted which devised the proposed national administrative structure for g.e., the recommendations of which ignore Government rejection of the unitary education system proposed by the de Lange Commission Report. From this, one can deduce that Neethling is a "reform" man.

However, this "Great Man" type of historical analysis is insufficient per se to explain the process of acceptance of g.e. in the R.S.A. The question remains : if these were the right people in the right place at the right time, what was it that made it the right time? It is no coincidence that the growth of the g.e.m. has coincided with the pace of reform in black education in the R.S.A. Consequently, it is essential to understand the process of acceptance of g.e. within the political context of this reform. A prominent factor in educational reform has been the HSRC.

D. THE ROLE OF THE HSRC IN THE G.E.M.

To understand the role played by the HSRC in the growth of the g.e.m., it is necessary to first examine the role of the HSRC in social science research in the R.S.A., and the conditions of its establishment.

When the HSRC was formed in 1968, one subsection of the proposed legislation stipulated that no government department could undertake research without the approval of the Minister of National Education. When objections were raised to this subsection, the Minister deleted it and "indicated that the overlapping of research that was made possible by the deletion had to be dealt with administratively" (South African Plan for Research in the Human Sciences (SAPRHS), p 31). The newly formed HSRC itself investigated the drawing up of a national plan for research in the human sciences to "eliminate overlapping and duplication of research" (SAPRHS, p 32). However, it soon became apparent that there was in fact no significant overlapping or duplication. The HSRC then

adroitly switched its justification of SAPRHS to the "ad hoc way in which human sciences research was being conducted. ... it was not being tackled on a national basis in a meaningful, integrated way. Thus it became clear that positive integration was needed." (SAPRHS, p 32). From this, it appears that the intention all along had been to centralise control of social science research, and it was just a question of finding suitable rhetoric to clothe the move. After much investigation, the HSRC Plan was approved by the Cabinet in 1979. The Plan was presented as a managerial rationalisation of organisational procedure relating to research. Although the Plan states

> "It is by no means intended that the HSRC should approve/control contract research. The role of the HSRC will merely be to point out relevant research that has been conducted or is still in progress, practical problems that may be experienced in the research, suggestions in respect of the execution of the research etc." (SAPRHS, p 6),

it is difficult to reconcile these laudable aims with statements that all bodies partly or fully subsidised from state funds to undertake human science research, must register all non-secret projects with the HSRC "with a view to coordination", and further that one function of the HSRC is to "obtain the voluntary cooperation of persons who conduct research at their own expense or support it financially, and to eliminate overlapping in the field of research" (SAPRHS, p 3).

Furthermore, the funds allocated to "self-initiated" research outside the HSRC (G-budget research) increased from R325 000 in 1969/70 (SAPRHS, p 7) to R3 226 241 in 1984 (1984 Annual Report of the HSRC). In comparison, UCT's 1984 research expenditure for the combined Faculties of Arts, Commerce, Education, Fine Art and Architecture, Social Science, Law and Music totalled R576 155 in 1981 (UCT Alumni, Autumn, 1983, p 3),

and R1,47m in 1984. The HSRC is probably the most extensive state-funded and -coordinated social research system outside the communist countries. Charney reported in 1982 in the London Sunday Times :

> "Its internal budget is now £9m, approaching what all the universities spend on social research .... It now employs 300 scientists - almost one-fifth of the country's total, and its president, Dr J.G. Garbers, says it will grow more."

In addition, the conservative 21-member Research Priority Committee (RPC) of the HSRC, which determines research priorities and submits them via the HSRC Council to the Chief of Science Planning (Office of the Prime Minister), who is himself a member of the RPC, consists of twelve State or para-State (CSIR, HSRC) members, two private sector representatives appointed by the HSRC, five University representatives appointed by the Committee of University Principals, and two University representatives appointed by the Committee of University Rectors - i.e. it will clearly reflect State interests.

These factors give some indication of the potential of the HSRC for financial and ideological control of social scientific research in the R.S.A.[3]

The 1985 Human Sciences Research Amendment Act defines the objects of the HSRC to be

> "(a) to promote, support and coordinate research
>
> (b) to advise the Minister of research priorities
>
> (c) to distribute the results of research
>
> (d) to facilitate and evaluate the implementation of results of research

(e) to stimulate the training of research manpower

(f) to place the full spectrum of disciplines in the human sciences at the disposal of all the inhabitants of the Republic." (Act 65 of 1985, Government Gazette 9789.)

These objectives appear at face value to be perfectly reasonable. Issues of efficiency in the conduct, management and dissemination of findings have a legitimate place in research policy. What is at issue here, however, is not the notion in principle of a national body to coordinate research, but what ideological role it plays. As has been discussed, scientific research is not a neutral enterprise. Ideology in research is inescapable. What is essential is that it be identified so that its influence on research communities can be determined. A national coordinated research policy is not inherently positive or negative. In the final analysis, what is important is whether it plays a role in the reproduction of social relations, or whether it contributes to the achievement of social justice.

Significantly, it has been argued that capital in the R.S.A. has increasingly called on the intellectual resources of the country's social scientists to help solve the challenges arising out of structural changes in the economy and labour organisation and unrest (Webster, 1980), and that the intention of the HSRC since 1979 appears to be to enlist the aid of the social scientific community to help solve the legitimation crisis facing the State (Webster, 1982). It is in this light that one must examine the role of the HSRC in the growth of the g.e.m.

The HSRC and the g.e.m.

The technocratic mode of rationality prevalent in the R.S.A., with its emphasis on efficient management, abstract/scientific knowledge and

the authority of the expert, appears to have facilitated the rise in influence of the HSRC in social scientific research in the R.S.A. The HSRC in turn has been influential in the promotion of g.e., based as it is on technocratic rationality, in a process of mutual legitimation and its role is about to become formally entrenched in the provision of g.e. (1984 HSRC Report).

HSRC interest in g.e. can be dated back to the initiation in 1965 of Project Talent Survey by the Institute of Manpower of what is now the HSRC. This longitudinal study of an entire cohort of Std. 6 white pupils was motivated by manpower concerns. Reports of this study published in 1970 and 1973 (Entries 1970, 1973b) dealt with pupils of above-average intellect. Following this historical precedent, the National Education Council requested the HSRC to conduct an investigation of education for mentally gifted pupils (entry 1977d). Significantly, this was motivated in terms of the need for "accountable educationally founded research", a statement ideological in its a-contextuality, its assumption of the power of experts and its compartmentalisation of education from other aspects of life.

That the HSRC's role in research and in g.e. was generally perceived and acknowledged as valid by 1978, can be seen in the decision at a National Workshop of the private associations to invite the HSRC to use the Schmerembeck Centre for research.

In a context of increasing demands for trained labour and education reform, and threatened economic sanctions, the HSRC organised a conference in September 1979 on the theme : "The R.S.A. : its people and their

future". At this conference, the President of the CSIR called on science and technology, including the human sciences, to resolve the national priority needs for greater self-protection, self-sufficiency and independence from imported strategic resources (entry 1979d).
A few days later, the Director of the C.E.D. approved the post of Planner for Gifted Education. Within days of this approval, a national convention on g.e. was held at Stellenbosch. The keynote address was given by the then Vice-President, now President of the HSRC, J.G. Garbers, and a paper on g.e. research was presented by J.B. Haasbroek, Director of the Institute for Educational Research of the HSRC in which he argues:

> "Wanneer onderwysbeplanning vir hoogbegaafdes ter sprake kom, is dit absoluut 'n vereiste dat dit op 'n nasionale grondslag moet geskeid. 'n Sentrale instansie behoort in samewerking met die onderwysoverhede en ander belanghebbende instansies die navorsing en onderwysbeplanning vir hoog begaafdes te onderneem en waar nodig te koördineer" (Haasbroek, 1979, p 16).

By now the emphasis had moved from arguments promoting g.e. to systems planning for g.e. Present at this conference were three people later appointed to the HSRC Investigation into Education - Garbers, Haasbroek, and de Lange himself (who chaired a talk by Omond).

Shortly after this conference, the HSRC, already with a long legitimating history of N.I.P.R. (National Institute for Personnel Research) psychometric development behind it, initiated a research project into the identification of highly gifted children in order to develop with the T.E.D. and other education departments "'n opvoedkundig verantwoorde identifiseringsprogram" (Haasbroek, 1981). In June 1980, came the Cabinet request to the HSRC to investigate the entire provision of education in South Africa within twelve months. Under the chairmanship of J.P. de Lange, this commission, widely criticised as conservative

(see later discussion), identified g.e. as one of the top educational research priority areas (1981 Report, p 157). Subsequently, on the recommendation of Piet Meyer to the Minister of National Education, the HSRC established a Work Committee under the Chairmanship of Haasbroek to formulate:

> "(i) a coordinated national policy for g.e.m. in S.A.
>
> (ii) a national continuous research policy in regard to g.e. at universities and colleges for education, coordinated and financed by the HSRC." (Meyer, 1982, p 13. Entry 1981a).

The Report of this Work Committee was presented to Prof. de Lange in November 1984. Reaction is still pending, but in 1982 Meyer was confident that this Report would be implemented nationwide and would have official support (entry 1982b). The administrative structure recommended in this Report entrenches the position of the HSRC in g.e. in the R.S.A. It is significant that those education departments which do not offer g.e. at present have all stated that they are delaying action until the outcome of the Report (Neethling, 1984, p 38), further testimony to the hegemony of HSRC expertise.

In the light of the role of the HSRC in social science research and of its key location in the growth of the g.e.m., the 1981 and 1984 HSRC Reports warrant examination for ideology.

(a) The de Lange Report

This Report is most notable for its complete lack of reference to the conditions of crisis which led to the Cabinet request to the HSRC to conduct a comprehensive investigation into education. In tune with

the prevailing emphases on instrumental utility, it rests squarely on the technocratic rhetoric of manpower and management efficiency. This technocratic mode of rationality enables social issues to be treated as though they are technical problems, without consideration of the reproductive function of education. What has been left out of the Report is any attempt to situate it in a historical or political context, or to explain why gross disparities exist in the various educational subsystems. There is not even discussion of the structural constraints to change imposed by the apartheid system, or that the recommendations reflect the conflicting pressures on the State from different co-existing forms of capitalist business, international pressure, contradictory class interests and from changing political alliances. As Davies has remarked

> "its definition of educational crisis as lack of management, the orgy of 'manpower' planning proposed, and the primary importance attached to the incorporation of an elite are all entirely consistent with the conventional wisdom of reformism." (Davies, 1982, p 29).

Much of the rhetoric in the Report is egalitarian. It recommends a single Ministry of Education and the introduction of free and compulsory education, supports the principles of equal educational opportunities, equal standards and free association, and rejects differentiation on a racial basis. However, as Davies has commented

> "Upon close scrutiny, the actual implications of the basic principles enunciated are so ambiguous or qualified as to be virtually useless as prescriptions in any genuine struggle against inequalities and discrimination in education" (1982, p 26).

For instance, the notion of open education turns out to be restricted only to private schools, universities and perhaps the technikons.

The "independent states" are omitted, thus obscuring the relative position of the most marginal elements in South African society, and denying them access to the proposed system. Most importantly, the Report omits mention of how second-tier educational authorities will be constituted, thus allowing for the continuation of separate educational subsystems based on population groups while claiming to provide equal education. In effect, the Report is concerned with the "dual repertoire" of reform, designed to redistribute opportunities to the working class and to recruit the ablest of all races (more-or-less equivalent to classes) for capital. It attempts to meet the general political demand for educational equality in ways which do not significantly affect the vested interests of existing power groups, through the dual means of cooptation and control.

The Report's reformist stance is premised on the concept of "skills-shortage". This concept is treated purely as a technical concomitant of production, divorced from economic and social issues, and amenable to reliable and accurate forecasting. Such use of the term is ideological : firstly manpower forecasting is a notoriously uncertain business. Secondly, skill is not merely technical, but is related to social and economic power.

> "We may speak of more or less 'skill' (or of 'skilled', 'semi-skilled' and 'unskilled'), but these categories disguise essential features of social context and human effect. Social situations and human capacities are systematically technicised, arrangements are moved out of the realm of evaluation, choice and politics and into the realm of abstract necessity." (CCCS, 1981, p 145)

Indeed Braverman's (1981) work shows that advanced technology involves technical deskilling, not increased skill at all. As so-called skilled jobs involve a high degree of autonomy, calls for skills

training can be better understood as calls for increased "controlling" by the internalisation of the value system of the ruling groups. In fact, the Report makes specific reference to the need for workers with the value system necessary to contribute to the development of the country (p 32). (The internalisation of this value system, or "correct orientation", also forms a major theme in the 1984 Report, sequel to the de Lange Report).

The 1981 Report is strongly "top-down" in character (see Stohr's definition in Chapter 5) and a technocratic reliance on "experts" permeates the Report. HSRC involvement is suggested in the proposed national cooperative education services to deal with research, development, advice and coordination in the following areas : curriculum development and evaluation, educational technology, evaluation diagnosis and guidance, and physical planning guidelines (p 199).

In particular, it is recommended that a curriculating service be established "which would have to operate in the closest cooperation with the HSRC and could even be placed within the HSRC" (p 166), and "a high-level committee should be set up in collaboration with the HSRC" to introduce computers in education (p 172). Other "specialist" committees are recommended to discuss the HSRC Work Committee Reports on Technical and Vocational Education (p 141), and on official languages teaching (the latter under the HSRC) (p 145). HSRC coordinating involvement is also suggested in designing school readiness programmes (p 157). All of this selfcongratulation has the effect of affirming and legitimating the expertise reflected in the Report.

In this Report, concerned with the dual aims of cooptation and control, provision of g.e. was recommended as a highest priority. It was this recommendation, coupled with Meyer's request for a thorough investigation, which led to the establishment of the Work Committee which produced the 1984 Report on Gifted Education.

(b) Report of the Work Committee : Education for the Highly Gifted. (Verslag van die Werkkomitee : onderwys vir hoofbegaafde leerlinge : Nov 1984)(referred to in this thesis as the 1984 HSRC Report)

The terms of reference and the events leading to the establishment of this Committee, have already been dealt with. As the report is still sub judice, and not yet generally available at the time of writing, some description will be necessary before assessment. Acceptance of the Report is confidently expected (Meyer, 1982 (entry 1982b), Neethling, personal interview (3.10.1985)). Even if this is not forthcoming, the document attests to current official and HSRC thinking on g.e.

The Report is based on the rationale that special educational provision for highly gifted pupils[9] is necessary for the following reasons:

(i) their potential cannot be developed to the maximum without subject matter which challenges their abilities

(ii) it is an "accepted principle" that individual differences must be catered for through differentiation and individualisation

(iii) actualised talents or abilities benefit the community "in its widest sense"

(iv) special educational provision can help prevent underachievement. (pp 12, 388).

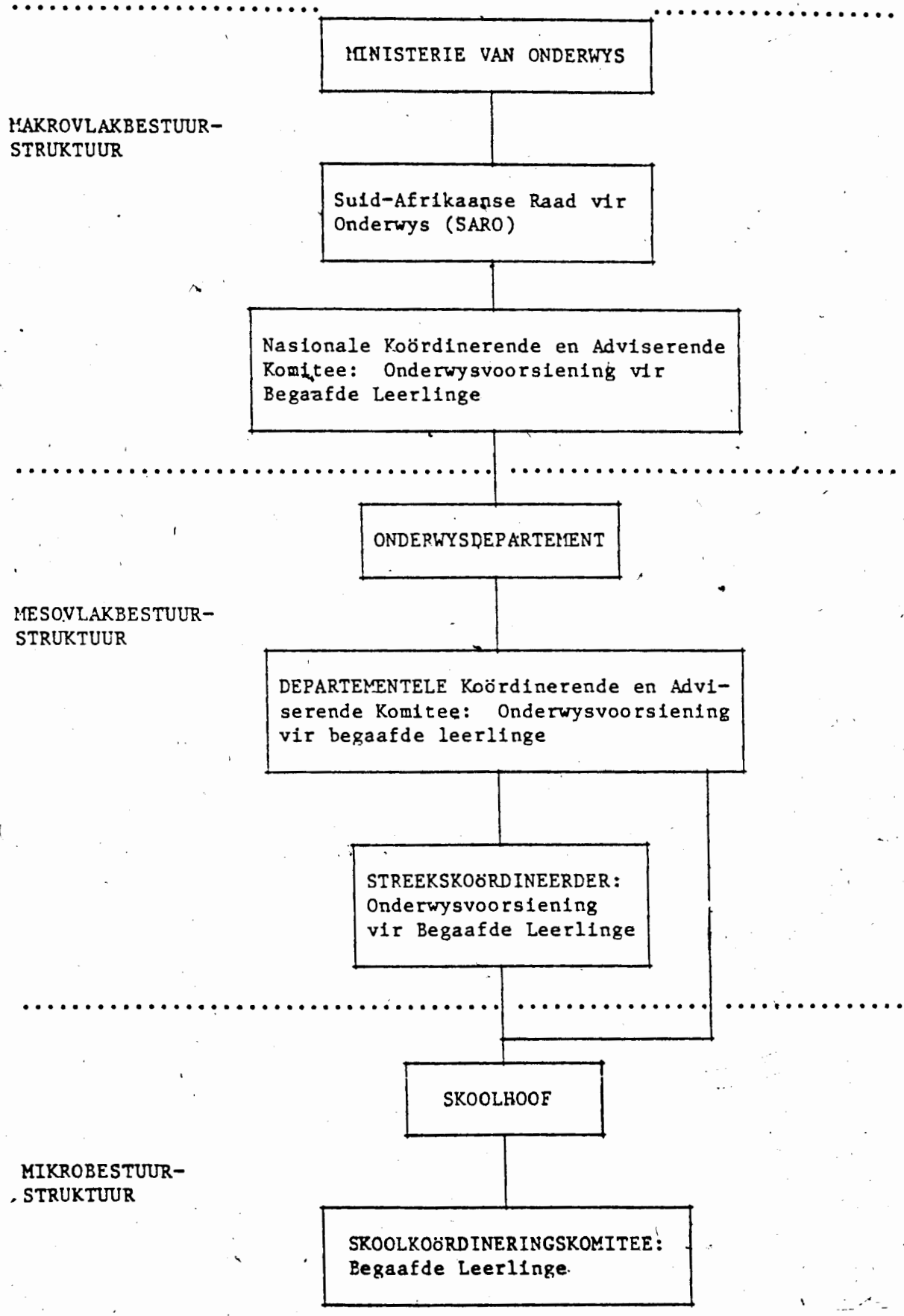
Twelve research projects were identified in order to comprehensively detail the current provision of g.e. and develop guidelines for action.[10.]

Having established that existing provision is uneven and inadequate, the Work Committee has put forward a number of recommendations based on the findings of these project reports, relating to issues of definition, identification, curriculum, teacher training, underachievement and school guidance, at pre-primary, primary and secondary levels.

The most significant of these recommendations is a suggested 3-tier organisational structure following that suggested in the 1981 Report (pp 193-203), viz. "at the first level, a single Ministry responsible for the broad educational policy of the R.S.A.; at the second level educational authorities with specifically devolved functions to fulfil, aimed at providing education within a defined area; at the third (local) level the basic unit of management would be the school ..." (1981, p 195). The structure is schematically presented on p 129.

This structure is to link with the 3-tier general education structure as follows: at the macro-level, the National Coordinating and Advisory Committee : Education of Gifted Pupils (a permanent sub-committee of the South African Council for Education (SACE)), will liaise with the education policymakers at central government level, as well as with the education departments at the meso-level in order to realise decisions taken at the macro-level. At the meso-level, Departmental Coordinating and Advisory Committees : Education of Gifted Pupils are to be established in each education department, together with a Departmental Coordinating Planner and regional coordinators, to ensure the

SKEMA: ONDERWYSBESTUURSTRUKTUUR VIR ONDERWYSVOORSIENING VIR BEGAAFDE LEERLINGE IN DIE RSA



(1984 HSRC Report, p 396)

implementation of policy at the micro-level and to overcome the constraints of demographic factors and suitably trained teachers. At the micro-level of the organisational structure, each school is to have a School Coordinating and Advisory Committee, together with a School Coordinator, to ensure effective education for the gifted.

The modular educational structure (as opposed to administrative structure) envisaged in the 1981 Report is considered as suitable for the provision of gifted education. Within this structure, a variety of conventional teaching strategies is considered suitable, e.g. magnet groups, mentor systems, etc.

Seven aspects of the very extensive Report are significant:

(i) Like the de Lange Report, its rhetoric is a-contextual, and dominated by technocratic concerns for manpower and management efficiency.

(ii) The suggested organisational structure is heavily "top-down" in character and is based strongly on expertism.

(iii) Control of g.e. is to be firmly in the hands of the education authorities via a new "arm" to the bureaucracies. Parents, private associations for the gifted, and pupils themselves are not represented at any of the three decision-making levels. The private sector involvement, envisaged at the macro-level only, appears to be limited to its instrumental role in providing mentors and facilities (p 393). Control over teachers themselves is increased.

(iv) While forceful and convincing arguments are made for the provision of special education for gifted pupils and the necessity for the

creation of specialist posts and chains of accountability in the education departments to ensure the implementation of g.e., it is by no means clear why a completely separate organisational structure for g.e. has been suggested, rather than adjustments within the existing organisational hierarchy, nor how conflicts in interest between the two organisational structures are to be resolved. In particular, the recommendation that the School Coordinator liaise between the School Coordinating Committee and the Regional Coordinator raises the question of the precise relationship of the Regional Coordinators to School Principals. The possibility must be entertained that this organisational structure is determined more by considerations of internal bureaucratic power politics than by the educational needs of gifted pupils.

(v) The HSRC is entrenched at the macro-level, ostensibly for its research interest and expertise (p 393), though whether this should give it the right to be directly involved in general policy-determination is doubtful, not to say technicist.

(vi) The proposed structure is closely based on the de Lange Report recommendations of an apparently "open" universal modular educational structure under a single Ministry, and ignores later State rejection of this latter principle. It apparently encompasses all race groups and thus at the level of egalitarian rhetoric appears to be reformist. However, in view of criticism of the modular structure as ideological (Kallaway (1984), Davies (1982), Chisholm (1982), Morphet (1982), of the equal-but-separate interpretations of the supposed single-Ministry formulation in the de Lange Report, of the lack of attention given to

the "homelands" in both Reports, and in view of the ideology of g.e. itself as demonstrated earlier in this thesis, this egalitarian rhetoric is misleading. It therefore appears to be cooptative in intent, while simultaneously entrenching control.

(vii) A major part of the brief of the Work Committee was the development of a coordinated national policy for research into giftedness and gifted education, including teacher training. Significantly, no such policy is specifically developed in the Report, other than to designate one function of the National Coordinating and Advisory Committee, (on which will be represented the universities and the HSRC for their research interest) as the limited "navorsing en die verwysing van navorsing in verband met onder andere onderwysbeplanning vir identifisering, koste-ontleding en finansiering van onderwysopleiding vir begaafde leerlinge" (p 392). The primacy of the HSRC's research role in g.e. is thus implicitly acknowledged, and not challenged. In addition, the social character of scientific research is obscured.

The technocratic rationality reflected in the Report in its normative a-contextual, consensual "top-down" concern with the realisation of manpower potential through an efficient management system, results in the education of the gifted being seen without reference to political, social, economic, or moral issues. Cognitive, social and emotional development are viewed instrumentally. This instrumental emphasis is most clearly demonstrated in the chapter on the importance of inculcating positive attitudes to g.e. among teachers, parents and pupils, where it is claimed that "... negatiewe gesindheidsvorming die hele projek van onderwysvoorsiening vir begaafde leerlinge kan laat skipbreuk ly" (p 258).

It was pointed out in the discussion of the de Lange Report that the higher the skill, the more autonomy required of a worker and hence the greater the need for an internalised value-system consistent with that of the dominant classes. It is apparently to ensure this in the gifted that several recommendations are made in the 1984 Report: (i) at the meso-level, suitable direction must be given to formulating strategies to produce in parents and teachers a positive attitude to giftedness, gifted pupils and g.e.; (ii) at the micro-level, these strategies must be implemented so that parents and teachers can acquire knowledge relating to giftedness and g.e., achievement-motivation, self-actualisation, and what kind of educational relationship facilitates optimal actualisation of abilities (p 259). Furthermore, it is stated that parents have the responsibility to create a childrearing climate which optimises self-actualisation, self-development and a positive and realistic self-concept. Then follows a list of guidelines for parents which amounts to an ideological summary of characteristic middle-class Western childrearing practices, and reflects normative middle-class values (p 259). What is at issue here is not whether such practices encourage giftedness (there is in fact much empirical correlational evidence to support this view) but the Eurocentrism and ethnocentrism of the underlying top-down assumptions. The micro-level School Coordinating and Advisory Committee is to encourage the adoption of these practices by arranging training courses, study groups, seminars, symposiums etc for parents for this purpose. By the same means, the same Committee is to encourage teachers (i) to adopt an emancipated teaching style to replace authoritarian and liberal-anti-authoritarian (sic) styles, "vanweë die beperkings wat laasgenoemde style ten aansien van die ontplooing van begaafdheid inhou" (p 259a) (ii) to create a classroom atmosphere

or climate which allows the development of a healthy self-concept and self-actualisation, encourages creativity and high standards of achievement, and is sensitive to the needs of the gifted. In addition, co-operation between parents and teachers is seen as important, and it is recommended that the School Coordinating Committee formulates policy to achieve this end. It appears that teachers will be subject to more control, and have less autonomy to act creatively and independently.

Despite the ideological rhetoric of the importance of "desirable" parenting practices and support for school policies, it is clear from the exclusion of parents from the organisational structure that parents are viewed instrumentally and are not expected to participate meaningfully in policy decisions.

This envisaged role of the School Coordinating and Advisory Committee prompts the uncomfortable suspicion that it would be more accurately entitled : Committee for the Imposition of Right Thinking, and amounts to a technicist intrusion into complex social arenas in the name of efficiency.

A further area in which technicism is demonstrated is in the section on curriculum, where "as little as possible must be left to chance" (my translation, p 262). Although detailed general recommendations with respect to individual subject curricula are made, the Report recommends that curriculating for the gifted be the responsibility of the central curriculating service recommended in the de Lange Report, where it was envisaged as operating "in the closest cooperation with the HSRC and could even be placed within the HSRC" (1981, p 166).

Curriculum is thereby conservatively equated with the technical issue of efficiency, legitimated by research expertise. That such a conception of curriculum is ideological was demonstrated in chapter 2. Above all, such overdeterminism ignores the complexities of lived classroom and social experience.

In short, the 1984 HSRC Report is conservative,[11] a-contextual, technicist and ideological, and it appears that its recommendations will act to increase control over g.e. by the dominant social groups in South Africa while at the same time coopting the ablest of other groups. Furthermore, its recommendations will act to legitimate the official educational systems in close association with the HSRC, whose involvement in g.e. is further entrenched.

These conclusions raise serious doubts about the acceptability of the Report to the South African community, particularly in view of the growing demand for meaningful parent and student participation in the educational process, and for the active reduction of inequality.[12] This is not to deny that a national coordinated policy for gifted education provision and research is desirable in principle, nor that efficient administrative and managerial structures have no place in education. The point is that any ethnocentric top-down a-contextual system <u>per se</u>, such as the one proposed, will effectively act to worsen inequality in the R.S.A. due to its ideological overtones.

Finally, this examination of the role of the HSRC in the g.e.m. leads to the overwhelming conclusion that the particular ideological nature

of the HSRC's role is conservative and technicist, and thus serving vested interests, and is likely to retard the achievement of social justice in the R.S.A. It is my contention that to contribute to the achievement of social justice, any legitimate role of the HSRC in g.e. must be informed by the recognition that there is a need for g.e. theory which is adequately formulated in terms of South African social reality, and for specific interventive strategies designed to offset the presently elitist and conservative function of g.e.

This discussion of aspects of the processes and context of g.e. policy formulation and adoption illustrates that the growth of the g.e.m. has coincided with the pace of reform in black education in S.A. and can be understood in terms of recent changes in the prevailing ideologies in the R.S.A. It appears that gifted education, particularly when seen in its increasingly close relationship with the HSRC, is being viewed as one method of solution of the complex social, political and labour problems facing the State, through the dual mechanism of co-optation and control. This discussion also illustrates that g.e. as currently practised in South Africa contributes to the complex re-production of social relations and is acting to worsen inequality in the R.S.A.

SECTION IV

SUMMARY AND CONCLUDING REMARKS

At the outset of this dissertation, an examination of the concept of giftedness revealed that it is normative and socially constructed, but that despite this, current thinking on giftedness is strikingly lacking in true contextual sensitivity or relativism. The most significant consequence of this has been the obscuring of the relationship of socially defined giftedness to social power. It is this relationship which has been explored in this thesis, through an analysis of informing theory and the growth of g.e. in the R.S.A.

Gifted education has been informed implicitly by general education theory and explicitly by several bodies of conventional informing theory. This theory was examined for ideology in chapters 2, 3 and 4 and found to function in ways which hegemonically reinforce the prevalent technological mode of rationality and contribute to the complex reproduction of social relations. It was concluded that g.e. theory is acting to obstruct significant social change because it is inadequately formulated. The issue of social visions and the problem of change was discussed in chapter 5, and the provision of gifted education was discussed in terms of various approaches to social change.

The actual practice of g.e. in S.A. was explored from 3 perspectives : through a history of its growth, a review of current g.e. provision across the various educational subsystems, and a description of its social and political context. These perspectives were "fused" to generate some possible explanations for the dramatic growth of the g.e.m. It was argued that this growth, which has coincided with the pace of reform in black education, can be understood in terms of recent changes in the prevailing ideologies in S.A. stemming from the growth of

monopoly capitalism. This growth, particularly when seen in its increasingly close relationship with the HSRC, seems to indicate that g.e. is being seen as one method of solution of the complex social, political and labour problems facing the State, through the dual mechanism of cooptation and control. In addition, the further possibility exists that g.e. is an arena through which reformist elements are working to accumulate executive power against anti-reformists. The 1984 HSRC Report recommendations for a coordinated national policy, although apparently egalitarian, have ideological limitations which seem likely to reinforce the prevailing hegemonies in education and in society.

The conclusions reached in this dissertation have been formulated in terms of the material presented. Some methodological difficulties were encountered in assembling a chronological history of the g.e.m. in the R.S.A. from primary sources, due firstly to problems of access to official files and behind-the-scenes information and secondly to a lack of cooperation from certain individuals and authorities. In addition, relatively more information was available concerning the role of the C.E.D. than of other education departments. Although it is therefore possible that the dynamics of the growth of g.e. in South Africa are not fully represented, a strong pattern can be detected from the assembled material, and this has allowed the development of a coherent explanatory framework for the growth of the g.e.m. in the R.S.A.

Consequently, despite these methodological considerations, the overriding conclusion can be drawn from this analysis of the ideology in

the theory informing gifted education and in the actual practice of g.e. in the R.S.A., that there is an urgent need for g.e. theory which is adequately formulated in terms of social reality, and for specific interventive strategies designed to offset the elitist function of g.e. and to redistribute its benefits. If these needs are not met, it seems inevitable that g.e. will contribute to the worsening of the problems of inequality in the R.S.A.

NOTES

Chapter 1

1. Gowan (1978) considers current conventional thinking on giftedness to have been influenced by seven major interrelated areas of development in humanistic psychology, viz. broad humanism, measurement of individual differences, intelligence, gifted children, creativity, development and parapsychology. For a resume of what Gowan considers to be the twelve most significant research milestones in the history of the gifted, see Khatena (1982, p 7 - Gowan source not specified).

2. This attitude can be clearly seen in Gallagher's comment on defining giftedness : "The inadequacies of the definition are merely symptoms pointing to our incomplete knowledge of the relevant concepts. If we are to pass along a more coherent statement to the next generation, then we will need not only better rhetoric but more sustained research and development as well." (Gallagher, 1979, p 31).

Chapter 2

1. There is at present no completely satisfactory theory of ideology. For the theoretical contributions of Lukács, Gramsci, Althusser and Poulantzas see "On Ideology", Working Papers in Cultural Studies, 1977, n. 10.

2. "By ideology we refer to particular forms of (public) representations. Ideas are properly called ideological when they can be shown to conceal or resolve in an idealistic or imaginary way the problematic character of social life. In the process of presenting a particular social order as harmonious, natural or in need of rescue from subversion and decay, ideological accounts serve also to secure the position of dominant social groups." (CCCS, 1981, p 28).

3. In the Middle Ages, the seven "liberal arts" were considered to be: "Grammar, the foundation of science; Logic, which differentiates the true from the false; Rhetoric, the source of law; Arithmetic,

the foundation of order because "without numbers there is nothing"; Geometry, the science of measurement; Astronomy, the most noble of the sciences because it is connected with Divinity and Theology; and lastly, Music." (Tuchman, 1978, p 59).

4. Hidden curriculum is "the tacit teaching of students of norms, values and dispositions that goes on simply by their living in and coping with the institutional expectations and routines of schools day in and day out for a number of years" (Apple, 1979, p 14).

5. "'The fundamental codes of a culture - those governing its language, its schemes of perception, its exchanges, its techniques, its values, the hierarchy of its practices - establish for every man, from the very first, the empirical orders with which he will be dealing and within which he will be at home.' These codes, taken together, represent the episteme of a culture." (Bowers, 1980, p 293, quoting Michel Foucault, 1973, p xx).

6. Additional discussion of the "Culture of Positivism" can be found in Giroux (1981) and Berger (1974a).

7. Anti-technicism does not imply an anti-technology stance. As de Bono has remarked "For society to quarrel with technology is like a man quarrelling with his legs." (de Bono, 1972, p 46).

8. Commenting on the role of crime and prisons in the making of the emerging working-class culture during the industrial revolution in South Africa, Charles van Onselen has similarly noted that "Human beings, even in amidst the most restrictive of circumstances, demonstrate a remarkable capacity for innovation, survival and resistance." (1984, Introduction).

9. For a discussion of ideology in Soviet research into education, see Tabachnik et al (1981).

10. "The division between mind and matter led to a view of the universe as a mechanical system consisting of separate objects, which in turn were reduced to fundamental material building blocks whose properties and interactions were thought to completely determine all natural phenomena. This Cartesian view of nature was further extended to living organisms, which were regarded as machines constructed from separate parts. ... such a mechanistic conception of the world is still at the basis of most of our sciences and continues to have a tremendous influence on many aspects of our lives. It has led to the well-known fragmentation in our academic disciplines and government agencies and has served as a rationale for treating the natural environment as if it consisted of separate parts, to be exploited by different interest groups." (Capra, 1982, p 23).

Chapter 3

1. According to Dr J.S. Neethling, Planner for Gifted Education, Cape of Good Hope Education Department (C.E.D.), gifted education in South Africa has been largely informed by American and, to a lesser extent, British educational precedent (Neethling, interviewed 4.7.1983). The original planning strategy for the Cape Province, for instance, was designed "with specific models operating in North Carolina, Washington, New Jersey and Georgia as premise" (Neethling, 1984, p 24), but with modifications to take into account the local situation with respect to demographic factors and bureaucratic structure (Neethling, interviewed 4.7.1983, 22.7.1983). The assumption here appears to be that "systems" are universally applicable, a characteristic consequence of the technological mode of rationality prevailing in South Africa and other technologically developed countries. What differences there are between gifted education in the R.S.A. and gifted education in the U.S. appear to be restricted to technical issues of administrative detail and local curriculum content.

2. A clear explication of the thinking processes required in mathematics (a "mathematical cast of mind", (Krutetski (1976)) as

identified by Heid (1983) is given in the HSRC 1984 Work Committee report into gifted education : "The processing of mathematical information relies on logical thought in the sphere of qualitative and spatial relationships, number and letter symbols. It also requires rapid and broad generalisation of mathematical objects, relations and operations, and at the same time a flexibility and fluidity of mental processes in mathematical activity. The mathematical process is exemplified by a striving for clarity, simplicity, economy and rationality of thought and, in turn, solutions. There is clearly the ability for rapid and free reconstruction of the direction of a mental process, switching easily from a direct to a reverse or converse train of thought. The above is often combined with an original approach to a problem and a tendency to deal in the abstract." (HSRC, 1984, p 302).

3. All curriculum models are deficit models in one trivial sense, in that their objectives necessarily involve (presumably positive) change from a pre-existing state. The term is used here in the sense of an attitude of paternalistic superiority which denies the dignity and validity of the pre-existing state.

4. A full discussion of the SOI model for conventional curriculum design and diagnostic and intelligence testing can be found in Meeker (1969).

5. These conditions are:

"1. Availability of cultural means (an elite to preserve these cultural means, accessibility to equipment, materials, etc.)
2. Openness to cultural stimuli (cultural stimuli are present, requested, desired, and made easily available).
3. Stress on becoming, not just being.
4. Free access to cultural media for all citizens without discrimination.
5. Freedom - or even retention of moderate discrimination - after severe oppression or absolute exclusion is an incentive to creativity.
6. Exposure to different and even contrasting cultural stimuli.

7. Tolerance for, and interest in, diverging views.
8. Interaction of significant persons.
9. Promotion of incentives and rewards."
(Arieti (1976), from Khatena (1982, p 166).

6. Krech and Crutchfield comment with respect to creativity theories: "Almost every conceivable exception to the rule is found if a large enough group of subjects is examined" (1960, p 398).

7. A model similar to Vargiu's for explaining transformations is the 1977 Nobel Prize-winning dissipative structures theory developed by physical chemist Ilya Prigogine, in which the dissipation of energy creates the potential for sudden reordering of the elements in a complex physical structure, resulting always in a higher order of complexity and flexibility. See Ferguson (1982, pp 176-178) for a discussion of this theory, and p 476 for further references. Surprisingly, this model has apparently had little impact on conventional creativity theory.

8. An example of such a holistic model is Kark Pribram's holographic supertheory of brain function, which holds that the brain is a hologram, interpreting what Einstein's protege David Bohm describes as a holographic universe. While this model appears to be a-historical, it is by no means simple. It is particularly intriguing in that it suggests that "mental processes are in effect made of the same stuff as the organising principle" (of the universe) (Ferguson, 1982, p 198), i.e. as Arthur Eddington has said, "The stuff of the universe is mind-stuff" (reported in Ferguson, p 198). Unlike conventional left-brain/right-brain models, such a model appears to resolve the Cartesian mind/body dichotomy.

Chapter 4

1. "The teleological viewpoint explains the present in terms of the future. According to this viewpoint, man's personality is comprehended in terms of where it is going, not where it has been" (Hall and Lindsey, 1957, p 96).

2. Bowles comments : "That working-class parents seem to favour more authoritarian educational methods is perhaps a reflection of their own work experiences which have demonstrated that submission to authority is an essential ingredient in one's ability to get and hold a steady, well-paying job" (1976, p 40).

3. Much controversy surrounds his theory and research. For examples of conventional criticism see Mussen et al (1963, pp 526-528).

Chapter 5

1. See Gowan's comment on psychology with respect to giftedness, endnote 1, chapter 1.

2. At the trivial level of tautological definition (giftedness is defined in terms of what is socially valuable), the assumption is clearly valid. The issue here is rather whether the perceived value is actually valid - i.e. who benefits.

3. Development is no longer simply equated with economic growth. The term is used here in Goulet's sense, that development can be properly assessed only in terms of the total human needs, values and standards of the good life and the good societies perceived by the very societies undergoing change (Goulet, 1971). It is now recognised that evaluations of development must reflect whether there has been a reduction in (i) poverty (ii) unemployment and (iii) inequality. Dewar has commented: "In fact, there is now sufficient evidence to suggest that if inequality is not directly tackled, the tendency is towards deepening, rather than alleviating inequality" (Dewar, personal communication, Feb. 1986).

4. To quote Popkewitz: "To adopt a language for structuring existence is to give organisation to the ways in which the existence is to be changed" (1984, p 52).

5. As Buckland has remarked "Despite official policies and legislation, it is the actual meanings transacted at the classroom level which ultimately determine the nature of the education process" (Undated mimeograph, p 27).

6. "For a society to be just, it must, as a matter of both principle and action, contribute most to the advantage of the least advantaged. That is, its structural relations must be such as to equalise not merely access to but actual control of cultural, social, and especially economic institutions" (Apple, 1979, p 12).

7. cf. Price's definition of the Marxist aim as "the achievement of self-conscious and self-determining human beings in a classless society" (1977, p 72).

8. It is this recognition that accounts for the fact that "Education is at present the very centre of intergroup relations" (1985 HSRC Investigation into Intergroup Relations, Section 4.4).

9. The descriptive background to development theory presented in this chapter has leant heavily on a review of theory given in a forthcoming book by Dewar et al.

Chapter 6

1. See the Report of the Work Committee : Education for the Highly gifted Pupil, HSRC, Pretoria, 1984 (hereafter referred to as the 1984 HSRC Report), pp 48, 49, for a resumé of conventional objections to gifted education. For general radical criticism of the practice of gifted education, see "A different view of the 6th World Conference on Gifted and Talented Children" (August, 1985).

2. Personal observation of Dr J.S. Neethling, who served on the Work Committee for Pupils with Special Educational Needs, 1981, (a subcommittee of the de Lange Commission), and on the Work Committee of the 1984 HSRC Report. The de Lange Report merely refers to g.e. as "one of the most important issues" (1981, p 157).

3. The reaction of the Minister of National Education to the national policy for g.e. proposed in the 1984 HSRC Report is still pending at the time of writing, but is expected to be accepted and implemented. The C.E.D. appears to have already begun implementing aspects of the policy at the meso-level. One is reminded of

Buckland's remark regarding education commissions in S.A.: "It may well be that a primary purpose of these investigations has been to provide the language, arguments and 'facts' to support policy shifts already negotiated in the broad political context" (of crisis)(Buckland, undated mimeograph, p 11).

4. For discussions of resistance to segregated education, see Molteno (1981, 1982), Kallaway (1984), Davies (1982).

5. In practice, some schools, especially perhaps those endorsing the British public-school tradition, are reluctant to introduce g.e. as envisaged by the C.E.D.

6. A list of private enterprise educational programmes can be found in Kallaway, 1984, p 29. These are not specifically designed for gifted pupils. The most recent of these private sector efforts is the establishment of the non-racial independent All Saints Senior College for exceptionally able pupils in Bishu, Ciskei.

7. Kurt Danziger has noted "... a clear shift from a justification of existing institutions in terms of intrinsic value to their justification in terms of instrumental utility or effectiveness. Secondly, we observe a shift from cultural to political and finally to economic institutions as the main focus for legitimating ideas." (Danziger, in Adam, 1971, p 285). See also Morphet, 1982, p 109.

8. These are multiple: "'the State' is a unity of contradictory class interests, involving struggles for dominance by different fractions of capital, changing alliances, and altering balances of power between contending interests." (Chisholm, 1982, p 6).

Chapter 7

1. It is almost a truism that State-initiated policy will reflect the vested interests of the dominant social groups. The critical issue is not <u>whether</u> but <u>how</u> this happens.

2. The material accumulated for this thesis raises many other interesting questions and issues which cannot be dealt with here. The four issues explored here have been selected as those which appear to the writer to be the most important in understanding the growth of the g.e.m.

3. This theme was used by Omond, especially after 1975 (see Entry 1975a).

4. The first committee of the Western Cape Association for Gifted Children consisted of a musician, civil engineer, quantity surveyor, school principal, clinical psychologist and a speech and drama teacher. (Memorandum from Jos du Toit, then Chairman of the WCAGC, dated 10.5.1983).

5. This competitive element continues. The writer's experience as Committee Member and 1984/85 Chairman of the Western Cape Association for Gifted Children brought her into contact with many individual parents whose basic motivation in belonging to the Association seemed to be to maintain and develop their children's superiority over their peers, as opposed to their intrinsic self-actualisation.

6. It will be interesting to see whether there will be any critical reaction by the associations or their national body, the South African Association for the Gifted, to this administrative plan if it is accepted, particularly as the President of the national body was one of the two private association representatives who served on the Work Committee.

7. E.G. Malherbe, in his investigation into South African education published in 1977, criticised white education, especially Afrikaans education, as bedevilled by inefficiency and low standards, and called for the more effective use of the nation's intellectual resources.

8. David Welsh has commented "it is believed by some scholars that the HSRC accords preferential treatment to those research areas

that do not impinge upon controversial areas" (1979, p 391). This observation is not challenged by the 1985 HSRC Investigation into Intergroup Relations, for while it is critical of Government policy, it is essentially capitalist, and can be interpreted as an attempt by the HSRC to distance itself from the apartheid system.

9. The ideology of the definition of giftedness which the Report proposes has been discussed in chapter 1.

10. "Om sy opdrag uit te voer, is die volgende navorsingsprojekte onderskei en aan werkgroepe toegewys:

(1) Die stand van onderwys vir hoogbegaafde leerlinge in the R.S.A.

(2) Omskrywing van hoogbegaafdheid en hoogbegaafde leerlinge.

(3) Identifisering van hoogbegaafde leerlinge.

(4) Onderwys vir hoogbegaafde onderpresteerders.

(5) Skoolvoorligting vir hoogbegaafde leerlinge.

(6) Gesindheidsvorming van onderwysers, ouers en leerlinge met betrekking tot die onderwys van hoogbegaafde leerlinge.

(7) Kurrikulumontwikkeling vir hoogbegaafde leerlinge.

(8) Vakkurrikuleringsbeginsels vir die volgende vakke/vakgroepe: Wiskunde, Sosiale Wetenskappe, Tale, Handelswetenskappe, uitvoerende en beeldende kunste, Natuurwetenskappe en tegniese vakke en leierskap.

(9) Onderwysvoorsiening vir leierskapvermoe as spesifieke manifestasie van begaafdheid.

(10) Keuring en opleiding van onderwysers vir die onderwyser van hoogbegaafde leerlinge.

(11) Onderwys vir hoogbegaafde gestremde leerlinge.

(12) Onderwyskundige en beheerstruktuur vir die onderwys van hoogbegaafde leerlinge." (1984 HSRC Report, pp 13, 14)

11. Morphet defines as conservative "a resolute attempt to assert educational ends and criteria as the only acceptable base for educational practice." (1982, p 113).

12. Henry Passow has observed with respect to g.e. in the U.S.A.: "In some instances, outstanding scholastic achievement is perceived as "The Man's Game" and not to be pursued by the poor and the non-white lest they be coopted." (1972).

THE GROWTH OF THE GIFTED EDUCATION MOVEMENT IN SOUTH AFRICA

Significant events in the growth of the g.e.m., arranged in chronological order as closely as possible.

DATE	EVENT	QUOTES AND COMMENTS	SOURCES
1918	In his annual report, Dr W.G. Viljoen (Superintendent-General for Cape Education) emphasized the need for differentiated educational provision for gifted children.	"He was the first educationalist in South Africa to suggest categorising children on the basis of intelligence." (Dr J.S. Neethling, 4.7.1983).	Dr J.S. Neethling, personal communication, 4.7.1983, referring to Cape Education Department Report for year ending 31.12.1918
1950s	Research conducted on the gifted by E.H. Venter, A.J.K. Pelser, S. Biesheuvel, P.A. Duminy and others.		L.K. van der Walt (Rector of Port Elizabeth Onderwys Kollege), D.Ed thesis (Unisa) 1974 : Die begaafdheidsverskynsel op skool en die rol van houding teenoor akademiese voortreflikheid - 'n empiriese studie, p 165.
1953	Bantu Education Act	"... an undisguised attempt by the State to prepare black children for a totally subordinate role in South African society" (Davies). "It is [therefore] necessary that Native Education should be controlled in such a way that it should be in accord with the policy of the State" (Verwoerd).	Davies, J. : "Capital, State and Educational Reform in South Africa", mimeograph, 1982, p 7. Verwoerd, H.F., Hansard 17.9.1953.
1953 July	Transvaal Education Department (T.E.D.) set up "Ondersoek insake moontlike spesiale onderwysvoorsiening vir die begaafde kind."		L.K. v.d. Walt, op.cit., p 165.
1954	S.A.O.U. Kongres : hooftema "Die Begaafde Kind".		L.K. v.d. Walt, op.cit., p 165.
1955a Oct.	Report published of T.E.D. visit to Europe, U.S.A. and Canada to research differentiation. Differentiation introduced in T.E.D schools.	Streaming was based on I.Q., school achievement and "beroepspotensialiteit". Separate stream for I.Q. 130+ considered but rejected, as it was felt that the system of differentiation as introduced would be sufficient.	L.K. v.d. Walt, op.cit., p 167.
1955b	Conference of Inspectors of Cape Education Department (C.E.D.) : major topic on agenda was differentiation.		J.S. Neethling, M.A. thesis, Georgia Univ.; A comparative study of various administrative designs facilitating gifted education with special reference to existing models in the Cape Province (S.A.) and five selected American states. 1984, p 15 quoting C.E.D. File 15/44/6. April 1966.

DATE	EVENT	QUOTES AND COMMENTS	SOURCES
1959 Oct.	O.F.S. Ed. Dept. published "Verslag van die komitee van ondersoek na die onderwys van die begaafde kind."	Differentiation introduced in O.F.S. schools, justified in terms of apartheid : "Op alle terreine is daar vandag, veral in Suid-Afrika, 'n dringende aanvrag na hoogopgeleide persone. So bv. wys Dr Biesheuvel (The Nation's Intelligence and its measurement) na die tekort in Suid-Afrika aan personeel m.t 'n hoe professionele, administratiewe en tegniese bekwaamheid wat dienste ook aan die Nie-blankes moet lewer en bereken dat 23% van die aktiewe Blankes hooggeskoolde werk moet lewer wat deur net 4% van die bevolkingsgroep in ander lande gedoen word." (pp 5, 6).	L.K. v.d. Walt, op.cit., pp 166, 168
1960	J.L. Omond, ex-Inspector of black schools in Eastern Cape, began campaigning for special provision for gifted children.	Since 1960, Omond has collected and disseminated data and press-cuttings, and addressed many clubs, associations, teacher groups, M.P.s, P.T.A.s, Colleges of Education etc.	J.L. Omond, curriculum vitae.
1963a	Coloured Persons Education Act.	Coloured Education placed under Dept. of Coloured Affairs in place of the provincial administrations.	Hansard, 21.12.1963.
1963b	Conference of C.E.D. Inspectors : main topic was differentiation.		J.S. Neethling, M.A. Thesis (1984), p 14, quoting C.E.D. File 15/44/6. (April 1966).
1963c	F.S. Robertson, Deputy Director of C.E.D., made a strong plea for special provision for the gifted.	He used the same arguments later successfully employed by Piet Meyer, but to no avail. (Neethling, personal communication 3.10.1985).	J.S. Neethling, 1984, op.cit., p 14, and personal communication 3.10.1985
1964	Joint council of SATA and SAOU requested C.E.D. for g.e.	Request not granted, although a concession was made to stress differentiation in inservice training courses.	J.S. Neethling, 1984, p.cit., p 14.
1965a	W.L. Roos began Project Talent Survey, a longitudinal study of all the T.E.D. Std.6 pupils.	Institute of Manpower Research project motivated by South Africa's manpower problem.	Verhoef, W., and Roos, W.L. The aim and experimental design of Project Talent Survey. HSRC Institute of Manpower Research, Report MT-1, 1970
1965b	Indians Education Bill.	Indian Education placed under Dept. of Indian Affairs, in place of the provincial administrations.	Hansard, 20.4.1965.
1967	National Education Policy Act no. 39	This act initiated a system of differentiated education "in accordance with the ability and aptitude of and interest shown by the pupil, and the needs of the country." (Article 2(i)f. With respect to coloured education, "differentiation in education in the initial stage had to be limited to a diversification of subjects only." (Differentiation in depth of subject matter in coloured education was only introduced in 1976. See 1976c).	Transvaal Ed. Dept's Education Bulletin, Aug. 1981, XXV(2), p 5. Dept. Internal Affairs, Ed.Bureau, 1981. Education for Life; the education of the Coloured population group in the R.S.A. p 6.
1968	Human Sciences Research Council formed.	HSRC began work on a national plan for research in the human sciences (approved by the Cabinet in April 1979).	South African Plan for Research in the Human Sciences (SAPRHS). HSRC Institute for Research Development, Pretoria, 1980.

DATE	EVENT	QUOTES AND COMMENTS	SOURCES
1970	Roos of Project Talent Survey published Die intellektueel-superieure leerling : 'n agtergrondbeskrywing op Std.6 vlak. Pretoria, HSRC, 1970.		Roos, W.L., ibid.
1971a	Wits. Maths Dept. ran a computer course for gifted children.	One of the children was the daughter of Prof. D.S. Henderson of the Applied Maths. Dept., who was bored at school, and later went on to become a Rhodes Scholar.	Proceedings : 1st National Workshop on the Education of the Gifted Child, Feb. 1978, held under the auspices of the Schmerenbeck Centre, Jhb., p 1. Also, correspondence with J.L. Omond, 3.7.1983.
1971b 11 Sept	Association for the Education of Gifted Children established in Johannesburg, to provide innovatory and experimental activities for gifted children. (Private non-racial association).	(i) Reasons - "limited official provision for the gifted" (John van Zyl) - "gifted children insufficiently challenged at school" (Proceedings) - "frustration and boredom induced by ill-prepared teachers and the lack of appropriate equipment" (view of parents, teachers and children)(John van Zyl). (ii) Addresses given at inaugural meeting by Prof. D.S. Henderson of Applied Maths Dept., Wits., N. Ferrandi of Maths Dept., Wits., and Dr L.T.J. Biebuyck and Dr W.L. Roos of the HSRC. (Proceedings). (iii) Reaction of T.E.D. "less than cooperative" (Omond).	John van Zyl. "Association for the Education of Gifted Children in S.A." Perspectives in Education, 1977, 2 (2); pp 81-86. Proceedings : 1st National Workshop, op.cit., p 1. Omond, J.L., letter dated 3.7.1983.
1971c Nov.	Implementation policy w.r.t. 1967 National Education Policy Act set out in Govt. Gazette, R2029, Nov. 1971	This introduced a 4-phase school career, each of 3 years duration i.e. junior primary, senior primary, junior secondary and senior secondary. This structure was designed to cater for the needs of the educable mentally handicapped, the "less gifted", the pupil of ordinary abilities and the highly gifted pupil. "This principle is implemented in accordance with the unique requirements of each Province."	Education Bulletin, op.cit, p 5.
1973a	Natal industrial unrest.		
1973b	First report of Project Talent Survey published (followed by 4 more in next 2 years)		Engelbrecht, S.W.B.: Akademiese prestasie van intellektueel bogemiddelde leerlinge : deel een. Inst. Manpower Research, HSRC Report MT-15, 1973. (Parts 2 and 3, 1974, Parts 4 and 5, 1975).
1974a	Progressive compulsory education introduced for coloureds.		
1974b Dec.	Dr L.K. v.d. Walt's D.Ed thesis on giftedness completed.	Human capital approach : "Die skool se taak is dus kortliks: "... om die beste breinkrag, die intellektuele en geestelike kapitaal van die volk, te konserveer en tot die uiterste to ontgin" (p 166). He concluded: "Waar daar wel in Suid-Afrika blyke van belangstelling in die spesiale voorsiening vir die begaafde is, bly daadwerklike, vergestalte pogings in hierdie verband nog uit" (p 168).	L.K. v.d. Walt, op.cit.
1975a	J.L. Omond attended 1st World Conference on Gifted Children in London, followed by 6 weeks research in the U.S.A.	This conference yielded headlines such as "Children who may save the world", "Gifted children must be taught survival answers", and "Boredom turns gifted children into revolutionaries" (all themes subsequently used by J.L. Omond in his campaign).	Fincham, F. : "Gifted Children : Quo vadis?" Perspectives in Education, 1977, 2 (2), pp 87-93

DATE	EVENT	QUOTES AND COMMENTS	SOURCES
1976a Feb.	J.L. Omond established the Office for the Gifted and Talented in Port Elizabeth.	Private-sector support - donation of R3 000,00 by businessman Johan Eggers. Dr P.S. Meyer, then Director of Cape Education Department, instructed his inspectors not to attend the inaugural meeting and not to give any information to the Office. (Omond). "Official response to the establishment, aims and objectives of Omond's office was extremely negative and inspectors in the Port Elizabeth area recommended that no departmental support be given to this organisation. Apart from these viewpoints, the inspectors also declared that the system of differentiated education created sufficient opportunities for gifted children." However, the Office was received favourably by the Rector of the University of Port Elizabeth, the press and many private organisations (Neethling).	Omond, J.L., correspondence of 3.7.1983. Neethling, J.S., M.A. Thesis op.cit., pp 16, 17, referring to C.E.D. File 15/44/6, June 1976, Sunday Tribune June 1976 and Eastern Province Herald June 1976.
1976b Feb.	Seminar on enrichment materials for gifted education, held by Jhb. Association, Transvaal Teacher's Association, and Geography Teacher's Association.		John van Zyl, op.cit., p 83.
1976c March	Differentiation introduced for coloured education.	See entry 1967. Minister for Coloured Affairs reiterated Government policy to offer coloureds "an educational system equal to that of any other population group." (HSRC Report).	Dept. Internal Affairs, 1981, op.cit. p 6. Also, R.S.A. debates of Parliament, 1-5 March 1976. van Rensburg, F.A.J. Trends in education for Coloureds in the R.S.A. HSRC, Pretoria, 1976, p 77.
1976d May	Omond visited Cape Town to help establish a local association.	See entry 1976i.	J.L. Omond, correspondence, 3.7.1983
1976e	Soweto riots and school boycotts (till end 1977).	Blacks demanded equal, non-racial and democratic schooling. "The challenge to inferior, racist and despotic schooling was indeed fundamental in 1976" (Molteno). "... it was unquestionably the Soweto crisis that spawned a more resolute approach to educational objectives." (Davies)	Molteno, F. "The evolution of Educational Policy in S.A." Paper presented at Wits. University, 1981. Davies, J. "Capital, State and Educational Reform", 1982, mimeograph, p 16.
1976f	Bequest of R25 000 by Schmerenbeck estate to Johannesburg Association, under Wits. Univ. administration.	This followed "a great deal of public interest and press coverage of the Johannesburg programme." (Proceedings).	Proceedings 1st National Workshop, op.cit., p 2.
1976g	Director of C.E.D., Piet Meyer, began a Ph.D thesis on differentiation.		Neethling, J.S., interview, 4.7.1983.
1976h 10/11 Aug.	Meeting of Directors and Deputy-Directors of the four provincial education departments rejected request by Omond for special provision for gifted pupils.	Rejection based on the grounds that the differentiation system allowed for the provision of gifted education (g.e.). However, "the necessary provision ... did not materialise." (Neethling).	Neethling, J.S., M.A. Thesis 1984, op.cit., p 17.

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1976i 11 Aug	Western Cape Association for Gifted Children established.	The main reason for the establishment of the WCAGC was parents' concern with their children's boredom at school, which caused problems at home. "A typical reaction was a reluctance to attend school at all." (du Toit). The first committee of this non-racial association consisted of members of the professions, of whom two were coloureds. (Proceedings). Initially, the C.E.D. was hostile to the Association (Neethling).	Jos du Toit, second Chairman WCAGC, written communication 10.5.1983. Proceedings 1st National Workshop, op.cit., p 4. Neethling, J.S., personal interview, 4.7.1983.
1976j Aug.	C.E.D. attitude to gifted education changed.	"The reasons for this change of attitude and approach are not completely obvious and clear" (Neethling).	J.S. Neethling, op.cit., p 19, also personal interview, 4.7.1983.
1976k Oct.	C.E.D. appointed Committee to investigate gifted education and to devise an information brochure for schools and universities.	Although "here was a definite attempt to plan and structure specifically for gifted pupils", Meyer rejected the manual as "too academic for general circulation." Revised version circulated March 1978.	J.S. Neethling, op.cit., pp 18 & 26, referring to C.E.D. File 15/44/6, 1977 Oct., and C.E.D. file 15/44/6, March 1978.
1976l Nov.	Urban Foundation formed.	Backed by every major corporation in S.A., its declared aim was to "improve the quality of life of the urban citizen "through employment-, education-, housing- and health-projects.	
1976m Dec.	C.E.D. attitude change to Omond.	"Contrary to previous liaison between Omond and the education department, a letter from the Director of Education and addressed to Omond, thanked him for fruitful discussions that had taken place. The Director also expressed the hope that in the future, there would be good cooperation between the department and the Office for the Gifted and Talented."	Neethling, op.cit., p 20.
1977a March	Private association started at Windhoek, after visit by J.L. Omond.	Hostile reaction by Education Department which forbade school principals to attend inaugural meeting. No support from Afrikaans-speaking parents or teachers. Coloured community began by supporting the movement but later withdrew. "... Blacks had been too afraid of the Department's attitude to become involved." (Proceedings).	Proceedings 1st National Workshop, op.cit., p 4.
1977b March	Schmerenbeck Educational Centre opened on Wits. campus.	See entry 1976f. Anglo-American gave a 3-year grant to cover secretarial services. No support by 1978 from Afrikaans-speaking community. By 1978 there was some liaison between the Centre and the TTA. (Proceedings)	Proceedings, op.cit., pp 2,20,15.
1977c July	Omond presented paper on g.e. in S.A. to 2nd World Conference on Gifted and Talented Children, held in San Francisco.	"... a copy of his lecture, which once again stressed the need for effective education of the gifted in Southern Africa, was discussed very positively by education leaders in the Cape." (Neethling).	Neethling 1984, op.cit., p 21.
1977d	HSRC publication: "Education for mentally highly gifted pupils - a preliminary study", undertaken on behalf of the National Education Council.	"The fact that in certain educational circles in the Republic of South Africa the view is held that the present policy of differentiated education does not make adequate provision for the specific educational needs of the mentally highly gifted pupils necessitates accountable educationally funded research in this connection, and it was against this background that this study was undertaken." (Gouws, p v).	M. Gouws : Education for mentally highly gifted pupils - a preliminary study. HSRC Institute for Educational Research. Report No.0-57, 1977.

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1977e	Private association started in Pretoria, known as FEST (Foundation for Education, Science and Technology) Enrichment Activities for Gifted Children.	Sponsored by a subcommittee appointed by Dr S. Meiring-Naude, then Chairman of the Board of Control of the Foundation for Education, Science and Technology, and formerly President of the CSIR and Scientific Advisor to the Prime Minister.	Proceedings 1st National Workshop, op.cit., p 2.
1977f	E.G. Malherbe published his opus Education in South Africa .	"The most consistent critic of the State's educational policy " (Davies), Malherbe accused white education, especially the Afrikaans-speaking sector, of inefficiency and low standards. He claimed that the economic crisis was due to educational apartheid's inability to promote black talent, and recommended "a drastic revision of the racially exclusive employment policies", and the introduction of schemes to increase the number of educated blacks in the high professional, managerial and entrepreneurial levels of the work force.	Malherbe, E.G. Education in South Africa, vol 2, Cape Town, Juta : 1977 Davies, J., op.cit., p 9.
1977g	C.E.D. granted permission to the private organisations to allow teachers to serve on their committees. Inspectors made goodwill visits to the associations in Cape Town and Port Elizabeth.		Neethling, 1984, op.cit., p 20.
1977h Nov.	Natal Association for Gifted Children established in Durban.	Non-racial, supported by Vice-Principal of Durban-Westville University, Prof. Ramfol. Favourable reaction from Natal Education Department, but no official support. (Proceedings). Reason : parent dissatisfaction with existing school provision for gifted (Ball).	Proceedings 1st National Workshop, op.cit., pp 3, 5. Ball, D., telephone communication, 3.2.1986.
1977i	Black school boycotts lifted.		
1978a Feb.	Unisa offered course on teaching gifted children under "Educational Psychology".		Proceedings, 1st National Workshop, op.cit., p 20.
1978b Feb.	First National Workshop on the Education of the Gifted Child, held in Johannesburg under the auspices of the Schmerenbeck Centre.	Delegates adopted a motion to make an official offer to the HSRC to use the Schmerenbeck Centre for research purposes (Proceedings, p 20). A move to form a National Association was rejected on the grounds that government support "could result in the imposition of unacceptable conditions, particularly those of multi-racialism. ... Associations would not be prepared to be dictated to by departments of education ..."(p 26). Also, "the meeting discussed at length the reactions of the different provincial education departments to the establishment of organisations for gifted children. Some centres had encountered hostility, some indifference, while those to whom the departments were favourable disposed were well aware that the departments could not officially support them. ... the departments seemed to regard the movements to form organizations for gifted children as a tacit indictment of departmental policies. ... the question of black gifted children was a touchy one." (p 25). With respect to the inadequacy of the educational system, Prof Ferrandi mentioned that three times as many first year students from a certain "cram college" entered Wits. University as from any one of the largest government schools (p 5).	Proceedings, 1st National Workshop, op.cit.

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1978c July	C.E.D. issued circular and manual to principals and college rectors on "The Gifted Child", following a trip overseas to investigate differentiation by Dr Meyer.	"As the human material of a country probably constitutes one of its most precious possessions, it stands to reason that not only the potential of the less gifted should be exploited to the full but also - and especially - the potential inherent in the highly gifted. It is in fact from the ranks of the latter that the future leaders in the numerous fields of human activity come." (C.E.D. circular 52/1978). The press strongly supported this departmental action (Neethling).	C.E.D. circular 52/1978, 24 July 1978 p 13. Neethling, J.S., 1984, op.cit., p 20.
1978d	C.E.D. undertook a study of existing provision for gifted and talented.	Conclusion: "the general situation was far from satisfactory, and furthermore, that the vast majority of schools were unable to provide effectively for the needs of the gifted and talented child." (Meyer).	Meyer, P.S. "Education for the gifted in the R.S.A.", a paper given at the International Seminar on Gifted Education, Berlin, April 1982 p 6.
1979a Feb.	The Chief Inspector in the P.E. area "expressed the strong support of all the inspectors in his region to the new positive attitude towards gifted education."		Neethling, J.S., 1984, op.cit., p 21 quoting C.E.D. File 15/44/6, Nov. 1979.
1979b	T.E.D. undertook study tour to investigate question of extending differentiated education for highly gifted pupils.	"I wish to state very clearly that in the Transvaal provision has been made in the past for the needs of the gifted child ... attempts are being made to meet the needs of the highly gifted. The question can be raised whether more cannot be done for highly gifted pupils. Another way to put it, is : Can the existing system of differentiated education be further extended and developed to provide even more fully for these pupils?" (Jooste, p 6). Jooste rejected the notion of separate schools, but announced the planned establishment of extra-curricular centres (see entries 1981c, 1982c).	Jooste, J.H. (Director, T.E.D.): "Provision of education for highly gifted children in the Transvaal", Education Bulletin; Aug 1981, XXV (2), pp 6, 10. This paper was originally presented at a T.E.D. symposium: "The Highly Gifted Child", 1980. (See entry 1980b).
1979c	Education and Training Act (Act 90) introduced compulsory education for blacks.	Penalties were to be imposed on parents resisting compulsory education and registration of teachers in a Teachers Council for blacks was required. "The Bill to my mind emphasizes control. It is as if we are dealing with a dangerous animal - how to keep it caged." (Tutu).	Bishop D. Tutu, quoted in The Star, 22.6.1979.
1979d April	Omond appointed Representative for Southern Africa at 3rd World Council Conference on Gifted Children.	He commented: "attention given to Gifted and Talented Children by the news media, education authorities and the general public of South Africa has increased noticeably since the Second World Conference in San Francisco in July 1977." He also listed the private-sector donors to the P.E. Office for the Gifted: Mobil Oil (S.A.), BP (S.A.), Volkswagen (S.A.), Pick 'n Pay Wholesalers, Allied and Permanent Building Societies, General Motors (S.A.), Phillips Carbon Black Co., Volkskas Beperk (staff donation).	Omond, J.L. "The education of the gifted and talented in South Africa" paper given at 3rd World Conference, Jerusalem, 1979, pp 2,5.

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1979e July	Administration of Coloured Affairs issued "Information memorandum relating to the Education of the Gifted and Talented Children in S.A."	Conclusion: "Future developments will depend largely on results obtained by other educational authorities in this field, on the progress made by the Administration in providing basic educational facilities for the Coloured population as a whole, and on the available material means."	Memorandum supplied to J.L. Omond in connection with the 3rd World Conference, July 1979, p 6.
1979f	Riekert Commission Report, and first of the 6 Wiehahn Reports published (rest published up to 1982).	The Riekert Commission on the proper utilisation of manpower in urban areas and the Wiehahn Commission which recommended the removal of the industrial colour bar, both emphasized education and labour training for blacks. They recommended that certain restrictions on Africans be lifted, harsher forms of discrimination relaxed, and that trade unions be incorporated into the industrial relations system.	
1979g	President of World Council for the Gifted and Talented, Henry Collis, visited S.A. at invitation of Director of C.E.D.		Omond, J.L., letter dated 3.7.1983 Neethling, J.S. op.cit., p 22.
1979h Sept.	HSRC conference : "The R.S.A. : its people and their future." (10th anniversary conference of the HSRC, Pretoria).	President of the CSIR, C. v.d.M. Brink, said: "In die RSA waar groter selfbeskerming, groter selfversorgenheid, minder afhanklikheid van ingevoerde strategiese hulpbronne, die voeding van, en werkverskaffing aan al ons mense die hoogste nasionale prioriteite is, sal die wetenskap en die tegnologie tot die maksimum in die voorste linie gestoot moet word en sal die geestesgewetenskaplikes hul plek en rol in hierdie linie vinnig moet identifiseer om sy aan sy hierdie uitdaagings vorentoe saam aan te pak ..."	C.v.d.M.Brink: "Die geesteswetenskappe en die natuurwetenskappe vul mekaar aan." Address delivered at the conference. Quoted in A.L. Behr: "The Gifted Student : a challenge to the University", address given to Convention on Giftedness, Univ. Stellenbosch, Oct 1979 (1979j)
1979i Oct 13	C.E.D. approved post of Planner for Gifted Education as from April 1980.	"with a view to research and the drawing up of programmes for gifted pupils in schools throughout the Cape Province." Post approved by Administrator of Cape 13 Nov. 1979 (Neethling).	Report of the Director, C.E.D., 1979, p 8. Neethling, J.S., 1984, op.cit. p 22.
1979j 18&19 Oct.	National Convention on the Gifted and Talented Child, Stellenbosch, held by Stellenbosch University Education Department. Theme : "The Gifted and Talented : a National Challenge."	Keynote address given by Prof. G.J. Garbers, Vice-President of HSRC "... die begaafdes en talentvolles [is] nie alleen die kosbaarste kleinode wat as sodanig gekoester en vertroetel en met sorg opgevoed moet word nie. Hulle is ook strategiese instrumente wat deur hul leierskap en insigte op 'n strategiese wyse instrumenteel kan en moet wees om nie alleen die potensiaal van die breë bevolking te stimuleer, to help rig en te koördineer nie, maar kan deur hul besondere bydrae belangrike katalisators wees in die geestelike groei en prestasies van die breë bevolking." (Garbers, p 2) "... die ontdekking en sistematiese opvoeding van die begaafdes en talentvolles in die tegnologiese gemeenskappe wat vasgevang is in die armoedspiraal (sosio-ekonomies sowel as kultuur-opvoedkundig, d.w.s. die sosiaalgestremde) sowel as die in die nie-tegnologiese gemeentskappe, d.w.s. die kultureelgestremdes, om 'n verskeidenheid redes van die allergrootste belang is." Maar "... daardie eienskappe hoewel vaag, in terme waarvan die begaafde en talentvolle uitgeken kan word, is in hoë mate kultuurgebonde en dan veral gebonde aan die tegnologiese kultuuropset." (Garbers, p 9). Later, he refers to giftedness as "'n kritiesbelangrike onderwerp."(p 13).	Garbers, J.G.: "Die begaafde en talentvolle : fasette van 'n nasionale uitdaging (verwesenliking van potensiaal, en die milieugestremde begaafde en talentvolle)", Oct. 1979.

DATE	EVENT	QUOTES AND COMMENTS	SOURCES
		Another address was given by J.B. Haasbroek (Director of National Institute for Educational Research of the HSRC). He rejected special schools for the gifted on the grounds that these deprive them of leadership opportunities and opportunities "om ander leerlinge positief te beïnvloed" (Haasbroek, p 11). He also commented: "Wanneer onderwysbeplanning vir hoog begaafdes ter sprake kom, is dit absoluut 'n vereiste dat dit op 'n nasionale grondslag moet geskied. 'n Sentrale instansie behoort in samewerking met die onderwysowerhede en ander belanghebbende instansies die navorsing en onderwysbeplanning vir hoog begaafdes te onderneem en waar nodig, te koördineer." (Haasbroek, p 16). J.L. Omond's talk on "Providing for the Gifted and Talented" was chaired by Prof. J.P. de Lange (see 1980f).	Haasbroek, J.B. "Navorsing : Begaafde en talentvolle leerlinge en onderwysvoorsiening." Oct.1979.
1979k 22 Nov	"Total strategy" launched at State-capital meeting in Jhb. to counter "total onslaught".	This strategy coupled military measures to ensure a better defence capability with a social reform programme to satisfy black aspirations, including educational reform.	
1980a	White Paper on the Wiehahn Report.	"The Government's White Paper on the Wiehahn Report (1980) gave an important impetus to the provision of technical education." (Viljoen).	Viljoen, G. van N., Minister of Education and Training : Department of Education & Training Policy Statement : Education for black people. Undated, but about May 1985, p 1.
1980b	T.E.D. Symposium : "The Highly-Gifted Child."	See entry 1979b for comments from paper delivered by T.E.D. Director. Haasbroek reported that the HSRC had initiated a research project into the identification of highly gifted children in order to develop with the T.E.D. and other education departments "'n opvoedkundig verantwoorde identifiseringsprogram."	Haasbroek, J.B. "The identification of highly gifted children," Education Bulletin, Aug. 1981, XXV(2), p 24. (Paper delivered at this symposium).
1980c	O.F.S. Departmental Advisory Committee set up to investigate giftedness.	Intention: "to make a study and recommendations in respect of this special group of pupils, from whose ranks our future leaders must come."	O.F.S. Education Department Report for the year ending 31.12.1980. p 11.
1980d	Dr P Meyer appointed Director-General of National Education.		Neethling, J.S., interview 22.7.1983.
1980e	Coloured school boycotts and unrest.	Coloureds demanded non-racial, free and compulsory education.	
1980f June	Cabinet request to HSRC to investigate education in S.A. within 12 months - the de Lange Commission.		HSRC Main Committee Report on its Investigation into Education : Provision of Education in the R.S.A, Pretoria, July 1981.

DATE	EVENT	QUOTES AND COMMENTS	SOURCES
1980g Sept.	Private association started at Bloemfontein.	Reason : Parents were experiencing problems with gifted children not being catered for by the official school system.	Verster, C.J., (committee member), telephone communication 3.2.1986.
1980h Oct.	Dr J.S. Neethling appointed as C.E.D. Planner for Gifted Children, the first such post in the R.S.A. (see 1979i)	Introduced a 3-year 3-phase plan to provide programmes and trained teachers for gifted children. "The Department realised that information brochures and talks don't have the necessary impact to produce change" (Neethling, 1983). The plan was based heavily on American experience (Neethling, 1984).	Neethling, J.S., quote during interview 4.7.1983. Neethling, 1984, op.cit., p 24.
1981a	Natal Education Department appointed an advisor on talented and exceptional children (Belle Wallace of Essex Ed. Dept.) to set up identification and enrichment programmes.		Meyer, Dr P.S.: "Education for the Gifted in S.A.", address given at International Seminar on Gifted Education, Berlin, April 1982, p 11. Also Neethling, 1984, op.cit., p 37.
1981b March	Private association formed at Stellenbosch, the Helderberg Ass.	Reason : dissatisfaction of parents with lack of opportunities for children to develop their special abilities at school.	Fourie, Dr P. du Toit, telephone conversation, 4.2.1986.
1981c May	T.E.D. opened its first extra-curricular centres at Pretoria and Johannesburg Colleges of Education, and appointed a Planner for Gifted Education.		T.E.D. Report for year ending 31.12.1981, pp 33, 42. Neethling, J.S., interview 3.10.1985.
1981d July	de Lange Commission Report published.	Gifted education identified as a priority area.	Report of the Main Committee of the HSRC Investigation into Education : Provision of Education in S.A., July 1981, pp 157 and 162.
1981e	HSRC Main Committee for Educational Research appointed a Work Committee: Education for the Highly Gifted. This was commissioned by the Dept. of National Education on the recommendation of the Director-General of National Education, Dr P. Meyer.	One of 5 Work Committees set up after the completion of Phase I of the HSRC Investigation into Education (i.e. the de Lange Report) "to study certain topical problem areas." (Garbers, p 3). Considered to be one area in which research is "absolutely essential" and meriting "urgent attention" (Garbers, p 5). The Work Committee's main objectives were to collect data on and formulate "(a) a coordinated national policy for gifted education in S.A., and (b) a coordinated continuous research policy in regard to gifted education at universities and colleges for education, coordinated and financed by the HSRC." (Meyer). This policy was intended for all population groups (Neethling) (also 1984 HSRC Report).	Garbers, J.G., President of HSRC : Research priorities in respect of education in South Africa. HSRC booklet, undated. Meyer, Dr P.S., 1982, op.cit., p 4. Neethling, J.S., 1984, op.cit., p 39 HSRC Report, 1984 : Verslag van die Werkkomitee : onderwys vir hoofbegaafde leerlinge. HSRC, Pretoria, 1984, p 12.
1981f	PACE Commercial College established in Soweto by the American Chamber of Commerce in S.A.	First black private school in S.A. Established in reaction to slow pace of Government reform of black education (Davies).	Davies, J., 1982, op.cit., p 24.
1981g	Dr P Meyer (Director-General of National Education) attended the 4th World Conference in Montreal.	One of ± 6 S.A. delegates.	Omond, J.L., letter dated 3.7.1983.
1981h Nov.	Second State-Capital summit in Cape Town.	Exasperation of Capital over "the State's equivocations" in education and labour reform was "forcefully expressed." (Davies). "In the opinion of Herman Giliomee, businessmen now have serious reservations about the State's commitment to the alliance forged to tackle the 'urban problem' and to 'ensure the long-term future of Capitalism'". (Davies, 1982).	Davies, J., 1982, op.cit., p 30.
1982a	Pilot programme for g.e. began in selected Cape schools. Phase 2 of Plan initiated.	Modules on g.e. provided at every Cape Ed. Dept. teacher training college. Resource Centre and 2 pupil-publications established. Inservice training set up for junior school teachers.	Neethling, J.S., interview 22.7.1983 also C.E.D. mimeograph, undated, also 1984, op.cit., p 27.

DATE	EVENT	QUOTES AND COMMENTS	SOURCES
1982b April	Dr P. Meyer presented a paper at an International Seminar on Gifted Education.	According to Meyer, by this time, eight private associations had been established, due to Omond's "untiring efforts"(p 4) and three (white) Education Departments officially provided g.e. - Cape, Natal, Transvaal. Referring to the Work Committee : Education for the Highly Gifted, he commented "It is envisaged that the recommendations will be implemented nationwide and will have official support. The eventual implementation of such a national policy will open new horizons for all gifted children in South Africa. In future years the country will reap the benefit of the positive measures taken at present"(pp 12, 13).	Dr P. Meyer, April 1982, op.cit.
1982c	T.E.D. established extra-curricular centre for the gifted at Potchefstroom.		Neethling, 1984, op.cit., p 36.
1983a Jan.	Conference of the SAAAE (South African Association for the Advancement of Education). Opening address given by Dr P.S. Meyer : "The Education of Gifted Children and the Manpower situation in South Africa".	Central theme : Teaching of the gifted child.	Creata, Feb 1983, 1(1); p 14.
1983b	Phase III of C.E.D. plan initiated.	Emphasis on high schools. By the end of 1983 every C.E.D. school in the Cape had been introduced to g.e. (Neethling).	Neethling, J.S., 1984, op.cit., pp 33-35.
1983c Feb.	HSRC Work Committee : Education for the Highly Gifted Report completed.	Only presented to the Minister in Nov.1984. Reaction still forthcoming at Feb. 1986. Neethling described it as "a massive national movement", "revolutionary", "dramatically different as far as restructuring at macro- and meso-levels is concerned ." (Neethling, 1983). In July 1983, Neethling expected it to be phased in from 1984.	Neethling, personal interviews, 4.7.1983, 22.7.1983 and 3.10.1985.
1983d Feb.	Launching of "Creata - Gifted Child Education", a Cape Schools' bulletin on g.e. (not an official Departmental publication).	Sponsored by Boland Bank for two years, although this is not mentioned in the first issue.	Neethling, personal interview, 4.7.1983.
1983e	Government White Paper on the Provision of Education.	This followed on the de Lange Report and "constituted a blueprint for educational reform in South Africa" (Viljoen).	Viljoen, G. van N ., Minister of Education and Training : Dept of Education and Training Policy Statement : Education for black people. Undated, + May 1985, p 1.
1983f	Henry Collis, retired President, World Council for Gifted Education, donated his library on gifted education to the C.E.D.	He was apparently highly impressed with the progress made by the C.E.D. since 1979.	Neethling, interview 4.7.1983.
1983g May	National Association of private associations formed : "The South African Association for the Gifted", with Omond as chairman.	Interviewed, Neethling said that with the extensive official provision for gifted education, the role of the associations has changed to one of primarily providing parent-support.	Omond, letter, 3.7.1983. Neethling, interview, 4.7.1983.
1983h	Research project on g.e. carried out at 5 coloured project schools.	Conclusion : appointment of Planner for g.e. for coloureds recommended. This has been deferred pending 1984 HSRC Report.	Groenewald, Dr H.J. (Chief Education Planner, Education Bureau, Administration of Coloured Affairs), interviewed 25.10.1985.

DATE	EVENT	QUOTES AND COMMENTS	SOURCES
1983i	South African Constitution Act.	Segregated education reaffirmed in "own affairs" category.	Neethling, interview 3.10.1985.
1984a	O.F.S. Education Department appointed Planner for g.e.		Viljoen, G. van N., 1985, op.cit., p1
1984b	National Policy for General Education Affairs Act (Act 76).	The Ministry and Department of National Education was created to determine and monitor national education policy of certain designated types. However, "... in practice, education is the responsibility of the separate education departments for 'own affairs'". (HSRC Report, 1985, Section 4.4.2).	HSRC Investigation into Intergroup Relations, Report of Main Committee, Pretoria, 1985.
1984c	University of Port Elizabeth offered a Master's degree in g.e.		Neethling, interview 3.10.1985.
1984d 26-29 June	International Conference - Education for the Gifted (Ingenium) held at Stellenbosch.	With HSRC support. Seven out of ten visiting keynote speakers were American, viz. Gallagher, Torrance, Passow, Renzulli, Feldhusen, Clark, Sisk.	Conference programme.
1985a	C.E.D. questionnaire circulated to pre-primary schools w.r.t. gifted pupils.		C.E.D. File L 16/24/1, 21.1.1985.
1985b	C.E.D. inservice training courses started for pre-primary teachers.	Further training to be conducted in 1986.	Neethling, interview 3.10.1985.
1985c	HSRC Investigation into Intergroup Relations, Report of Main Committee, published.	"Education is at present at the very centre of intergroup relations in South Africa." (Section 4.4 of Report.) "The segregated formal education dispensation, embedded in a segregated society, together with other institutions in society, contributes to the deep segmentation of South African society, including education itself." (Section 4.4.2).	HSRC Report, 1985, op.cit.
1985	Massive unrest, school and examination boycotts and consumer boycotts by blacks and coloureds.	State of Emergency declared. Strong State repression. Increased organisation of opposition to segregated education and other apartheid policies.	

REFERENCES

"A different view of the 6th World Conference on Gifted and Talented Children". Statement circulated at this conference, Berlin, August 1985. Mimeograph.

Althusser, L. "Ideology and Ideological State Apparatuses", in Cosin, B.R. (ed). Education : structure and society. Harmondsworth : Penguin, 1972, pp 242-280.

Anyou, J. "Elementary social studies text-books and legitimating knowledge". Theory and research in Social Education, 1978, 6(3); 40-55.

Apple, M. Ideology and curriculum. London : Routledge and Kegan Paul, 1979.

Arieti, S. Creativity. New York : Basic Books, Inc., 1976.

Barron, F. "The needs for order and disorder as motives in creative activity". In Taylor, C.W. and Barron, F. (eds). Scientific creativity : its recognition and development. New York : John Wiley, 1963, pp 153-160.

Behr, A.L. "The Gifted Student - a challenge to the university". Mimeograph of address delivered at the National Convention on the Gifted and Talented, Stellenbosch, 1979.

Berger, P. "Technological production and consciousness" in Berger, P.; Berger, B.; Kellner, H. The homeless mind. London : Penguin, 1974a.

Berger, P. Pyramids of sacrifice. Harmondsworth : Penguin, 1974b.

Berger, P; Luckmann, T. The social construction of reality. London : Penguin, 1967.

Bernstein, B. Class, codes and control. London : Routledge and Kegan Paul, 1975.

Biddle, B.J. "Ideology, social planning, and research on teaching in the United States" in Tabachnik, B.R.; Popkewitz, T.S.; Szekely, B.B. (eds). Studying teaching and learning : trends in Soviet and American research. New York : Praeger, 1981, pp 39-58.

Bloom, B.S. (ed). Taxonomy of educational objectives, Handbook I : Cognitive domain. New York : David McKay Company, 1956.

Bowers, C.A. "Ideological continuities in technicism, liberalism and education". Teacher's College Record, Columbia University, 1980, 81(3) : 293-321.

Bowers, C.A. "The reproduction of technological consciousness : locating the ideological foundations of a radical pedagogy". Teacher's College Record, Columbia University, 1982a, 83(4) : 530-557.

Bowers, C.A. "Education and the politics of cultural change". Presented as the John Dewey Lecture, Houston, 1982b. Mimeograph.

Bowles, S. "Unequal education and the reproduction of the social division of labour" in Dale, R; Esland, G.M.; MacDonald, M (eds) Schooling and capitalism : a sociological reader. London : Routledge and Kegan Paul, 1976, pp 32-41.

Bowles, S; Gintis, H. Schooling in capitalist America. New York : Basic Books, 1976.

Bracht, G.H.; Hopkins, K.D.; Stanley, J.C. (eds) Perspectives in educational and psychological measurement. Englewood Cliffs, N.J. : Prentice-Hall, 1972.

Braverman, H. "The modern corporation and 'Scientific Management'" in Dale, R; Esland, G; Fergusson, R; MacDonald, M (eds) Education and the State : Vol.1; schooling and the national interest, Vol.2; politics, patriarchy and practice. Lewes : Falmer Press, 1981.

Buckland, P. "Technicism and de Lange : reflections on the process of the HSRC Investigation". Perspectives in Education, May 1982; 35-51.

Buckland, P. "Towards a non-technicist approach to education policy in S.A.". Undated mimeograph.

Capra, F. The turning point : science, society and the rising culture. London : Fontana, 1982.

Carnoy, M. (ed). Schooling in a corporate society : the political economy of education in America. New York : David McKay, 1972.

Carnoy, M. "Can educational policy equalize income distribution?" Prospects, 1978, 8(1); 3-18.

CCCS (Education Group, Centre for Contemporary Cultural Studies, Birmingham). Unpopular Education. London : Hutchinson, 1981.

Chenery, M.; Ahluwalia, M.S.; Bell, C.L.G.; Duloy, O.; Jolly, R. Redistribution with Growth. London : Oxford University Press, 1974.

Chisholm, L. "Training for capital : de Lange Reports (1)". Perspectives in Education, May 1982 (Special Issue : The HSRC Education Report), 3-20.

Creata, 1983, 1(1); p 14.

Dale, R; Esland, G.M.; MacDonald, M. (eds). Schooling and Capitalism : a sociological reader. London : Routledge and Kegan Paul, 1976.

Dale, R; Esland, G; Fergusson, R; MacDonald, M (eds) Education and the State : Vol.1; schooling and the national interest. Vol.2; politics, patriarchy and practice. Lewes : Falmer Press, 1981.

Danziger, K. "Modernisation and the legitimation of social power" in Adam, H. (ed). South Africa : sociological perspectives. London : Oxford University Press, 1971.

Davies, J. "Capital, state and educational reform in South Africa". Mimeograph, 1982.

Davies, R. "Capital restructuring and the modification of the racial division of labour in South Africa". Journal of Southern African Studies, 1979, 5(2); 181-198.

de Bono, E. About Think. London : Jonathan Cape, 1972.

Department of Internal Affairs. Education for life : the education of the coloured population group in the Republic of South Africa. Cape Town, 1981.

Dewar, D; Todes, A; Watson, V. Regional development and settlement policy : premises and prospect. London : George Allen and Unwin, forthcoming.

Dewey, J. How we think. Lexington, Mass : D.C. Heath & Co., 1910.

Dos Santos, T. "The crisis in development theory and the problem of development in Latin America" in Bernstein, H. (ed). Underdevelopment and development : the Third World today. London : Penguin, 1973.

Engelbrecht, S.W.B. Akadiemese prestasie van intellektueel bogemiddelde leerlinge : deel een. HSRC Institute of Manpower Research, Report MT-15, 1973.

Esland, G.M. "Teaching and learning as the organisation of knowledge" in Young, M., Knowledge and control. London : Collier MacMillan, 1971, pp 70-115.

Feinberg, W. Reason and rhetoric : the intellectual foundations of Twentieth-Century Liberal Educational Policy. New York : John Wiley, 1975.

Ferguson, Marilyn. The Aquarian conspiracy. Personal and social transformation in the 1980s. London : Paladin Books, Granada Publishing, 1982.

Fincham, F. "Gifted children - quo vadis?" Perspectives in Education, 1977, 2(2); 87-93.

Foucault, M. The order of things : an archaeology of the human sciences. New York : Vintage Books, 1973.

Frank, A.G. Capitalism and underdevelopment in Latin America. Harmondsworth : Penguin, 1971.

Friedmann, J. "A general theory of polarized development" in Hansen, N.M. (ed) Growth centres in regional economic development. New York : Free Press, 1972, pp 82-107.

Friedmann, J. "The territorial approach to rural development in the People's Republic of Mocambique; six discussion papers". International Journal of Urban and Rural Research, 1980, 4(1); 97-115.

Friedmann, J. and Weaver, C. Territory and function. London : Edward Arnold, 1979.

Gallagher, J.J. Teaching the gifted child. Boston, Mass. : Allyn and Bacon, 1975. (2nd ed).

Gallagher, J.J. 'Issues in Education for the Gifted'. In Passow, A.H. (ed). The Gifted and Talented, the 78th Yearbook of the National Society for the Study of Education. Chicago : University of Chicago Press, 1979, pp 28-45.

Galton, F. Hereditary Genius. London : McMillan, 1869. (2nd ed. 1892) 1962 ed, London : Spottiswoode, Ballantyne. (Fontana Library edition, text of 1892 ed.)

Garbers, J.G. "Die begaafde en talentvolle : fasette van 'n nasionale uitdaging (verwesenliking van potensiaal, en die milieu-gestremde begaafde en talentvolle)". Mimeograph, keynote address given at National Convention on the Gifted and Talented, Stellenbosch, 1979.

Garbers, J.G. Research priorities in respect of education in South Africa. HSRC booklet, undated, post - de Lange Report.

Giroux, H. Ideology, culture and the process of schooling. London : Falmer Press, 1981.

Gladwin, T. East is a big bird. Cambridge, Mass. : Harvard University Press, 1970.

Gordon, W.J.J. Synectics. New York : Collier Books, 1961.

Goulet, D. "An ethical model for the study of values". Harvard Educational Revue, 1971, 41.

Goulet, D. "Development as liberation : Policy lessons from case studies". World Development, 1979, 7(6); 555-566.

Gouws, M. Education for mentally highly gifted pupils - a preliminary study. HSRC Institute for Educational Research, 1977, Report No. 0-57.

Gouws, M. Openbaringswyses van hoofbegaafde leerlinge - 'n psigopedagogiese perspektief. Pretoria, RGN; 1983.

Government Gazette, 1985, 9789.

Gowan, J.C. "The Relationship between creativity and giftedness", Gifted Child Quarterly, 1971, 15; 239-244.

Gowan, J.C. "Creativity and Gifted Child movement". Journal of Creative Behaviour, 1978, 12(1) : 1-13.

Gowan, J.C. "The development of the creative individual". In Gowan, J.C.; Khatena, J.; and Torrance, E.P. (eds) Educating the Ablest. Itasco, Ill. : F.E. Peacock, 1979, pp 58-79.

Gramsci, A. Selections from the Prison Notebooks. London : Lawrence and Wishart, 1971.

Guilford, J.P. "Creativity". American Psychologist, 1950, 5; 444-454.

Guilford, J.P. "Traits of creativity". In Anderson, H.H. (ed) Creativity and its cultivation. New York : Harper, 1959, pp 142-161.

Guilford, J.P. The nature of human intelligence. New York : McGraw-Hill, 1967.

Guilford, J.P. Way beyond the I.Q.: Guide to improving intelligence and creativity. Buffalo, New York : Creative Education Foundation, 1977.

Guilford, J.P. and Hoepfner, R. The analysis of intelligence. New York : McGraw-Hill, 1971.

Haasbroek, J.B. "Navorsing : Begaafde en talentvolle leerlinge en onderwysvoorsiening". Mimeograph of address delivered at National Convention on the Gifted and Talented, Stellenbosch, 1979.

Haasbroek, J.B. "The identification of highly gifted children", Education Bulletin, August 1981, 25(2), 11-24.

Habermas, J. Toward a rational society. Boston : Beacon Press, 1970.

Hagen, E. Identification of the Gifted. New York : Teacher's College Press, 1980.

Hall, C.S. and Lindzey, G. Theories of Personality. New York : John Wiley, 1957.

Halsey, A.H. "Genetics, social structure and intelligence". British Journal of Sociology, 1958, 9(1); 15-28.

Hansard. Reports of the debates of Parliament. 17.9.1953, 21.12.1963, 20.4.1965.

Heid, M.K. "Characteristics and special needs of the gifted student in Mathematics." The Mathematics Teacher, 1983, 76(4); 221-226.

Henderson, B. A critique of film theory. New York : Dutton, 1980.

Henderson, P. "Class structure and the concept of intelligence". In Dale, R.; Esland, G.; MacDonald, M. (eds) Schooling and Capitalism : a sociological reader. London : Routledge and Kegan Paul, 1976, pp 142-151.

Hirst, P.H. "Liberal education and the nature of knowledge". 1965, reprinted in Hirst, P.H. Knowledge and the curriculum. London : Routledge and Kegan Paul, 1974, pp 30-53.

HSRC. South African Plan for Research in the Human Sciences (SAPRHS). HSRC Institute for Research Development, Pretoria, 1980.

HSRC. Report of the Main Committee of the HSRC Investigation into Education : provision of education in the R.S.A. (Chairman : Prof. J.P. de Lange). HSRC, Pretoria, July 1981.

HSRC. Annual Report of the HSRC for 1984. HSRC, Pretoria.

HSRC. Verslag van die Werkkomitee : onderwys vir hoofbegaafde leerlinge. (Chairman : J.B. Haasbroek). HSRC, Pretoria, 1984.

HSRC. Main Committee Report of the HSRC Investigation into Intergroup Relations : "The South African Society : realities and future prospects". (Chairman : H.C. Marais). HSRC, Pretoria, 1985.

Freire, P. "Education : domestication or liberation?" Prospects, 1972, 3 (2).

Illich, I. Deschooling Society. London : Calder and Boyars, 1971.

Inhelder, B. and Piaget, J. The growth of logical thinking. New York : Basic Books, 1958.

Jooste, J.H. "Provision of education for highly gifted children in the Transvaal". Education Bulletin; August 1981, 25(2); 4-10.

Kallaway, Peter (ed.) Apartheid and education : the education of black South Africans. Johannesburg : Ravan Press, 1984.

Karier, C.J. Man, society and education : a history of American educational ideas. Glenview, Illinois : Scott Foresman, 1967.

Katz, M.B. The irony of early school reform. Cambridge, Mass. : Harvard University Press, 1968.

Keddie, N. (ed). Tinker, tailor ... The myth of cultural deprivation. Harmondsworth : Penguin, 1973.

Khatena, J. Educational psychology of the gifted. New York : Wiley, 1982.

Kretch, D. and Crutchfield, R.S. Elements of psychology. New York : Alfred A. Knopf, 1960.

Kris, E. Psychoanalytic explorations in art. New York : International Universities Press, 1952.

Krutetskii, V.A. Psychology of mathematical abilities in schoolchildren. Chicago : University of Chicago Press, 1976.

Kubie, L.S. Neurotic distortion of the creative process. Lawrence : University of Kansas Press, 1958.

Lindzey, G. (ed). Assessment of Human Motives. New York : Holt, Rinehart and Winston Inc., 1958.

Malherbe, E.G. Education in South Africa : Vol.2. Cape Town : Juta, 1977.

Marland, S.P. Jr. Education of the gifted and talented : Report to the Congress of the United States (2 vols). Washington, D.C. : U.S. Government Printing Office, 1972.

Martin, J.R. "Needed : a new paradigm for liberal education". In National Society for Study of Education 80th Yearbook, 1981, I.

Maslow, A. "Creativity in self-actualising people". In H.H. Anderson, ed. Creativity and its Cultivation. New York : Harper, 1959, pp 83-95.

Maslow, A.H. and Mittelmann, B. Principles of abnormal psychology. New York : Harper, 1951.

Mbilinyi, M. "Basic education : tool of liberation or exploitation?" Prospects, 1977, 7 (4), 489-503.

McLean, Martin. "The Political Context of Educational Development : a commentary on the theories of development underlying the World Bank education sector policy paper". Comparative Education, 1981, 17 (2), pp 157-162.

McRobbie, A. "Working class girls and the culture of feminity" in Women Take Issue : aspects of women's subordination. London : Hutchinson, 1978, pp 96-108.

Meeker, M.C. The structure of intellect : its interpretation and uses. Columbus, Ohio : Charles E. Merrill, 1969.

Mesavoric, M and Pestel, E. Mankind at the turning point : the second report to the Club of Rome. New York : E.P. Dutton, 1974.

Meyer, P.S. "Education for the gifted in the R.S.A." Mimeograph of paper given at the International Seminar on Gifted Education, Berlin, 1982.

Meyer, P.S. "Parents and their gifted children". Mimeograph, 1983.

Michael, W.B. "Cognitive and affective components of creativity in Mathematics and the Physical Sciences". In Stanley, J.C.; George, W.C.; Solano, C.H. (eds) The gifted and the creative : a fifty year perspective. Baltimore, Md : Johns Hopkins University Press, 1977, pp 141-172.

Molteno, F. "The evolution of educational policy in South Africa - a story of structure and struggle". Paper presented at Colloquium on Education and Social Structure and Process : Analysis, Vision and Interim Action. Centre for Continuing Education, University of the Witwatersrand, 16-18 July 1981.

Molteno, D.F. "The schooling of black South Africans and the 1980 Cape Town students boycott : a sociological interpretation. M.Soc.Sc thesis, UCT, 1982.

Morphet, T. "The world of work : its impact on curriculum planning (1)." Perspectives in Education, Sept. 1982, 6(2); pp 108-120.

Mussen, P.H.; Conger, J.J.; Kagan, J. Child development and personality. 2nd ed. New York : Harper and Row, 1963.

National Education Conference, Grahamstown, 1982 : the de Lange Report. Final Plenary Report, Mimeograph.

Neethling, J.S. A comparative study of various administrative designs facilitating gifted education with special reference to existing models in the Cape Province (S.A.) and five selected American states. M.A. Thesis, Athens, Georgia; 1984.

Newland, T.E. "On defining the mentally superior in terms of social need". Exceptional Children, 1963, 29, pp 237-240.

Omond, J.L. "The education of the gifted and talented in South Africa". Mimeograph of paper given at 3rd World Conference, Jerusalem, 1979.

"On Ideology", Working papers in Cultural Studies, 1977, No.10.

Orange Free State Education Department. Report for year ending 31.12.1980.

Ornstein, R. The psychology of consciousness. New York : Freeman, 1972.

Osborn, A.F., Jr. Applied imagination. New York : Charles Scribner's Sons, 1953. 3rd revised edition, 1963.

Passow, H. "The gifted and the disadvantaged". Reproduced in Promising practices : teaching the disadvantaged child. National State Leadership Training Institute on the Gifted and Talented, Brief no.2, published by Ventura County Superintendent of Schools, 1975.

Peters, R.S. Ethics and Education. London : Allen and Unwin, 1966.

Popkewitz, T.; Tabachnik, B.; Zeichner, K. "Dulling the senses : research in teacher education". Journal of Teacher Education, Sept/Oct, 1979, 30 : pp 52-60.

Popkewitz, T.S. "Educational research : values and visions of a social order". Theory and Research in Social Education, Dec 1978, 4(4).

Popkewitz, T.S. Paradigm and ideology in educational research : the social functions of the intellectual. New York : Falmer Press, 1984.

Popkewitz, T.S. and Tabachnik, B.R. "Soviet and American Pedagogical research : differences and similarities in the two countries". In Tabachnik, B.R.; Popkewitz, T.S.; Szekely, B.B. (eds) Studying teaching and learning : trends in Soviet and American research. New York : Praeger, 1981, pp 3-38.

Popper, K.R. The logic of scientific discovery.
London : Hutchinson, 1959.

Price, R. Marx and education in Russia and China.
London : Croom Helme, 1977.

Prince, G.M. "The operational mechanism of synectics".
Journal of Creative Behaviour, 1968, 2(1) : pp 1-13.

Renzulli, J.S. The enrichment triad.
Mansfield, Conn. : The Creative Learning Press, 1977.

Renzulli, J.S. "What makes giftedness? Reexamining a definition".
Phi Delta Kappan, 1978, 60 : pp 180-184, 261.

Renzulli, J.S. "The enrichment triad model : a guide for developing defensible programs for the gifted".
In Gowan, J.C.; Khatena, J. and Torrance, E.P. (eds)
Educating the ablest. Itasca, Ill : F.E. Peacock, 1979 (2nd ed)

Richardson, H.W. (1981). "National urban development strategies in developing countries". Urban Studies, 1981, 18; pp 267-283.

Rogers, C.R. Client-centered therapy : its current practice, implications and theory. Boston : Houghton, 1951.

Rogers, C.R. "A theory of therapy, personality and interpersonal relationships, as developed in the client-centered framework".
Unpublished manuscript, 1955.

Rogers, C.R. "Toward a theory of creativity". In Anderson, H.H. (ed)
Creativity and its cultivation. New York : Harper, 1959, pp 69-82.

Rossmann, J. The psychology of the inventor : a study of the patentee.
Washington, D.C. : Inventors Publishing Co., 1931.

Sandbrook, R. The politics of basic needs : urban aspects of assaulting poverty in Africa. London : Heinemann, 1982.

Sarup, M. Marxism and education. London : Routledge and Kegan Paul, 1978.

Sarup, M. Education, State and crisis : a Marxist perspective.
London, Routledge and Kegan Paul, 1982.

Schafer, R. "Regression in the service of the ego".
In G. Lindzey (ed), Assessment of human motives.
New York : Holt, Rinehart and Winston, Inc.; 1958, pp 119-148.

Schmerenbeck Educational Centre. Summary of the proceedings of the First National Workshop on the education of the gifted child.
Johannesburg, 1978.

Schumacher, E.F. Small is beautiful : a study of economics as if people mattered. London : Blond and Briggs, 1973.

Simon, B. Intelligence, psychology and education : a Marxist critique. London : Lawrence and Wishart, 1971.

Stohr, W.B. Development from below : the bottom-up and periphery-inward development paradigm. Interdisciplinary Institute of Urban and Regional Studies, Diskussion 6, Univ. Economics, Vienna, 1980.

Stohr, W.B. and Tödtling, F. "Spatial equity - some antitheses to current regional development doctrine". Papers of the Regional Science Association, 1977, 38; pp 33-53.

Streeten, P. "From growth to basic needs", in World Bank (ed) Poverty and Basic Needs, 1980, 5-8, World Bank, Washington.

Taba, H. Teaching strategies and cognitive functioning in elementary school children. Washington, D.C. : U.S. Office of Education, 1966.

Taba, H. and Durkin, M. Taba social studies curriculum : (Gr 1-8) Reading, Mass : Addison-Wesley, 1969.

Tabachnik, B.R.; Popkewitz, T.S.; Szekely, B.B. (eds). Studying teaching and learning : trends in Soviet and American research. New York : Praeger, 1981.

Tannenbaum, A.J. Gifted children : psychological and educational perspectives. New York : McMillan, 1983.

Tart, C.T. Altered states of consciousness. New York : John Wiley & Sons, Inc., 1969.

Taylor, C.W. (ed). The 3rd (1959) University of Utah research conference on the identification of creative scientific talent. Salt Lake City : University of Utah Press, 1959.

Taylor, C.W. "Developing effectively functioning people". Education, 1973, 94; pp 99-110.

Taylor, C.W. and Holland, J. "Predictors of creative performance". In C.W. Taylor (ed) Creativity : progress and potential. New York : McGraw-Hill, 1964.

Taylor, I.A. "An emerging view of creative actions". In I.A. Taylor and Getzels, J.W. (eds) Perspectives in creativity. Chicago : Aldine Publishing Co., 1975, pp 297-325.

Terman, L.M. Genetic studies of genius. Stanford, California : Stanford University Press, 1925.

Torrance, E.P. Guiding creative talent. Englewood Cliffs, N.J. : Prentice-Hall, 1962.

Torrance, E.P. and Myers, R.E. Creative learning and teaching. New York : Harper and Row, 1970.

Toulmin, S. "The Mozart of psychology". New York Review of Books, Sept 28, 1978, 25; pp 51-57.

Tuchman, B.W. A distant mirror : the calamitous 14th century. New York : Ballantine Books, 1978.

Turner, J.F.C. Housing by people : towards autonomy in building environments. London : Marion Boyars, 1976.

v.d.M. Brink, C. "Die geesteswetenskappe en die natuurwetenskappe vul mekaar aan". Address delivered at the HSRC Conference "The R.S.A. : its people and their future", 1979.

v.d.Walt, L.K. "Die begaafdheidsverskynsel op skool en die rol van houding teenoor akademiese voortreflikheid - 'n empiriese studie". D.Ed. thesis (Unisa), 1974.

van Onselen, C. The small matter of a horse : the life of 'Nongoloza' Mathebula, 1867-1948. Johannesburg : Ravan Press, 1984.

van Rensburg, F.A.J. Trends in education for Coloureds in the R.S.A. HSRC, Pretoria, 1976. Report no WS-17.

van Zyl, John. "Association for the education of gifted children in South Africa". Perspectives in Education, 1977, 2(2); pp 81-86.

Vargiu, J. "Creativity : the purposeful imagination". Synthesis, 1977, 3-4 : pp 17-53.

Verhoef, W. and Roos, W.L. The aim and experimental design of Project Talent Survey. HSRC Institute of Manpower Research, Report MT-1, 1970.

Viljoen, G. van N. Policy statement : education for black people. Department of Education and Training. Undated, but ± May 1985.

Wallas, G. The art of thought. London : C.A. Watts, 1926.

Weber, M. Essays in sociology. Translated and edited by Gerth, H. and Mills, C.W. London : Routledge and Kegan Paul, 1952.

Wells, J. "Monetarism in the U.K. : an overview". Institute of Development Studies Bulletin, 1981, 13(1), pp 14-25.

Welsh, D. "Social research in a divided society". In Hare, A.P.; Weindick, G; von Broembsen, M.H. (eds). South Africa : sociological analysis. Cape Town : Oxford University Press, 1979.

Williams, F.W. A total creativity program kit. Englewood Cliffs, N.J. : Educational Technology Publications, 1972.

Williams, R. The long revolution. London : Chatto and Windus, 1961.

Williams, R. "Base and superstructure in Marxist cultural theory". In Dale et al (eds), Schooling and capitalism : a sociological reader. London : Routledge and Kegan Paul, 1976.

Willis, P.E. Learning to labour : how working class kids get working class jobs. Westmead : Saxon House, 1977.

Wolfe, T. "The Me Decade and the third great awakening". New York Magazine, Aug 23, 1976.

Young, M. (ed). Knowledge and control. London : Collier McMillan, 1971.