THE KNOWLEDGE THEORIES OF P.H. HIRST AND P.H. PHENIX

A COMPARATIVE STUDY OF HIRST'S 'FORMS OF KNOWLEDGE' AND PHENIX'S 'REALMS OF MEANING' AND THEIR IMPLICATIONS FOR CURRICULUM PLANNING

David Warrillow-Williams

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ABSTRACT

Since the early sixties a great controversy has centred in the curriculum world on the so-called 'disciplines thesis' of Philip H. Phenix and Paul H. Hirst. This thesis proposes that all knowledge can be reduced to a small number of logically distinct 'domains' or 'disciplines', and therefore all human meaning and understanding can be examined in terms of these 'forms' or 'realms'.

Hirst contends there are seven or eight logically distinct forms: history, ethics, mathematics, physical science, religion, philosophy, social science and the arts, while Phenix contends there are nine. Phenix's 'realms' are symbolics, empirics, esthetics (sic), synnoetics, ethics and synoptics, six in number, achieved by combining his normative and comprehensive classes of meaning into two rather than five 'realms'.

This theory of knowledge is intended by Hirst to provide a 'bridge' of reason between the human mind and the 'real' world. Phenix intends it to break down the feelings of fragmentation, cynicism, meaninglessness and inadequacy in the face of the surfeit of knowledge confronting the members of modern industrialized communities.

The 'disciplines thesis' Hirst and Phenix put forward though is far from being one about which they are in complete harmonious accord. Hirst is severely critical of several of Phenix's 'realms', particularly symbolics, synnoetics and synoptics.

In trying to 'tidy up' Phenix's theory, Hirst has not reached a height from which his own ideas are above criticism. However, he
has certainly clarified many of the central issues regarding the philosophical foundations of the curriculum, and made a powerful case for the continuance of 'liberal education' as an indispensable part of the school curriculum.

The implications for the curriculum of Hirst and Phenix are many. To begin with the ways of knowing contained in the 'forms' or 'realms' should be a vital part of the teaching of all school subjects, whether those subjects are pure 'forms' or 'realms', or 'fields' combining aspects of several of the cognitive domains. In addition careful consideration should be given to logical, developmental, methodological and motivational factors in the teaching of the disciplines so that at all times the following four basic principles are observed.

(1) The sequence of study should be such that the material to be studied is introduced in a coherent, logically progressive way, there being no single way of 'putting together the pieces in the jigsaw.'

(2) All human beings progress through certain clearly definable periods of growth and these determine what we are capable of learning.

(3) The distinct ways of structuring experience in each of the disciplines are as important as the actual content of a subject.

(4) Without an appeal to the imagination pupils will not be motivated to learn.
CHAPTER 1

A STUDY OF PAUL H. HIRST'S 'LIBERAL EDUCATION AND THE NATURE OF KNOWLEDGE'. 
In his introduction to his proposals on 'Liberal Education and the Nature of Knowledge' Hirst seeks to define what a liberal education is, though it is easier for him to define what it is not.

Whatever else a liberal education is, it is not a vocational education, not an exclusively scientific education and not a specialist education in any sense.1

He sees it as being an education based fairly and squarely on the nature of knowledge itself, a concept central to the discussion of education at any level.2

He then proceeds to explore the original Greek concept of a liberal education and a typical modern attempt to define, justify and develop a liberal education curriculum, the Harvard Committee Report, 'General Education in a Free Society', published in 1945.

Hirst's Explication of the Greek Notion of Liberal Education

The fully developed Greek notion Hirst explains was rooted in a number of related philosophical doctrines about mind, knowledge and reality: firstly about the significance of knowledge for the mind, and secondly about the relationship between knowledge and reality.

In summary he explains that the first set of doctrines concerned the peculiar and distinctive activity of the human mind, which because of its very nature, pursues knowledge. The achievement of knowledge satisfies and fulfils the mind which thus attains its own appropriate end. Pursuit of knowledge is thus the pursuit of the good of the mind and therefore an essential element in the good life. In addition the
achievement of knowledge was the chief means to the good life as a whole. Since mind is man's essential distinguishing characteristic it is in terms of knowledge that his whole life was considered to be rightly directed.

That knowledge was equal to the task was guaranteed by the second group of doctrines. These asserted that the mind, through the right use of reason, comes to apprehend what is ultimately real. Thus life and thought could be given perspective by knowledge that corresponds to what is ultimately real. Further, the way in which reason attains knowledge results in a view of the whole of man's understanding as hierarchically structured in various levels.

From the knowledge of mere particulars to that of pure being all knowledge had its place in a comprehensive and harmonious scheme, whose pattern was formed as knowledge was developed to understand reality in all its many forms.

Thus there emerged the idea that liberal education was a process concerned simply and directly with the pursuit of knowledge. However, for Hirst the doctrines already mentioned give to this general idea particular meaning and significance. He contends that they lead to a clear definition of a liberal education's scope and content and to a clear justification for education in these terms. The definition he says is clear because education is determined in range, structure and content by the forms of knowledge themselves and their harmonious, hierarchical interrelations. A liberal education he feels does not need to be justified in terms of utility or morality.
He sees the doctrines as lending three justifications to this concept of education:

(1) Such a liberal education is based on what is true and not on uncertain beliefs or temporary values;

(2) Knowledge itself is a distinctive human value as the fulfilment of the mind;

(3) The significance of knowledge for the Greek concept of 'the good life' as a whole predetermines that the liberal education is important to man's understanding of how he ought to live, both individually and socially.

Thus Hirst sees the Greek concept of liberal education as an education to free the mind, free reason from error and illusion and free man's conduct from being wrong. From this, he explains, has arisen an educational curriculum theoretically free from 'the predilections of pupils, the demands of society or the whims of politicians'. This was behind the Greek development of the seven liberal arts, an introduction to the forms of knowledge as then perceived. Since then educational theoreticians have aimed at a similar 'cultivation and development of the mind in the full range of man's understanding'.

Hirst and a Typical Modern Statement: The Harvard Committee Report

Hirst vigorously questions the Harvard Committee's Report. He poses the question whether those who do not believe in a metaphysical concept of reality or in reality based on knowledge can legitimately subscribe to this concept of education. Historically liberal education
was couched in a Greek philosophical framework. Yet, he explains, the Harvard Committee Report tries to develop a concept of liberal education independent of such metaphysical realism.

Hirst undermines the report by showing how, because a liberal education seeks development of the mind in terms of what is external to it, the structure and pattern of reality, then by questioning the relationship between mind, knowledge and reality 'the whole harmonious structure is likely to disintegrate'.

He goes on to challenge the Report's lack of definition. A liberal education defined solely in terms of knowledge only becomes acceptable if knowledge is thought to be developing the mind in desirable ways. If doubt is cast on the functions of knowledge then liberal education must be redefined explicitly stating the qualities of mind and moral virtues to which it is directed.

If knowledge is not understanding of reality, but of experience then what is to replace the hierarchical scheme of knowledge that gave pattern and order to education, he asks?

Having challenged the problem of the Committee's lack of definition Hirst goes on to examine the important question of justification. If knowledge is not rooted in reality or if its significance for the mind and 'the good life' are questioned, then what is the justification of a liberal education in terms of knowledge alone?
Hirst concludes that adequate definition and justification are not only dependent on the classical [Greek] doctrines but can be based directly on an explication of the concepts of 'mind' and 'knowledge' and their relationships.

The Harvard Committee Report attempted a definition of liberal education in two ways:

(a) The qualities of mind it ought to produce;
(b) The forms of knowledge with which it should be concerned.

Hirst challenges these because the precise relationship between (a) and (b) is not made clear. It is asserted that they are 'images of each other' yet that liberal education looks to 'the good man in society and is dictated by the nature of knowledge itself.'

Three areas of knowledge are determined in the Report, primarily by their distinctive methods:

(i) The Natural Sciences
(ii) The Humanities
(iii) Social Studies

However, it is 'cultivation of certain aptitudes and attitudes of mind' that is being aimed at, the elements of knowledge being the means for developing these. In other words, according to the Report's logic liberal education is primarily concerned with (a) above.

The 'aptitudes of mind' in the Report are fourfold:
(1) To think effectively;
(2) To communicate thought;
(3) To make relevant judgements;
(4) To discriminate among values.

Hirst questions how these aptitudes come to be developed by the three types of knowledge as little is said about it. The Report notes that the three phases of (1) above correspond to the three divisions of learning, (i), (ii) and (iii) mentioned previously, and notes the difficult connection between education in the making of value judgements and the formation of moral character. Otherwise he says its remarks are general, emphasizing these qualities should be consciously developed in all studies and generalized as far as possible.

Hirst attacks the Report at this point because he feels

the notion that a liberal education can be directly characterized in terms of mental abilities without fully specifying the forms of knowledge involved is false.

He says this is because of a misunderstanding by the Committee of the way in which mental abilities are distinguishable. As an example he quotes what the Report had to say about effective thinking (that is that there can only be effective thinking when an outcome can be recognized by those that have the appropriate skills and knowledge).

Hirst believes that description and evaluation of liberal education must be in terms of public language with public criteria to do this. None of the four aptitudes of mind mentioned previously can
be delineated he feels except by means of their detailed public features. He criticizes the Committee's approach because he considers it is simply illustrative. No account of liberal education is possible, he contends, without a full account in terms of the public features of the forms of knowledge with which it is concerned. Secondly he criticizes the Committee's statement because 'the use of broad, general terms for these abilities serves in fact to unify misleading, quite disparate achievements.'

He uses as an example the fact that 'communication' in the sciences has only certain very basic features in common with 'communication' in poetic terms. It is only when the abilities are fully divided in terms of the various domains of knowledge that he feels it is at all clear what is involved in developing them. He therefore compares 'effective thinking' to 'successful games playing'; it is a too nebulous, general and impractical definition. Thus, for Hirst it is vitally important to realize the objective differences that there are in forms of knowledge and therefore in our understanding of mental processes that are related to these.

In his final criticism of the Report he attacks it for including under the heading 'liberal education' such things as emotional and moral development in the generalized notion of education. Liberal education then ceases to be one defined directly in terms of the pursuit of knowledge and thus cannot be justified by justifying that pursuit.
A Reassertion and a Reinterpretation

A logically consistent concept of liberal education must be worked out for Hirst (on logical grounds) in terms of the forms of knowledge. This is of crucial concern, he feels.

By 'forms of knowledge' he does not mean content but 'the complex ways of understanding experience which man has achieved through learning'. Each form of knowledge he contends involves the development of creative imagination, judgement, thinking, communicative skills and so on in ways that are unique as ways of understanding experience. To list these elements draws attention for Hirst to the many features that a liberal education must include. To state 'the development of effective thinking' is only pertinent if it is explained in terms of the forms of knowledge which give it meaning such as 'in terms of solving problems in Euclidean Geometry' or 'coming to understand the poetry of John Donne'.

To be told that liberal education is concerned with certain specified forms of knowledge, the essential characteristics of which are then detailed explicitly as far as possible, he maintains is to be given a clear understanding of the concept and one which is unambiguous as to the forms of thinking, judgement, imagination and communication it involves. He gives A.D.C. Peterson's definition in the Gulbenkian Foundation Report, Arts and Science Sides in the Sixth Form, as a much closer definition of a liberal education then the Harvard Committee's Report.
Peterson avoids the term 'knowledge' to be 'free of any claims of distortion or bias' and develops the concept as one 'that develops the intellect in as many as possible of the main modes of thinking'.

Peterson's 'modes of thinking' concept is greatly developed by Hirst. He identifies four parallel forms of mental development which can only be distinguished, in the last analysis, in terms of the public features that demarcate the areas of knowledge on which they stand.

He proposes that the logical, empirical, moral and aesthetic forms of understanding are distinct from each other only by their distinctive concepts and expressions and their criteria for distinguishing the true from the false and the morally good from the bad. In this he suggests a new 'harmony' in a logical relationship between the concept of 'mind' and the concept of 'knowledge'. Thus he considers the achievement of knowledge involves the development of mind, that is the self-conscious, rational mind of man.

To have a rational mind implies for Hirst experience structured under some sort of conceptual scheme. He considers that manifestations of consciousness are intelligible by means of a conceptual apparatus. Further, whatever private awareness there may be, it is by public symbols he believes that concepts are articulated.

As the symbols derived from experience can be used to examine subsequent experience he explains assertions are possible which are testable. There are thus public criteria. It is by the use of such tests that for Hirst the concept of knowledge arises. Knowledge arises 'from the formulating and testing of symbolic expressions ... which
are held for public sharing.\footnote{14} It is within the cognitive framework of these public criteria that he sees the life of man being patterned and ordered. Without it he considers everything would be unintelligible.

Knowledge can only be understood in terms of the objective features with which it can be associated. Thus for Hirst the forms of knowledge are the basic articulations whereby the whole of experience has become intelligible to man. 'They are the fundamental achievement of mind.'\footnote{15}

Since the mind is not an organ with its own inbuilt forms of operation the distinctions between the various forms Hirst bases entirely on their particular conceptual, logical and methodological features.

The justification of a liberal education is thus in terms of the nature of knowledge. The different forms have different conceptual, logical and methodological categorizations. Therefore the achievement of knowledge is the development of mind to encompass this 'trinity' of distinctive features for each distinct 'form' of knowledge. This, Hirst maintains, leads to a justification which must be made in terms of publicly rooted concepts and be assessable in terms of acceptable criteria.\footnote{16} These two principles are fundamental to the pursuit of knowledge in all its forms. Therefore the forms are the working out of the principles in particular ways.

Justification of any kind of knowledge he considers therefore involves using the principles in one specific form to assess their use
in another. Any activity can thus be examined for its rational character and for its adherence to these principles and is thus justified on the assumption of them. Justification outside the use of Hirst's two key principles he feels is logically impossible. The circularity of justification that is implied here he explains is the result of the inter-relation between the concepts of rational justification and the pursuit of knowledge. He therefore concludes that 'in a very real sense liberal education is the ultimate form of education.'\(^{17}\) Despite the absence of any metaphysical doctrine about reality Hirst's concept of liberal education closely parallels the original Greek concept. It is an education which is directly concerned with the development of the mind through rational knowledge in whichever form that may be.

This Hirstian concept of liberal education has, like the original Greek concept objectivity. It is a necessary feature of knowledge that there be public criteria for distinguishing between true and false good and bad, right and wrong. It is the existence of these criteria which Hirst explains give knowledge its objectivity. This in turn gives objectivity to liberal education, an education that aspires to free the mind from error and illusion.

Further, the determination of 'the good life' is by pursuit of rational knowledge in which actions are justified by giving reasons. Therefore, the forms of knowledge are directly concerned with moral understanding.

Thus the concept of liberal education as a whole Hirst shows is given a justification in its importance for the moral life. This
is not a distinct significance but a necessary consequence of what the pursuit of knowledge entails.

What Hirst Considers to be the Basic Philosophical Considerations for Liberal Education

At this point in the development of his argument Hirst asks the question 'What are the implications of this for the practical conduct of education?' He first tries to distinguish the various forms of knowledge and then tries to relate them to the organisation of the school curriculum.

He defines a form of knowledge as 'a distinct way in which our experience becomes structured round the use of accepted public symbols.' Since the symbols have public meaning he maintains their use is testable against experience and there is the progressive development of series upon series of tested symbolic expressions.

Hirst's forms begin in the various low level developments within our knowledge of the everyday world. From this he perceives their extension into the developed forms as being natural. In these developed forms he identifies four related distinguishing features:

(1) They each involve certain central concepts that are 'peculiar' to that 'form'. For example, gravity, photosynthesis and hydrogen are concepts in the sciences. Numbers and matrices involve mathematics whilst God and predestination involve religion.

(2) In a given form of knowledge these and other concepts form a network of possible relationships in which experience can be
understood. As a result the 'form' has a distinct logical structure. For example, the terms and statements of mechanics and historical explanations can only be understood in certain strictly limited ways.

(3) The 'form' has expressions or statements that are testable against experience such as in science, moral knowledge and the arts, though in the arts the number of questions is explicit and the criteria for the tests are only partially expressible in words, and thus are limited by the peculiarities of the form.

(4) The 'forms' have developed particular techniques and skills for exploring experience and testing their distinctive expressions. The symbolically expressed knowledge of the arts and sciences illustrates this.

Despite these four ways of distinguishing forms of knowledge this is not the limit to their explication, he feels. All knowledge involves the use of symbols and the making of judgements in ways that can only be learnt by tradition. He gives as examples the art of scientific investigation, the development of appropriate experimental tests, the forming of an historical explanation, the assessment of truth and the appreciation of a poem.

The acquisition of these 'forms' therefore he maintains logically cannot be fully realised in (solitary) isolation but must be learnt from a 'master' of the form, hence the terms 'discipline', 'disciple', and so on. The dividing lines between the 'disciplines', he contends cannot be easily drawn. The central feature is that they
can be distinguished by their dependence on some particular kind of test against experience for their particular expressions.

The sciences he argues depend crucially on empirical, experimental and observational tests. Mathematics depends on deductive demonstrations from certain set axioms. Moral knowledge and the arts involve distinct forms of critical tests, though these and the ways in which they are applied are only partially statable. Because of their particular logical features Hirst also classifies historical knowledge, religious knowledge and the human sciences as distinct disciplines.

Within these areas Hirst argues for making further distinctions. These are because groups of knowledge have centred on a number of related concepts or around particular skills or techniques.

Finally Hirst sets out his last three important classifications of knowledge:

(a) Those organisations of knowledge which are not themselves disciplines or subdivisions of a discipline, but complexes of knowledge from several disciplines. Hirst calls these 'fields of knowledge'. They are not concerned with developing a particular, unique structuring of experience and include such 'fields' as geography, engineering and curriculum study.

(b) Whilst for Hirst moral knowledge is a distinct form he feels no specialized subdivisions have been formed. He maintains political, legal and educational theory contain elements of moral knowledge and are about the best examples of this genre.
(c) He identifies certain 'second order' forms of knowledge which are dependent on the other 'primary' areas. For example, scientific studies of language, philosophical studies of meaning and justification would all seem to constitute distinct disciplines by virtue of their particular concepts and criteria of judgement in Hirst's view.

In summary, therefore, the Hirstian curriculum consists of a 'liberal education' in three principal areas:

(1) Forms of knowledge (subdivisible): mathematics, the physical sciences, history and the human sciences, religious study, literature and the fine arts, and philosophy.

(2) Fields of knowledge: theoretical and practical (may or may not include elements of moral knowledge).

(3) Moral knowledge: how to behave in practical situations.

Hirst's Views on the Planning and Practical Conduct of Liberal Education

Hirst does not see liberal education syllabuses and curricula simply in terms of knowledge and skills. He feels they should be constructed to introduce pupils to the interrelated aspects of each of the basic forms of knowledge and each of the several disciplines. He considers they must be constructed to cover the range of knowledge as a whole selecting material which is neither encyclopaedic nor too specialized.
What is being sought is, first, sufficient immersion in the concepts, logic and criteria of the discipline for a person to know the distinctive way in which it 'works' by pursuing these in particular cases; and then sufficient generalisation of these over the whole range of the discipline so that his experience begins to be widely structured in this distinctive manner.

Hirst feels that the goal of independent, rational thinking can only come from an education where the distinctive patterns of thinking have been taught instead of unrelated, questionable knowledge based on facts but not on processes.

It is this 'coming to look at things in a certain way' that he believes should be aimed at, not minute particulars (such as the dates of all the kings and queens of England or the table of chemical elements or atomic weights). Beyond this he feels an outline of the major achievements in each area will provide some grasp of the range and scope of experience that has thus become intelligible (for example critical appreciation in the literary arts.)

His liberal education curriculum includes some indication of the areas of overlap between the forms, particularly in the practical fields. This is most important, he feels, in moral education as he sees moral understanding as requiring the widest possible range of human understanding or knowledge.

He recognizes that the fields of knowledge are very often desirable as subjects because together they can be used to 'develop understanding of all the various forms of knowledge.' However, for Hirst it would be paramount that the forms within the fields be emphasized and not the fields themselves. 'A course in various fields
... will not ... be a liberal education unless that aim is kept absolutely clear.\(^{23}\)

This is not to say that he sees liberal education as the only form of education. He very significantly defines liberal education as

\[
\text{only one part of the education a person ought to have, for it omits quite deliberately specialist education, physical education and character training.}^{24}
\]

However, it is plain that for Hirst the academic side of the school curriculum and the practical and theoretical disciplines should all be squarely within the philosophical ambit of a liberal education.

He quotes Michael Oakeshott as giving the final word on the subject. It is not

\[
\text{an enterprise designed to yield an extrinsic profit [such as a certificate], a contest where a winner gets a prize ... it is an unrehearsed intellectual adventure ... an initiation ... in which we learn to recognize ... to distinguish ... and in which we acquire the intellectual and moral habits ... which, in the end, give place and character to every human activity and utterance.}^{25}
\]
Footnotes Chapter 1


2. *ibid*

3. *ibid* p. 31

4. *ibid* p. 32

5. *ibid* p. 33

6. *ibid*

7. *ibid* p. 34

8. *ibid*

9. *ibid* p. 35

10. *ibid* p. 36

11. *ibid* p. 38

12. *ibid*

13. *ibid* p. 39

14. *ibid* p. 40

15. *ibid* p. 40

16. *ibid* p. 42

17. *ibid* pp. 42-43

18. *ibid* p. 44

19. *ibid* p. 45

20. *ibid* p. 47

21. *ibid*

22. *ibid* p. 53

23. *ibid* p. 51

24. *ibid*

25. *ibid* p. 55
CHAPTER 2

A STUDY OF PHILIP H. PHENIX'S 'REALMS OF MEANING'.
Introduction

Like J.A. Bruner, Phenix perceives human learning as being related to the structures of knowledge and the processes of disciplined enquiry. His aim in writing *Realms of Meaning* was to

'attempt to elaborate a philosophical theory of the curriculum for general education based on the idea of logical patterns in disciplined understanding.\(^1\)

He is explicit that in using the term 'meaning' he not only embraces the processes of reasoned thought, but the life of feeling, conscience, inspiration and other processes not retained in the strict sense. Meaning, he suggests, has four dimensions. Firstly, he maintains there is that of inner experience, including the quality of reflectiveness, self-awareness and self-transcendence, which he asserts all varieties of meaning exemplify. Secondly, he suggests there is the dimension of rule, logic and principle. Thirdly, there is the dimension of selective elaboration, which he argues is limitless in extent theoretically, but in practice limited by what is perceived as significant with an inherent power of growth and elaboration. Finally, there is the dimension of expression, for the meanings he is interested in are not private property, but are communicable through symbols, which are objects that stand for meaning.

Phenix organizes the scholarly disciplines in terms of their logical patterns into nine generic classes. He proposes that every meaning has two cognitive aspects, 'quantity' and 'quality'. That is to say, knowledge consists in a relation of the knower to some range of things known, and each relation, he suggests, is of some kind.
He then argues that 'quantity' exists in three degrees: 'singular', 'general' and 'comprehensive'. In other words it is either of one thing, or a selected group or of a whole totality. In turn he proposes a trinity of distinct 'qualities' of meaning: 'fact', 'form' and 'norm', by which he means what actually exists, what may exist and what ought to exist respectively.

By combining the various aspects of 'quantity' and 'quality' Phenix thus infers his nine generic classes of meaning, which he then reduces to six 'realms', treating the two normative classes together under 'ethics', and the three comprehensive classes together under 'synopytics':

(1) Symbolics
(2) Emprics
(3) Aesthetics
(4) Synnoetics
(5) Ethics
(6) Synoptics

Each 'realm' and each of its constituent 'subrealms' he proposes may be described by referring to its typical methods, leading ideas, and characteristic structures. These features may be exhibited both in their uniqueness for each realm or subrealm and in their relationships and continuities with other types of meaning.

(1) Symbolics

This realm he suggests consists of ordinary language, mathematics and various types of what he terms 'non-discursive symbolic forms', such as gestures, rituals, rhythmic patterns and the like. Meanings in the symbolic realm are contained in arbitrary symbolic structures with socially accepted rules of formation and
transformation created as instruments for the expression and communication of any meaning whatsoever. These symbolic systems he proposes in one respect constitute the most fundamental of all the realms of meaning in that they must be used to express the meanings in the other realms.

(2) **Empirics**

The realm of empirics includes for Phenix the sciences of the physical world, of living things and of man. These sciences provide factual descriptions, generalizations and theoretical formulations and explanations which are based on observation and experimentation in the world of matter, life and mind. They express meanings as probable empirical truths framed in accordance with certain rules of evidence and verification and making use of specified systems of analytic abstraction.

(3) **Esthetics (sic)**

In this realm he includes the various arts, such as music, the visual arts, the arts of movement, and literature. Meanings in esthetics he argues are concerned with contemplative perception of particular significant things as what he terms 'unique objectifications of ideated subjectivities'.

3
(4) Synnoetics

The realm of synnoetics embraces for Phenix what Michael Polanyi calls 'personal knowledge' and what Martin Buber calls the 'I-Thou' relationship. He derives the term from the Greek 'syn' (= 'with') + 'noesis' (= 'cognition'). Thus he infers synnoesis signifies 'relational insight' or 'direct awareness'. It is analogous in the sphere of knowing to sympathy in the sphere of feeling. This personal or relational knowledge he proposes is concrete, direct and existential and may apply to oneself, to other persons or to things.

(5) Ethics

In the ethical realm he includes moral meanings that express obligation rather than fact, perceptual form or awareness of relation. In contrast to the sciences, the arts and to personal knowledge, for Phenix morality has to do with personal conduct that is based on free, responsible deliberate decision.

(6) Synoptics

This realm Phenix devises to refer to meanings that are comprehensively integrative. In it he includes history, religion and philosophy. These disciplines combine empirical, aesthetic and synnoetic meanings into coherent wholes. Historical interpretation he argues, comprises an artful recreation of the past, in obedience to factual evidence, for the purpose of revealing what man, by his deliberate choices, has made of himself within the context of his given circumstances.
Religion Phenix describes as being concerned with ultimate meanings, that is with meanings from any realm whatsoever, considered from the standpoint of such boundary concepts as the Whole, the Comprehensive and the Transcendent.

Philosophy, he suggests, provides analytic clarification, evaluation and synthetic coordination of all the other realms through a reflective conceptual interpretation of all possible kinds of meaning in their distinctiveness and their interrelationships.

Explication of the six 'realms'

The First Realm: Symbolics

(1) Ordinary Language

This 'realm' is characterized for Phenix by arbitrary symbolic structures exhibiting what he calls 'certain customary rules of construction and interpretation'. By the term 'ordinary language' Phenix means the forms of discourse in everyday speech and writing. Technical languages deliberately created for special purposes are not included.

There are of course many languages or symbolic systems he points out. Knowledge of a language means that a person is able to use meaningful symbols for communication. Therefore knowledge of a language comprises all the elements: use, meaning, symbol and communication. The test of a person's knowledge of a language Phenix argues is whether or not he can use it. Speaking words and reciting grammatical rules is meaningless unless they can be organized into
intelligible discourse. The objective of using language is communication. It is a binding force in society. Through language communities are created and sustained.

Language behaviour and the language community are, he maintains, just the outer face of language. The inner face is meaning. Language is not just a system of signals to which a properly constituted organism responds. It constitutes meanings.

What Phenix terms 'ideation' or the putting together of thoughts and ideas (a concept borrowed from Noam Chomsky) intervenes between word and act. Speech, therefore, is not a stimulus to action. It is its content, an inner experience of meanings to which a person's deeds are related. It follows, therefore, that a person knows a language only if he understands its meanings, and not if he merely responds automatically to verbal signals.

The meaning-content of a language he argues is expressed by symbols and these symbolic expressions have certain characteristic structures. The subject matter of language is the formal structures of symbols by which meanings are expressed.

Knowledge of language is knowledge of particulars, but on the other hand he proposes that it is general in the sense that the sounds, meanings and grammatical forms are all classes of similar particulars. A person can be said to know a language only to the extent that he has practical competence in both the particular and the general aspects mentioned above.
For Phenix, to learn a language is to master the formal symbolic systems by which the meanings of the particular community of discourse are expressed. The distinctive logic of language is this abstraction, which he describes as

the source of its power to express an infinite variety of experiences and to represent the real world in all its depth and complexity.\(^5\)

By this 'miracle of language' the boundless world is opened to shared understanding.

(2) Mathematics

Phenix connects mathematics with the languages because like the languages it is a collection of arbitrary symbolic systems. While like ordinary language knowledge of mathematics consists in the ability to use symbols to communicate meanings, there are significant differences between the two in emphasis. He argues that while the uses of ordinary language are largely practical, mathematics is not primarily practical, nor is it created as a major basis for social cohesion. It does have practical uses, particularly in science and technology, but these practical uses are not of the essence of mathematics as the social uses of ordinary discourses are.

Mathematical symbolisms are essentially theoretical. They constitute an intellectual discipline, the forms of which are not determined by the exigencies of adjustment to nature and society. Unlike ordinary language mathematics is not chiefly concerned with the community's adaptation to the actual world of things and people.
Mathematical symbolisms he argues occupy an independent, self-contained world of thought. The realm of mathematics is that of 'pure' symbolic forms, 'the applications of which, no matter how useful, are secondary and incidental to the essential symbolic meanings.'

Phenix defines it another way as a language of complete abstraction. Unlike ordinary language, knowing mathematics concerns knowing about the subject. One really knows the subject only if he does his mathematics with self-conscious awareness, examining and justifying each step ... in the light of the canons of rigorous proof.

In one more crucial respect mathematics for Phenix is other than what is usually designated a language. Besides the 'linguistic' features of a means of expression and communication using written or spoken symbols it includes what he terms 'chains of logical reasoning.' It is a discipline in which formal symbolic systems are constructed by positing certain undefined terms (elements, sets, rules of combination), elaborating further concepts by definitions (conventions), adopting certain postulates (concerning both the undefined and the defined terms), and then, using the principles of logic, drawing necessary deductive inferences, resulting in an aggregate of propositions called 'theorems'.

(3) Nondiscursive symbolic forms

To say that ordinary languages or mathematics are 'discursive' is to say that they are used for communicating ideas in a consecutive,
connected fashion, following the principles of common logic. What he calls the 'nondiscursive' symbolic forms are used in all the arts and for the expression of feelings, values, commitments and insights in the domains of personal knowledge, metaphysics and religion.

In these fields the aim is not literal statement but figurative expression. The appeal is principally to the imagination rather than to consecutive argument. In the non-discursive domains language is used to express personal subjectivity. In the discursive domains language is used outwardly; in the non-discursive it is used inwardly.

He quotes A.N. Whitehead and S. Langer who have defined this contrast by means of the concept of 'presentational immediacy'. That is, in the discursive forms meanings unfold in sequential argument; in the non-discursive forms meanings are presented in direct or immediate insight. This is not to infer, Phenix argues, that the non-discursive forms have no logic. They have their own distinctive patterns, characteristic orders and relationships.

The non-discursive symbolisms are chiefly used to express meanings in the realms of aesthetic experience, personal knowledge and synoptic insight. They are also sometimes used in practical affairs and ordinary social life, as in the case of signals, manners, gestures and rituals, when the purposes of communication are best served by direct presentation of a form instead of by reasoning to a conclusion.

He calls this 'particular sensory objectifications of subjective states', and categorizes nine different types of this form:
(1) **Signals:** Although understood literally and logically are nondiscursive because they are understood reflectively. Examples are bells, whistles, coloured lights and 'natural' signals such as a dog barking or a snake hissing.

(2) **Bodily gestures:** These are sometimes signals but at other times are symptoms of inner conditions.

(3) **Facial expressions:** The same for (2) above applies to facial expressions. Both are important cues to ordinary language understanding.

(4) **Manners and Customs:** Actions are often culturally determined, such as the myriad of acts between parents and children symbolizing respect, authority and freedom, dependence and independence, responsibility and other aspects of status and expectation.

(5) **Ritual:** This is more stylized and less individual than gesture. It expresses through symbolic acts meanings at a deeper level than everyday experience. Most are communal and revolve around 'rites de passage'.

(6) **Graphic or Object-symbols:** These are bearers of meaning that exceed the bounds of ordinary logic. Examples are flags, stars, crescents, crosses, astronomical signs and so on.

(7) **Dreams:** This field is a uniquely significant class of symbols which is just beginning to become accepted as 'important communications by ourselves to ourselves' (or at least our
psychanalysts), thanks to the developmental energies of Fromm and Jung on the pioneering work of Freud.\textsuperscript{9}

(8) **Myths, allegories, parables and fairy tales:** Although these use ordinary language they communicate non-discursive meanings by imparting the figurative or metaphorical sense rather than the literal sense of ordinary discourse. This group of non-discursive symbolisms is by no means a sharply defined group. It overlaps with the domain of literature.

(9) **The forms in which the other arts are expressed:** Harmony, tone and rhythmic conventions in music, colour, texture and movements organized according to conventions in the visual arts and characterisation, setting and literary devices such as simile and cadence in literature are all non-discursive in effect. The list of forms, however, is much greater than this.

**The Second Realm: Empirics**

(1) **Physical Science**

For Phenix although physical science requires ordinary language and mathematics for its expression it is concerned with fact rather than symbolic conventions. Knowledge in science is of the actual world as it appears to be in sense experience and as it is inferred to be on the basis of this experience. It is aimed at the discovery of truth, and so, he argues, conventions are never true or false, they are only more or less convenient or appropriate to specified purposes.
Science is characterized by descriptions which are essentially abstract. In physical science descriptions of the world are experienced through the activity of physical measurement of such things as mass, length and time. This provides scientific data through which generalizations, laws and theories can be formulated.

These are a result of hypotheses, experiments and observations. The principles, generalizations and laws are not directly inferred from the data of observation. The observations do not test the truth or falsity of hypotheses, but rather their scope and limitations.

(2) Biology

Meanings in biology are of the same general logical type as meanings in physical science, Phenix suggests, in that they are empirical descriptions of matters of fact, ideally formulated in terms of exact laws and explanatory theories of great generality. The differences between the life sciences and physical science consist in the scope of their subject matter. Rather than being concerned with all matter-energy systems, biology only deals with those which are alive.

As it turns out, precisely delineating the class of living things, he points out, is in itself one of the central tasks of this empirical sub-realm. Briefly, he describes a thing as being alive if it sustains itself through dynamic interaction with its environment, using matter and energy from without in such a way as to preserve its own integrity and to reproduce its own kind.10
This is clearly a more limited domain than the physical sciences. It is an autonomous science with its own process of classification. This taxonomy, he explains, is based on an arbitrary judgement of similarity in structure, function and development, which is generally agreed on by most qualified biologists.

Classification is just one step in the search for meanings in biology. In the search for these meanings he explains, biologists use the method of natural history. Enquiry is directed at the question of how each particular kind of organism came to be what it was. The ruling idea of natural history is the concept of 'evolution', in which three concepts figure prominently: inheritable variations, adaptation and natural selection.

More general than the methods of taxonomy and natural history are the interrelated methods of structural and functional analysis, the former being to do with patterns of organization, the latter with processes or modes of activity.

Summing up, Phenix concludes, as in all science, biology is empirical, factual, descriptive and ultimately theoretical and general, yielding understandings both of individual living things and the multitude of kinds of animate creatures inhabiting the earth.

(3) Psychology

This empirical sub-realm, Phenix proposes, has a similar relationship to biology as biology to physical science in that it is dependent on and included in the second, yet remains autonomous within its own sphere. The subject matter of 'mind' sets it apart.
He points out the controversy that exists as to what 'mind' really is. Some regard it as an inner psychic reality directly known to the conscious person and not dependent on anything else. At the other extreme it is considered as nothing but the activity of the brain, which is nothing but a matter-energy complex wholly explicable by physical science.

In order to be objective he explains the observable behaviour of the higher animals forms a major part of the attempt to discover what is mind by observing how mind influences action. Formulations in this field rely heavily on skill in experimental design and in the interpretation of statistical data. Statistics are used as a means for direct quantitative descriptions of groups or populations. By 'correlation analysis' it is possible to formulate certain generalizations or laws.

Thus in common with the other sub-realms in the empirical realm psychology has meanings which Phenix shows are empirical, descriptive and theoretical. However, he adds the caution that there is a major still unresolved issue in this field. That is the degree to which the high abstractions and quantifications of the natural sciences can do justice to the facts of mind, especially in human beings.

(4) Social Science

Phenix identifies five principal social sciences: social psychology, sociology, anthropology, economics and political science. They are all clearly in the domain of the sciences of man, he argues. The effort to identify with the concepts of the natural sciences is
not as evident as in psychology. Phenix argues that geography, too, may be included, being a descriptive discipline, but he omits it because its ideal is not generalizations or 'laws'.

Phenix describes social science as dealing with 'the world of culture and society, a world of which human beings are the architects'.\(^{11}\) For this reason abstractions from the world of natural science are inappropriate. Each of the social sciences has developed its own descriptive terminology, scientific methodology and concepts. For this reason he concludes the social sciences are similar enough to the natural sciences to be included in the empirical realm.

Above all, however, he maintains that the social sciences are policy sciences, since all are concerned in some way with the deliberate artifacts of culture ... rather than with the given facts of nature. In this respect meanings in the social sciences are similar to those in the realm of symbolics, and the empirical and symbolic domains overlap.\(^{12}\)

The Third Realm: Esthetics (sic)

Phenix sets the aesthetic meanings in the arts aside from symbolic and empirical meanings primarily because of their 'particularity' by which he means that in contrast to 'general' symbolic meanings the object of knowledge is the single, unique, individual 'particular' form.

The primary concern is not with types of things as in symbol-systems or general laws and theories, but with individual objects which are unique and essentially incomparable.
Knowledge in the aesthetic realm is gained by 'acquaintance' and not by 'description'. Each work of art contains its own meaning and speaks for itself. Its significance cannot be embodied in separable symbolic patterns. Aesthetic understanding is 'immediate', that is referring directly to the objects perceived. Although, Phenix maintains, aesthetic objects may contain propositions, as in drama, unlike in the sciences these propositions merely contribute to the content of the work of art and their truth or falsity is not the measure of the aesthetic meaning of the work.

That is not to say, he states, that science and art are mutually exclusive. Deep aesthetic meaning may be found in things studied scientifically and the theoretical structures of science may themselves aesthetically admirable. Likewise aesthetic forms such as the sonata or harmony can be analyzed empirically, but it is the kinds of understanding gained that set these realms apart, the difference between the general-descriptive and the individual-perceptive modes.

For Phenix the aesthetic meanings are best discovered in connection with a study of the arts, because he believes it is through them that aesthetic meaning is most directly and deliberately cultivated.

Of particular significance are the fine arts, traditionally consisting of music, poetry, painting, sculpture, architecture, dance and drama, which have been commonly regarded as the main source of the aesthetic heritage of mankind.
He acknowledges the practical arts and crafts as exercising a much more persuasive influence on the aesthetic consciousness of mankind. However, he feels the fine arts provide the basis for the analysis of what he terms the 'distinctive varieties of esthetic signification in their most pure and unambiguous forms.'\textsuperscript{13} They are to the aesthetic cultivation of mankind, he feels, what the pure sciences are to the general development of empirical competences.

For the sake of simplicity he groups the seven fine arts mentioned above into music, visual arts, arts of movement and literature.

(1) Music: Meanings in music are contained in individual musical compositions. These compositions Phenix describes as 'patterned sequences of sounds deliberately created for an esthetic purpose.'\textsuperscript{14} They are to be listened to for their own intrinsic interest and not for any ulterior utilitarian ends.

The meaning of each musical composition belongs to that composition alone and is not derived from its membership in any collection of such compositions. The musical sounds directly impart their own qualitative meanings. They do not stand for ideas, as do the elements of intelligible speech.

The meaning of music, he suggests, is most intimately connected with the rhythmic sense. The meaning is not simply a matter of intellectual comprehension. It is also an act of organic response in which 'the vital rhythms upon which life depends are brought into relation to the sound patterns of music.'\textsuperscript{15}
The ultimate object of aesthetic attention is not the qualities disclosed by analysis of such things as melodic motifs or fugal development, but the work as a whole. Hence, Phenix infers, if a piece of music is to qualify as a composition worthy of aesthetic interest, it must have a certain organic unity among its parts. The source of significance is the single, complex whole.

(2) **The Visual Arts:** Phenix includes the fields of drawing, painting, sculpture, graphic arts and architecture in this domain. They differ from music in that they have a degree of individual permanence. They are concrete rather than ephemeral, persisting only in memory and needing to be recreated (or electronically reproduced) to be enjoyed.

In common with all the arts the visual arts create single objects that articulate significant patterns of subjective feeling. Unlike music, the primary mode of perception is visual, not aural. Space is of crucial importance together with the material qualities and their integration into a whole through the element of 'design', which might incorporate many diverse concepts such as depth, tone, texture, perspective, colour, light and shade, mass, volume and style. Lastly its meaning consists in its individuality, its uniqueness.

He extends the view of the eminent art historian Gombrich that 'there is no such thing as art. There are only artists.' For Phenix 'there are not even artists, but only particular works of art.'

(3) **The Arts of Movement:** This subrealm is included in Phenix's epistemological taxonomy because he perceives it as being vital for
the expression and perception of human meaning on the grounds that the sense of movement is inherent in every human activity. He argues that all perceptions of the surrounding world are accompanied by motor reactions, and the earliest and most elemental of all the arts was therefore understandably the dance. It is the primordial art form, he maintains.

By the term 'arts of movement' he includes all intentional activities, undertaken for aesthetic purposes, in which the desired expressive effects are communicated by the movement of the human body.10 He sees them as the foundation for physical education, health and recreation.

The fundamental concept in this field is the 'organic unity' of the person. Of all the arts, he believes, they best exemplify the concept of immediate perception, since the person's own body is the instrument of expression and response.

The goal of such education is personal wholeness, a rejection of the concept of the duality of mind and body. For Phenix this is the essence of health.

An important part in the achievement of this he believes is the spirit of play, which Johann Huizinga has shown is a powerful force in the creation of culture in all its aspects. He accepts Huizinga's critical analysis of the meaning of play, to which he (Huizinga) attributes eight characteristic features:
(1) It is free, not obligatory.
(2) It is concerned with a make-believe world.
(3) It occurs within a limited space and time and is thus a definite, finite object.
(4) It has order.
(5) Play lives on contest and tension.
(6) It proceeds according to rules which are absolutely binding equally on each player.
(7) Play activities tend to form enduring communities.
(8) Play associations tend to fulfil a human hunger for acceptance and group membership.

In conclusion Phenix sums up the arts of movement as activities which are enriching for aesthetic meaning, both in individuals, and in the life of society.

(4) Literature: Of all the arts Phenix sees literature as the most influential since language affords the literary artist a commonly understood and widely accepted medium. In contrast the other arts make use of symbolic forms not so generally understood. Despite this, the medium of language in literature is often misunderstood as literary meanings are not taken figuratively but literally.

He argues that the literary use of language is non-discursive in that it is deliberately exploited for expressive effect to stimulate contemplation and the imagination. As in the other aesthetic fields the subject matter is primarily the individual work as a whole, whether poem, novel, play or essay. In all these forms aesthetic excellence
is a consequence of skillful composition, a 'figurative articular representation of significant intersubjective abstractions.'

The Fourth Realm: Synnoetics

In his introduction to this realm Phenix proposes that all meanings consist of certain discriminations, organizations and interpretations of experience. Each realm includes what he calls aspects of experience of a particular logical type which result from special kinds of selection and focusing (sic) within the complex totality of experience.

In his fourth realm of knowledge the selection and organization of experience is of a distinctively different logical kind. Meanings in this realm are a person's direct insight into other beings (or oneself) as a concrete whole existing in 'relation'. Whereas in the first three realms knowledge requires 'detachment', synnoetic meaning requires what he calls 'engagement'. In other words the knower effects a direct meaning.

Knowledge in symbolics, empirics and aesthetics is 'objective', depending on a 'subject-object relationship'. Synnoetic meanings relate subjects to subjects. Objectivity is replaced by what he calls 'intersubjectivity'. There is no separation between subject and object, but a personal meeting takes place.

Meanings in this personal realm are 'concrete' rather than 'abstract', in the sense that relational understanding is not a fragment, a perspective or a transformation of some other more complex experience. Rather, it is itself the 'prototype of experience' in its wholeness or concreteness.
He posits Martin Buber's discussion of the 'I-Thou relationship' as being central to an understanding of meaning in the realm of personal knowledge. According to Buber, fullness of being consists in 'relation'. In the 'I-Thou' relation the attitude of manipulation is absent. One does not try to use the other with whom one stands in relation, but rather affirms and respects the other's being. Freedom is essential.

'Love' is a fundamental concept in this, by which is not meant a subjective experience, state of feeling or passion. It means simply the reality of the active caring, responsible relation of an 'I' to a 'Thou', a concept identical to Christian 'love' but not acknowledged as such.

In Buber's view personal relations can also occur in our life with nature and in our spiritual life. This personalization of relationships underlies the basic ideal of 'reverence for life'. As for life in the spiritual sphere, Buber holds that every 'I-Thou' relation is grounded in a relation to the eternal Thou.

Phenix notes that each of the arts can aid in the deepening of personal knowledge. Among them, drama especially stands out as a means for growth in personal insight. He sees great drama, and particularly tragic drama, as revealing the essential truths of life. Comic drama, too, he believes achieves this, many critics maintaining it to be a more authentic source of personal knowledge than tragedy. Nathan Scott argues that the tragic hero is an extremist who forgets that he is a man, and not an angel. Thus, tragic man cannot serve as well as comic man to reveal the whole truth about the human situation.
Phenix maintains that persons grow to healthy maturity through their encounters with others. However, choices may be made in which the relations of freedom and love are denied. In that event, he argues, personal meanings are impaired and the self loses its integrity and creativity. To restore personal wholeness, therapeutic methods have been devised, together with theoretical models of the human psyche, which are intended to guide the practice of healing. These conceptual patterns, enriched by insights from phenomenology, existentialism, theology and above all from literature he argues, provide a basis for disciplined understanding in the synnoetic realm, making possible reliable education in a domain that is of fundamental importance for the life of man and society.

The Fifth Realm: Ethics

The essence of ethical meanings, or of moral knowledge, is right, deliberate action, that is, what a person ought voluntarily to do.\(^22\)

Phenix compares and contrasts ethics with the other realms to show its unique logic, and therefore status as a separate realm. In the realm of symbolic meaning, he proposes, the word 'ought' in the statement 'in English-speaking countries we ought to use English', is very different from the 'ought' in a moral sense.

To show the difference between ethics and empirics Phenix quotes David Hume, who two centuries ago pointed out that one can never correctly make an inference from what is to what ought to be nor vice-versa. Fact and moral obligation are of essentially different logical orders. For Phenix, ethical concepts are not used to designate
properties of things. Instead they are 'gerundives', by which he means that they are based on the idea of 'worthy-of'. For example, the value concept 'truth' is a gerundive because it means 'worthy of credence'.

Turning to the aesthetic realm he proposes that ethical meanings differ from aesthetic ones in that the latter arise from disinterested perception, while the former are concerned with active, personal commitment. In the arts things are created for purposes of contemplation. In ethics acts are done for purposes of participation. Furthermore, artistic works are unique and individual, while moral acts are generally though to exemplify universal principles of 'obligation'.

The most important difference between aesthetic meanings and ethical meanings for Phenix is that in the former the basic ethical idea of 'right' or 'obligation' is absent. To maintain the relative independence of the two realms is not to deny the possibility of judgements from one realm to the other. A work of art can be judged on moral principles. Similarly moral principles may be judged from an aesthetic viewpoint.

Finally, comparing the ethical realm with the synnoetic realm, he proposes that while both are realms of decision, commitment and active engagement the former is abstract and general, while the latter is personal. Moral choice does have personal elements in it, in that the whole being of the person is expressed in the decision to act. However, it is impersonal in that the morality of the act is not a function of the person in his singularity, but of the situation. Above all he maintains, ethics differ from personal knowledge in respect to
the element of 'obligation' or 'what ought to be done'. The 'ought' is not individual but universal.

The Sixth Realm: Synoptics

For Phenix the term 'synoptics' comprises meanings which have an integrative function, uniting meanings from all the 'realms' into a unified perspective; that is, providing a 'single vision' or 'synopsis' of meanings. The chief synoptic disciplines are history, religion and philosophy, each achieving the integration of meaning in a different way. History imaginatively recreates the past. Religion attempts to disclose ultimate meanings. Philosophy critically interprets expressed meanings.

He proposes that while each could without serious objection be treated as a separate realm, they share one fundamental purpose of integrative understanding. As with ordinary language and mathematics in the realm of symbolic meaning, they differ only in the manner in which they effect understanding.

(1) History: The central category for Phenix in the field of history is time. The subject matter is human events of the past. It unites what he calls the 'abstract objectivity of parametric time' in science and 'rhythmic time' in language and the arts with the 'concrete subjectivity of time 'in personal relations and particular moral decisions yielding a realization of 'whole time'.

He proposes that the unit of historical inquiry is the 'event', 'happening' or 'episode'. The task of the historian, he explains, is
to describe, order and interpret events which are concrete in the form of convincing stories. These events are conceived as outcomes of personal existential decisions at particular times. Hypotheses about what happened are formed by the imaginative recreation of the past, using relevant empirical knowledge from every field, together with personal understanding and ethical insight. Finally, these hypotheses are tested and progressively improved by checking them with the effects of the past in the form of present evidence.

(2) Religion: The common element uniting all the realms in, Phenix argues, is the concept of 'ultimacy', by which he means 'such ideas as infinitude, absoluteness, the unlimited, transcendence, perfection, completeness, all-inclusiveness, the Supreme and others.'

The content of religion may be anything at all, provided it is regarded from an 'ultimate' perspective. Religious meanings thus he infers comprehend and include all things, and a religious attitude with respect to any given thing is to consider it in the light of all that is, that is from the standpoint of the Whole.

The basis of understanding, Phenix proposes, is 'faith', and not the forms of understanding that characterize the other realms. Faith is the 'light that shines from the Whole', he argues, which is the 'Comprehensive that comprehends or hold together all things in a transcendent unity' and is itself not comprehensible within any finite entity since it is infinite.
Many different symbolic forms are used as the vehicles of faith. Rituals and sacraments, he suggests, are attempts to approach the divine reality which is at once the ground of personal being, the law of life, the foundation of hope and the creative source of all things.

(3) Philosophy: For Phenix this synoptic field is concerned with every kind of human experience and not with any one domain. Nothing, he asserts, is beyond the limits of philosophic scrutiny. It is thus, he infers, the most inclusive of the synoptic disciplines.

Whereas it is the function of the other fields of knowledge to express meaning, it is the distinctive function of philosophy to interpret meaning. Thus, the meanings expressed in philosophy are 'meanings of meanings', or what he calls 'metameanings'.

The method of philosophy he suggests is essentially that of 'dialectic', by which is meant a process of conceptual examination by raising questions, proposing answers and developing the implications of those answers in continuing cycles. Thus, he explains, the philosopher is committed to continued inquiry. This is essentially a process of

analysis, evaluation and synthesis of meaning into principles and laws of great generality, relating widely diverse fields of experience through some common conceptual scheme. 26

Thus, he states,

philosophers create synoptic views of the entire range of expressible human experiences, insofar as they can be interpreted in the categories of rational discourse. 27
Footnotes Chapter 2

2. ibid p. 5
3. ibid p. 7
4. ibid p. 61
5. ibid p. 70
6. ibid p. 72
7. ibid p. 73
8. ibid p. 82
9. ibid p. 89
10. ibid p. 106
11. ibid p. 127
12. ibid p. 133
13. ibid p. 144
14. ibid p. 145
15. ibid p. 147
16. ibid p. 154
17. ibid p. 154
18. ibid pp. 165-6
19. ibid p. 185
20. ibid p. 193
21. ibid p. 210
22. ibid p. 215
23. ibid p. 236
24. ibid p. 244
25. ibid p. 245
26. ibid p. 257
27. ibid p. 257
CHAPTER 3

A SYNOPSIS OF THE MAIN IDEAS, ISSUES, CONCEPTS AND PROPOSITIONS THROUGH WHICH THE 'FORMS' AND 'REALMS' MAY BE COMPARED
Phenix's 'Realms of Meaning' and Hirst's 'Forms of Knowledge' can best be compared on the basis of their views of 'mind', 'knowledge', 'meaning', understanding' and 'reality' and the relationships between them. Each writer uses the concept of 'mind' in a comparable manner. For Hirst it is the 'self-conscious, rational mind of man'; for Phenix 'mind' is synonymous with 'reason'. Hirst and Phenix use the concepts of 'knowledge', 'meaning' and 'understanding' in vaguely similar ways, but Hirst does not use his concept of 'knowledge' to include existential experience or what Phenix calls 'synnoetics', his fourth realm of meaning. The concept of 'reality' is essentially the same for both men, though Hirst explores its inter-relationship with the concept of 'knowledge' more assiduously than does Phenix.

Lastly the sum total of the 'realms' or 'forms', what Phenix calls 'general education' and Hirst calls 'liberal education' can be compared as the bridges through the use of which the connections between mind, knowledge/meaning/understanding and reality can be made.

Phenix's Concept of Meaning

Phenix introduces 'meaning' as a unifying concept to bind together the broader connotations of the idea of 'reason'. In his own words he uses it 'to express the full range of connotations of reason or mind'. For Phenix there are different 'meanings' contained in activities for the body, in perception, in logical thinking, in social organisation, in speech, in artistic creation, in self-awareness and awareness of others, in purposive decision, in moral judgement, in the consciousness of time and in the activity of worship.
As mentioned previously, he delineates four dimensions of 'meaning', using the term to embrace not only the patterns of rational thining, but the life of feeling, conscience, inspiration and other processes Hirst would not include in that concept.

The first of Phenix's four dimensions of meaning is 'experience', by which he means the sense in which it pertains to human consciousness and, refers to the 'inner life' of man. This 'inner life' he sees as having the peculiar quality of reflectiveness or self-awareness. As a reflective experience, Phenix sees meaning as presupposing a basic principle of duality, or of self-transcendence.

In self-consciousness a person both is himself and yet stands outside himself, Phenix maintains. He is at one and the same time 'both subject and object, knower and known, agent and patient, observer and observed.' This duality he believes is what enables a person to 'know' anything at all. One 'knows' something, he proposes, if one is at one and the same time distinct from and identified with what one knows. For Phenix all perception of relationships is based on 'this duality. A relationship is 'identity-in-difference', by which he means two things are united in the one act of consciousness in order that their 'non-identity' may also be recognised.

All the varieties of human meaning exemplify this self-transcendence, which for Phenix is the secret of man's unique adaptability. This inherently dual quality of experience he sees as the source of all that is characteristically human.
Phenix's second dimension of meaning is that of 'rule', 'logic' or 'principle'. He proposes that the many types of meaning are distinguished from one another by some difference in characteristic form. Each type of meaning has its own rule that makes it one kind of meaning and not another. Each is defined by a particular logic or structural principle. Meaning is not an undifferentiated experience of awareness, he maintains. Consciousness is differentiated into a 'variegated array of logical types'.

Phenix's third dimension of meaning is 'selective elaboration'. He proposes that theoretically there is no limit to the varieties of meaning, as different principles of meaning formation can be devised ad infinitum and new combinations and nuances of rule can be imagined without limit. Since not all of these possible kinds are humanly important he contends that from the endless variety selection occurs. The types that are significant in actual human life are the ones that have an inherent power of growth and lead to the elaboration of the enduring traditions of civilization. These are the kinds of meaning that have proven fruitful in the development of the cultural heritage of mankind.

Whilst Phenix contends he could attempt an a priori analysis of possible classes of meaning and try to forecast which would prove most fertile, he concludes that it would be far more logical to benefit from the long experience of mankind and regard as most significant the forms of meaning that have actually demonstrated their fecundity.

He identifies these selected types of meaning by means of the 'specialists who serve as the guardians, refiners and critics of the
cultural heritage. Each of these men of knowledge he explains belongs to a community that is for the most part invisible, comprised of people united by common responsibility for a particular kind of meaning. Each such community has its characteristic discipline or rule by which the common responsibility is discharged. This discipline expresses the particular logic of the meaning in question.

What these men know is what Phenix sees as meanings. The operative kinds of meanings he sees are revealed in the work of linguists, mathematicians, scientists of various types, artists, critics, moralists, historians, theologians and philosophers who together form the world of scholarship.

On the other hand, he is at pains to point out that this does not assume that the universe of meanings is exhausted by the particular collection of meanings of any given civilization and represented by a corresponding collection of scholarly disciplines. Meanings wax and wane, he contends, as do the disciplines responsible for them. For this reason he concludes that meanings must be regarded as tentative and incomplete.

Phenix's fourth dimension of meaning is 'expression'. He states that meanings that have civilizing power are communicable through symbols, which are objects that stand for meanings. The possibility of what he calls symbolization, he believes is dependent on the unique human power of self-transcendence, for he contends that the dual quality of reflective awareness is required to understand a symbol.
The essence of a symbol he asserts, is that it is both identified with what it refers to yet is distinguishable from it. He gives the word 'tree' as an example. It is not a tree, yet by the power of thought stands for a tree. Symbolization also presupposes for Phenix self-transcendence in the awareness of a common world, for the symbols are taken as having the same or similar connotation to oneself as to others into whose being one imaginatively projects oneself.

The symbolic expressions of meaning he states are of particular concern to the scholarly communities exercising 'guardianship' over the different types of meaning, as the distinctive expressions and peculiar logic are essential for critical analysis and elaboration of the different domains of meaning.

As already stated in chapter two of this discussion Phenix then concludes that if the essence of human nature is in the life of meaning, then to promote the growth of meaning educators need to understand the kinds of meaning in order to construct the school curriculum on this basis. In this, what Phenix calls the 'life of meaning' is a very similar concept to what Hirst would call the 'pursuit of knowledge' or the 'development of mind'.

To achieve this Phenix divides the many scholarly disciplines into broad categories of meaning along the lines of general similarity of logical structure. His study of the logical patterns of the disciplines leads him to divide them into the nine generic classes of meaning previously referred to in chapter two of this discussion.
Where he differs from Hirst is that Hirst bases his forms on 'linguistic intersubjectivity' in looking at different propositional 'objects of knowledge' in different ways.

Phenix's classes of meaning it will be recalled derive from his use of the concepts of 'quantity' and 'quality' to refer to meaning, classical notions of logical differences which Hirst is severely critical of. These two logical aspects Phenix considers are of substantial significance to his theory. In summary, he identifies three degrees of quantity: 'singular', 'general' and 'comprehensive', by which he means knowledge is of one thing, of a selected plurality or of a totality. Furthermore, he identifies three distinct qualities of meaning: 'fact', 'form' and 'norm'. These are discussed in chapter two of this discussion.

The nine generic classes of meaning he proposes are obtained by pairing the three quantity aspects with the three quality aspects in all possible combinations. They are briefly characterized below and are associated with the discipline or disciplines to which Phenix feels they apply.

(1) 'General Form'. In this class he includes the disciplines that are concerned with the elaboration of formal patterns for general application in the expression of meanings. They comprise the various symbol systems of ordinary language, mathematics and logic, gesture, ritual and nondiscursive symbolic conventions.

(2) 'General Fact'. When his general forms are related to reality they express the kind of knowledge that he feels is the special
province of the sciences. These disciplines are concerned with material truth expressed in the general laws and theories of the real world as expressed in the natural and social sciences.

(3) 'Singular Form'. In this class Phenix includes meanings perceived in imagination without any necessary reference to actual fact, and as embodied in unique particular objects. This class of meanings he believes is basic to the various arts.

(4) 'Singular Fact'. This class of meaning is unique to Phenix and severely attacked by Hirst. It includes 'meanings' arising out of what Phenix calls 'concrete existence in direct personal encounter'. They are reflectively elaborated, he maintains, in existential philosophy, religion, psychology and some literature.

(5) 'Singular Norm'. In this class Phenix includes particular moral obligations within a given situation where one seeks for knowledge of what one ought to do. The discipline of morals for Phenix is concerned with the methods of making and justifying such decisions.

(6) 'General Norm'. For Phenix knowledge of singular norms and knowledge of general norms are closely associated since the latter is appealed to in justification of the former and the source for the latter. He distinguishes both singular and general norms by the quality of obligation. Further, although he states the ethical realm is not commonly divided into constituent disciplines, he suggests such a division is possible for theoretical analysis.
(7) 'Comprehensive Fact'. Phenix sees the study of reality from a comprehensive standpoint, including both the singularity of the unique event and the relationship of that event with other events, as the province of the discipline of history. He sees the historian's role as integrating a multitude of meanings of a symbolic, empirical, aesthetic and ethical nature into a 'synoptic' perspective of the past.

(8) 'Comprehensive Norm'. Phenix contends that when all kinds of knowledge are comprehended within a perspective controlled by the 'normative' quality, the resulting discipline is religion. This religious knowledge he maintains is usually thought to require an act of faith by which a total commitment is made to whatever is regarded as ultimately worthy of devotion. In this 'normative act' he sees all the various kinds of knowledge as being synthesized.

(9) 'Comprehensive Form'. Phenix suggests that a formal consideration of knowledge in all its kinds belongs to the discipline of philosophy. He describes the philosopher's task as being to interpret meanings in any discipline by the use of concepts of wide generality, thus affording a 'synoptic' view of all the ways of knowing.

For reasons that are only superficially stated, and not very convincingly at that, Phenix quite (unexplainably) decides to treat the two normative classes of his categories of meaning together under the category 'ethics', presumably because both include the feature of 'obligation' or what 'ought' to be done in given situations. However,
by the same logic his singular fact and form classes both include the
feature of intersubjectivity, yet these are not treated together. His
general fact and form classes both include the feature of measurement,
yet these are not treated together.

By inadequately explicating the reasons for his merging of the
two normative classes Phenix considerably undermines his theory. The
fact that he treats the three comprehensive classes similarly together,
without proper explication of his reasons, further weakens his
argument. In any case it is evident that the philosophical principle
of 'reducibility' which Phenix adheres to in some of his 'realms' is
inconsistently applied. For example, although the symbolic realm of
mathematics is widely acknowledged as irreducible in a dialectic sense,
the synoptic realm of history in many instances is reducible to other
realms. When, for instance one makes use of moral judgements in history
one is making use of the 'ethical' realm. When one uses statistics
one uses the realm of mathematics. When one makes use of archaeological
data one is making use of the realm of empirics and so on.

Hirst's Concept of Knowledge. This is intimately connected with the
concepts of 'mind' and 'reality' referred to in the introduction to
this chapter. 'Knowledge' for Hirst is only that which is 'public',
without which he maintains 'emotional experiences or mental attitudes
and beliefs, would seem to be unintelligible.'7 Unlike Phenix's
concept of meaning, Hirst's concept of knowledge does not include 'the
life of feeling, conscience, inspiration and other processes not
retained in the strict sense.'8
Because of this, of central concern to Hirst's concept is just what it is that one is classifying when one talks of 'knowledge'. He uses the term 'objects of knowledge' to indicate what he means. By 'objects of knowledge' Hirst means the logical objects of knowledge when that state of mind is being distinguished from others. In this sense he sees there being three types of 'logical objects':

1. Knowing people, places or things (that is knowledge with the direct object).

2. Knowing what is the case (that is a true statement or proposition). He uses the term 'knowledge - that' to describe this type of knowledge.

3. Knowing how or when to do certain things. He calls this 'procedural knowledge' or 'knowledge-how'.

Hirst does not consider knowledge with the direct object (intersubjective existential experience) to be a distinct type of 'knowledge' (which he feels is 'objective' and should be kept separate from all other states of mind.) He quite unequivocally separates types of knowledge from types of experience and feeling.

Hirst suggests that knowing is not an occurrent dispositional event or state of awareness at all. 'One knows all one knows when none of it is before one's mind.' He maintains that coming to know may be an experience, but the knowledge achieved at that moment is not to be confused with the concomitant awareness. He asserts that existential experiences are intelligible and occur only by virtue of the concept or concepts which they involve, but that does not make them states of 'knowledge'.
Hirst concludes that if it is knowledge other than 'knowledge-how' which one wishes to classify, it is 'knowledge-that' which one is concerned with, and through examination of particular types of logical thinking in this domain that the categories of knowledge can be identified.

For this Hirst has been severely rebuked by many educational philosophers. Pring, Soltis and others have accused him of being 'dangerously narrow'\(^{11}\) in this regard. By only recognising 'knowledge-that' or propositional knowledge Pring maintains that a consequence would be that art and literature would simply become subjects concerned with an appreciation of propositions rather than something to do and enjoy.

In addition morality would become moral judgement, literary criticism would supplant writing or enjoying literature. Pring argues that 'important though it is to know that certain statements are true, knowing how to do things is equally important.'\(^{12}\)

He continues 'Hirst is preoccupied with propositional knowledge ... [and this] imposes too many academic restraints on an otherwise educational programme.'\(^{13}\)

For Hirst since it is the objects of knowledge that are of principal concern then all the propositions that are being considered must be true and therefore in at least one sense of that term state facts. If true propositions are to be classified as 'true' and nothing else then it must be 'by virtue of their logically necessary features and not by any other characteristics they may appear to have.'\(^{14}\)
Therefore as far as Hirst is concerned Phenix's nine generic classes of meaning are irrelevant. The reasons why he believes this will be discussed in the next chapter of this discussion.

He suggests that the criteria that are necessary to their being true propositions are:

(1) That concepts are appropriately related in a logical structure so that propositions can be formed.

(2) That the propositions have 'truth-criteria'.

His concept of 'truth-criteria' is based on the idea of 'objectivity' through 'linguistic intersubjectivity'. In other words if something is to be accepted as public knowledge (i.e. it is objective' rather than subjective') then it is only through the use of publicly accepted and understood symbols that it is valid as knowledge. Therefore the 'truth-criteria' are in the public rather than the private domain. In other words, as he sees it if something is to count as 'knowledge' it must be publicly expressable and therefore publicly testable.

He suggests that the two features of knowledge of logical structure and truth criteria are not logically independent of each other. Indeed he sees the existence of any concepts that are not in some way logically related to truth - criteria as problematic. For Hirst where the classification of knowledge is concerned the existence of truth-criteria is totally necessary and that presupposes the existence of a related structure of concepts.
All aspects of meaning for Hirst necessitate the use of concepts and it is only by virtue of conceptualization that there is anything we can call meaning at all. He proposes that no concepts can be the basis of shared meaning without criteria for their application. The criteria for the application of a concept, say 'X', he suggests, are the criteria for the truth of statements that say that something is an 'X'. Thus, Hirst concludes that by this chain of relations,

'meaning necessitates concepts ... concepts necessitate criteria of application and ... criteria of application are truth - criteria for propositions and statements, the notions of meaning and true propositions.'

Therefore, for Hirst meaning and knowledge are logically connected.

Logically, Hirst sees the fundamental forms of meaning and those of knowledge as identical. He sees 'meaning', 'truth' and 'knowledge' as logically interconnected. Truth cannot be put before meaning, he contends, for the criteria for truth are the criteria for meaning. Nor does truth for Hirst only find expression within meaning, for the pattern of meaning is only established by truth-criteria, he says. The question of there being logically distinct forms of knowledge, he feels, is the question of there being logically distinct types of true propositions or statements.

He proposes there are only two distinct types of knowledge, that in which the objects of knowledge are true propositions and that in which the objects are practical performances of some kind. To distinguish the types of true propositions he uses the three criteria of concepts, logical structure and the truth criteria in terms of which
they are assessed. These he uses to distinguish seven forms of knowledge which he calls 'the basic articulations whereby the whole of experience has become intelligible to man.'

Although he proposes criteria for the forms he does not perceive them as the totality of their existence. He suggests that all knowledge involves the use of symbols and the making of judgements in ways that cannot be expressed in words and can only be learnt in a tradition. 'Therefore acquiring knowledge of any form ... must be learnt from a master on the job.'

The dividing lines between the different forms even Hirst concedes are not 'sufficient for demarcating the whole world of modern knowledge.' The central feature to which they point he proposes is 'some particular kind of test against experience'. He suggests the seven forms and the tests for them are:

(1) The Sciences: empirical, experimental and observational tests.

(2) Mathematics: deductive demonstrations from certain sets of axioms.

(3) Moral Knowledge: Hirst says the tests are only partially statable (though he does not state what they are).

(4) The Arts: as for Moral Knowledge.

(5) Historical Knowledge: Hirst says in this domain the tests are for particular logical features (though he does not explain what these are).
(6) Religious Knowledge: as for Historical Knowledge.

(7) The Human Sciences: Hirst feels that because of the nature of their central concepts they should be regarded separately from the Physical Sciences (though he does not explicate what these concepts are.)

Hirst has been severely criticized by Elliott, Pring and Langford for conceiving of knowledge in this way. Elliott makes perhaps the strongest attack by suggesting that all knowledge makes use of the same 'powers of mind', that is to say 'retention and anticipation, synthesis and synopsis, discernment of relations and discovery of structures, 'bracketing' properties and aspects discovering the objects of feelings and impressions, guesswork pushing ideas to the limit, shifts of perspective and aspect-seeing, capacity for appreciative response and capacity for renunciation of practical ends.20

Since he argues that the same powers of mind are at work in all the forms, Elliott maintains that dividing knowledge into 7 forms 'shackles an understanding of mind, its development or the development of an adequate education'.21 He therefore suggests that development of mind can be achieved within one form only.22

He suggests that the forms of knowledge owe their origin and character to the nature and operation of the mental powers and that therefore 'understanding the development of the mental powers is the most fundamental development of mind'.23 Furthermore, he suggests that 'the logical differences between the domains spring from differences in the nature of objects towards which [the mind is turned]'.24
He strongly condemns the notion of Hirst that since understanding presupposes public standards then the public 'forms' are logically prior to the powers of mind. He posits that public standards reflect the nature of the mental powers on which they depend. If in this matter logical priority is taken to mean that it determined primacy in the order of reality, then Elliott concludes that the innate powers of mind 'are transformed into epiphenomena of their own achievements, and nothing is comprehensible any longer'.

For Hirst, not only experience, but the mental powers themselves are wholly indefinite until they receive a structure from the 'forms'. Elliott rightly points out that it is impossible for an indefinite mind to receive a structure from public Forms. For the acquisition of this it is necessary to presuppose definite mental powers.

These powers would have had an intelligible structure before they had developed the means for their own discovery and description. Elliott concludes therefore that we have to assume 'that the forms came into existence through the exercise of the mental powers'. Whether one should take an interest in Hirst's seven forms Elliott sees as a separate question, or as Lawton puts it, 'it is a matter of choosing between a simple classification and a complex one'.

Elliott however, chooses to question the right of Hirst to consider his 'forms' a theory of knowledge at all. He maintains, for instance that even if you accept Hirst's categorization of knowledge Hirst 'inadequately characterizes the forms'. He believes the theory is inadequate because it only names the forms and makes it appear 'as if there is no such thing as empirical knowledge of persons' and
concludes 'at present nobody knows whether Hirst's contention ... is plausible or not because nobody knows what the names of his forms [specifically] refer to'.

Pring also argues that Hirst's characterisation of a form is confused. He especially argues that Hirst's notion of a 'categoreal concept is faulty'. For example, while he agrees that Hirst's categoreal concepts for the physical sciences of 'space, time and cause' are valid, concepts such as 'God' (religion) and 'ought' (morals) are not fundamental in the same sense.

This is so he maintains because whilst it is impossible to live outside a framework of space and time, it is possible to exist without a god and without ideas of what one ought to do. A system of morals that appraised persons rather than actions and listed virtues rather than duties Pring feels is entirely conceivable.

However, I part company with Pring here since ultimately an appraisal of a person must be reduced to an appraisal of either what they do or what they stand for, both of which are dialectically reducible to Hirst's concept of 'ought'.

Because Pring considers that the forms are not indispensable to thinking, then he feels they serve merely as defining terms for 'a kind of thinking'. If they are 'dispensable, but important' then he maintains they do not enter into any definition of distinctive and fundamental forms of knowledge. If so, he concludes, 'the whole notion of fundamental forms [is] redundant'.
Lastly Pring argues that Hirst, in being more specific about the organisation of knowledge for curriculum purposes 'does not do justice to the complex differences between disciplined enquiries'. Hirst's scheme of things, he maintains, fails since it is not fully argued at the philosophical level and its articulation involves 'a confused notion of central organising or categorical concepts' and it imposes an ill-fitting framework within which to examine critically the many activities competing for a place in the curriculum.

Pring is not alone in attacking Hirst's theory of forms 'status as a theory'. Brent too attacks it on these grounds. He argues that Hirst's failure to interpret reality using a transcendental theory of forms to produce 'a coherent view of objectivity' means 'there can be no justification for calling his account a theory of knowledge ... for the minimum conditions ... of a theory ... is (sic) that it does not simply describe but rather explains'. Many choose, however, not to rebuke Hirst's theory in its entirety, but accept its principal features, choosing instead to query the status of this or that body of knowledge distinctive as a 'form'. The most commonly criticized of Hirst's forms are those of literature and the fine arts, history and the social sciences, religion and morality; however the criticisms are not all for the same reasons. They will be dealt with presently.

Besides the seven forms of knowledge Hirst recognizes three other important classifications of knowledge:

(A) 'Fields' of Knowledge
(B) 'Fields' of Moral Knowledge
(C) 'Second order' forms of knowledge dependent on the other forms.

These have already been described in chapter one of this discussion.

In Hirst's view he sees history and the social sciences as logically complex, in part using truths that are a matter of empirical observation and experiment. However, he maintains they are not solely empirical but concerned with explanations in terms of intentions, will, hopes, beliefs and so on. Brent disagrees with Hirst's decision to consider them as logically autonomous largely because of 'the inadequacy of historical determinism ... to explain satisfactorily human behaviour'. He does this because in the description and evaluation of human behaviour certain ethical judgements 'presuppose the possibility of human choice and decision' [unlike natural events].

Literature, the fine arts and religion Hirst regards as forms of knowledge only in so far as they involve expressions that have the features of true propositions. He considers that whether the arts are cognitive and a form of knowledge depends on whether or not artistic works themselves have features parallel to those of propositions with related objective tests.

He does not perceive such features, as does Wittgenstein, who first suggested that works of art can be seen as symbolic expressions having meaning, simply because they have properties logically equivalent to those of propositions. He cites recent reconsideration of the concept of truth, which suggests that the notion of truth is
centrally a demand for objective judgements and there is no one particular form of such judgement. Hirst reasons therefore that since works of art can be judged in a manner logically equivalent to that appropriate to propositions then the arts are a distinct and unique form.

He does not attempt to deny that art may have other functions besides propositional ones, say in relation to the expression of emotion or the creation of delight. Pring cannot accept this position at all. To begin with he cannot accept the notion of literature and the fine arts as a 'form' at all. He maintains that if by Hirst's definition of what constitutes a 'form' literature and the fine arts constitute a unique form of knowledge, then 'whatever counts as a piece of literature and whatever claims to be a work of art would have certain features in common which distinguishes (sic) them from all other kinds of Knowledge'. 39

By this argument, then Pring continues 'all works of art would be characterized by certain central organizing concepts and distinctive tests of truth.' 40 This, he maintains, forces all creative and artistic activities to fit a very limiting framework which pre-defines what is acceptable art.

He concludes, therefore, that this is quite inappropriate in terms of the curriculum. The problem as he sees it is that either works of art can be considered without reference to any outside 'truth-criteria' or Hirst's idea of literature and the fine arts as a 'form' is wrong. Therefore artistic statements cannot be classed as 'propositional statements' but are statements to be experienced,
if I may continue Pring's logic, 'syntoetically' something which Hirst maintains is not possible except in terms of his truth criteria.

In considering religion Hirst also recognizes that it has concerns beyond the mere pursuit of knowledge. Whilst some would question as to whether or not it could lay claim to being a logically distinct form of knowledge, Hirst takes its claim to knowledge seriously.

Others would try to reduce it to knowledge belonging to other forms, he maintains, usually moral, historic or aesthetic, and the rest to be emotive in character. Hirst does not. He contends that it is unclear that one can coherently claim a logically unique domain of religious beliefs such that none of them can be known to be true, all being matters of faith. He maintains that the reason for this is that the meaning of religious propositions rests on a grasp of their truth-criteria for such propositions.

If the propositions belong to a logically unique form their truth criteria must be unique. Religious propositions are only intelligible therefore to those who know those unique truth-criteria. The claim to an irreducible form of propositional meaning thus seems to necessitate to Hirst that at least some propositions of this kind be known to be true. If so there can only be a unique form of meaning if there is a unique form of knowledge, and the claim that religion involves a unique form of belief only is for Hirst incoherent.

In this matter Phenix approaches the problem differently. He sees religion as a 'major and unique way of looking at the world' and
therefore justifies it in these terms, not having to perform philosophical gymnastics to try and fit it into a theory. As such he gives it a far more prominent position as a 'realm' than does Hirst.

Lastly, although many would try and maintain that there are points common to all forms of Hirst's concept of knowledge, he would not see these as undermining his central thesis that the forms of knowledge are logically unique and mutually irreducible, forming a 'bridge', of 'meaning', 'truth' and 'understanding' between the human 'mind' and 'reality'.
Footnotes Chapter 3

2. ibid p.22
3. ibid p.23
4. ibid p.23
5. ibid p.25
6. ibid p.26
8. ibid p.55
9. ibid p.57
10. ibid p.58
13. ibid
14. P. Hirst, op. cit. p.60.
15. ibid p. 64
16. ibid p. 40
17. ibid p. 45
18. ibid p. 45
19. ibid p. 45
21. ibid p. 75
22. ibid p. 50
23. ibid p. 51
24. ibid p. 52
25. ibid p. 53
26. ibid p. 55
29. ibid
30. ibid
32. ibid
33. ibid p. 42
34. ibid p. 42
35. ibid p. 42
37. ibid p. 126
38. ibid p. 126
40. ibid
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P. Hirst, 'Chairman's Remarks' in A.C. Brown (Ed.), op. cit.


CHAPTER 4

A COMPARISON OF 'FORMS' AND 'REALMS' IN TERMS OF THEIR MAIN IDEAS, ISSUES, NOTIONS AND CONCEPTS
Introduction

The principal points of comparison for 'Forms' and 'Realms' are their different concepts of 'meaning' and 'knowledge' or 'understanding'. These lead to different theories regarding what should be included in the curriculum, and therefore different perceptions of 'liberal' or 'general' education and its relationship between 'mind' and 'reality'.

Hirst acknowledges that Phenix's 'realms' provide the wherewithal for constructing a sophisticated curriculum, but argues that Phenix's basic categories are not basic enough to do the job that his own conception of 'forms' of knowledge can. He argues that the only legitimate basis for distinguishing between the different 'realms' or 'forms' is by means of pointing to their different conceptual systems and different truth-criteria and not on the basis of Phenix's 'fact', 'form' or 'norm' criteria. He maintains that claims to the status of logically distinct domains of knowledge and all other claims to the meaning of knowing in essence can be reduced to one of his 'forms'.

Lastly, a curriculum which initiates the student into each of his 'forms', Hirst contends, is justifiable purely on the basis of knowledge itself, whereas Phenix seeks to justify his curriculum in terms of the needs of society.
'Knowledge' and 'Meaning'

From the previous chapter of this discussion it will be recalled that Phenix perceives 'meaning' as having four dimensions, briefly:

(1) Inner experience, in which he includes reflectiveness, self-awareness and self-transcendence.

(2) Rule, logic and principle, each type of meaning being defined by logic or principle.

(3) Selective elaboration, theoretically limitless but with the only significant meanings being those with an inherent power of growth and elaboration, usually found in the world of disciplined scholarship.

(4) Expression, by which Phenix means that meanings are not private property but communicable through symbols.

By studying the logical patterns of the disciplines he divides them into nine generic classes of meaning which he obtains through pairing what he sees as the most important logical aspects of meaning, the three degrees of quantity: singular, general and comprehensive, and the three distinct qualitative aspects: fact, form and norm.

Hirst takes Phenix's definition of meaning to task because he uses it not only to describe the processes of logical thinking, but existential states or what Martin Buber calls the 'I-Thou' relationship, described in chapter two of this discussion. He believes Phenix's concept of meaning is deficient because of 'a serious lack of clarity about what [he was] classifying in classifying the 'objects' of knowledge'.

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Hirst, it will be recalled from the previous chapter of this discussion, takes 'objects of knowledge' to mean the 'logical objects of knowledge when that state of mind is being distinguished from others'. In this sense he sees there being three types of 'logical objects': knowledge with the direct object, 'knowledge-that' and 'knowledge-how'. It is only 'knowledge-that' that he perceives as being pertinent to the thesis that the categories of meaning are fundamentally distinguishable as categories of knowledge.

He considers that knowledge with the direct object should not be included as he considers all existential states to be reducible to concepts that are distinguishable within 'knowledge-that'.

He is in partial accord with the quantitative aspects Phenix proposes but strongly disagrees with the qualitative aspect Phenix includes in his definition. For Hirst if it is the objects of knowledge that we are concerned with then all the propositions that are of interest to us must be true and therefore in at least one sense of that term state 'facts'. Phenix takes true statements of form and norm not to be statements of fact but to have other qualities. He therefore uses the term fact in a restricted way and Hirst is very critical of him for this.

For Hirst Phenix's notion of 'form' is as unsatisfactory as his notion of 'fact' on the grounds that it picks out imagined possibilities, thereby distinguishing a feature that characterises the logical or formal truths of language, mathematics, philosophy and matters of aesthetic form.
Similarly he is critical of Phenix's idea of 'norm' because Phenix peculiarly associates it with ethics and gives it no explicit connection with aesthetics. Hirst therefore concludes that what Phenix means by his three qualitative aspects of meaning is too unclear for them to be used as a classificatory device and in particular he feels it is not obvious that they are mutually exclusive categories. Nor does he believe that every true proposition has one of these qualities unless 'fact' is taken to cover any and every proposition that might otherwise cause difficulties.

As to the reasons why Phenix chose quantitative and qualitative aspects as the basis for the classification of meaning, of this Hirst is devastatingly critical. He asks the questions 'why these two?' - 'why not use the concept of time?' All propositions make use of the concept of tense. 'Why not use the criteria of indicative and hypothetical or positive and negative?'

He maintains that the reason is because Phenix relies heavily on 'certain traditional notions of logical differences without any reconsideration in the light of ... recent philosophical analysis.' For Hirst if true propositions are to be classified as true and nothing else, then it must be 'by virtue of their logically necessary features and not by any other characteristics they may happen to have.' As an example of what he means he uses the analogy of comparing means of transport. If this is what one is trying to do the criterion of colour is to vehicles as useless as quantity and quality are to meaning.

He then suggests that the criteria that are necessary to there being true propositions are: concepts appropriately related in a
logical structure so that propositions can be formed and truth-criteria. He then infers that the quantitative aspect of knowledge is irrelevant to a logical classification of the objects of knowledge and argues for a more careful working out of the qualitative distinctions.

He criticizes Phenix's use of the term 'objects of knowledge' as only if the term 'objects' is taken in the non-philosophical sense does Hirst feel it possible to assert that the domain of symbolics is a distinct type of knowledge. He maintains that all knowledge requires symbols of some sort, without which it would not exist. He sees symbols, therefore, as the vehicles of knowledge rather than the basis of one type of knowledge. The reason he gives is that they no more designate a logically distinct domain than any other particular 'object' in a non-philosophical sense.

Hirst is similarly critical of Phenix's realm of 'synnoetics'. The focussing of non-propositional 'objects' and the defining concern for 'experience' both seem to Hirst to invalidate the claim to a logically distinct type of knowledge. A third unsatisfactory aspect he feels is the ambiguity of Phenix's use of the quantitative aspects of knowledge. He contends that only if the objects of knowledge are not taken as true propositions but as objects in the everyday sense, and 'singular' is taken to mean 'unique' or 'not communicable' can the domain of 'singular fact' be equated with what Phenix calls 'synnoetics'.

However, Reid would find Phenix's realm still acceptable, as he would argue 'that form and content are apprehended directly as
aspects of one concrete whole and ... are not reducible to "knowledge-that".\(^5\)

Hirst raises questions about Phenix's notion of quantity in what is said about the comprehensive types of knowledge. He argues that it is not at all true to claim that propositions about a totality of subjects are characteristic of historical knowledge, which he sees as more likely to be formed of singular statements. Further, he sees religion and philosophy as similarly so, though comprehensive in a different sense. He also can not understand why 'symbolics' should be thought to be concerned with general propositions if that domain is to cover mathematics and non-discursive symbolic forms.

All these difficulties Hirst sees as but the outcome of ambiguity over the objects of knowledge and appropriate classification criteria for them. He considers that what it is the notions of quantity and quality are being applied to is uncertain and the resulting meaning of Phenix's terms labelling the generic domains is unclear, especially since no effective rationale is given for reducing the nine classes to six. These Hirst is severely critical of, for Phenix sees them as pure, fundamental, archetypal and generic, in spite of the explicitly stated composite character of two of these.

Hirst then raises five questions he would have liked Phenix to answer:

1. What is the status of the six 'realms'.
2. Are they categorically distinct in the Kantian sense?
(3) Are they ultimate in some metaphysical sense?
(4) Are the realms absolute in that they cannot change?
(5) Is it conceivable that new realms could arise?

In attempting to read Phenix's mind Hirst contends that the academic disciplines man has developed are in no sense ultimate or absolute and their composite character is repeatedly emphasized. What strikes Hirst as strange is that the disciplines don't reflect more closely the distinct generic types of knowledge if all knowledge and meaning is to be located in such logically pure domains. Hence in his own theory he put forward the concepts of 'fields' of knowledge.

Indeed he sees Phenix's allocation of the traditional disciplines as 'often unconvincing and even idiosyncratic', and the reasons why each is listed where it is as 'often uneasily related to the theory that should be their basis.'

He feels it strange that the six realms have not been developed more extensively within their own terms. Indeed he asks what exactly Phenix considers the logical features of a discipline to be, whether all established areas of study are disciplines or only areas that concern themselves with developing one generic type of knowledge within the logical structure peculiar to it. He wonders aloud why those disciplines that express the types of knowledge in the purest forms are not the heart of Phenix's concerns.

In comparison Hirst bases his concept of knowledge on the crucial significance of the fact that all aspects of meaning necessitate the use of concepts and it is only by virtue of
conceptualization that there is anything we can call meaning at all. He maintains that no concepts can be the basis of shared meaning without criteria for their application. The criteria for the application of a given concept he maintains are the criteria for the truth of statements that say that something is that given concept.

In this way he determines that meaning necessitates concepts which necessitate truth criteria for propositions and statements. Thus, he infers the notions of meaning and true propositions and therefore meaning and knowledge are logically connected.

Hirst concludes that if one is to talk of logically distinct realms of meaning one is in fact necessarily also talking about logically distinct types of truth-criteria and therefore of logically distinct forms of knowledge.

These forms he argues can only be distinguished by examining the necessary features of true propositions and statements: the conceptual structures and the truth-criteria involved. On this basis he delineates his seven categorically distinct forms of meaning and knowledge.

Brent would seriously object to this categorisation of knowledge in terms of a finite number of forms. He explains that what maintains the boundaries of knowledge (either within a 'form' or a 'realm') may and does change.

He cites the example of how Riemann and Lobachevsky completely changed the logical processes of traditional geometry and how 'great' artists have generally been memorable as such because they have completely redefined the way to artistically perceive the world.
Furthermore, since the categories of history and sociology are also in constant change (not to mention the physical sciences) then this seriously undermines both Hirst's notion of immutable 'forms' and Phenix's concept of six 'realms' and opens up the possibility of a potentially limitless number of categories of knowledge.\(^8\)

However, although Hirst originally conceived of his forms as finite in number, in 1975 at a symposium of leading educational philosophers he reconsidered his position stating

>'I would certainly not argue that there is some universally agreed number ... of forms ... neither more nor less' nor 'that any distinctions we may make between forms of understanding have any absolute or Platonic status'.\(^9\)

The similarities between his seven forms and Phenix's six realms are limited. Three of the realms, empirics, esthetics and ethics, Hirst acknowledges since he considers them 'distinguishable propositionally' on criteria he and Phenix share. Symbolics, synnoetics and synoptics are for Hirst 'mischaracterised areas, none of which is in fact a fundamental category of meaning and knowledge, all being complex in nature'.\(^10\)

For Hirst it is because Phenix has not recognized the full implications of the fact that the logical categorisation of all meaning reduces to the categorisation of true propositions that he seeks to classify at one go a domain of both propositions and existential experiences, 'thereby confusing the whole operation'.\(^11\)
'Forms' and 'Realms'

Exploring the similarities and differences between the 'forms' and 'realms' at a more detailed level it becomes clear that despite the fact that Hirst has a much more elegant perception than Phenix of the fundamental processes of meaning even his theory is not without its problems.

Mathematics

Although Hirst and Phenix have many disagreements their arguments are remarkably similar in this domain. Hirst sees mathematics as a unique discipline in the sense that it follows the four criteria mentioned in chapter one that he considers essential for a form to be distinct and irreducible, namely:

(1) Certain central concepts peculiar to it.
(2) A distinctive logical structure ordering its concepts and relations between them.
(3) Distinctive methods of enquiry

He considers the third criterion to be of crucial importance.

Phenix perceives mathematics as just one of the disciplines making up his 'realm' of symbolics. He argues that as a discipline it is identifiable by its representative ideas and their structure (Hirst's (1) and (2)), the methods of enquiry and testing that it employs (Hirst's (3) and (4)) and its subject matter, which Ruthven sees as effectively reducible to Hirst's (1) above at some theoretical level. 12
Ruthven criticizes both Hirst and Phenix because there is ambiguity about whether the definition of a discipline which is being used is indeed a 'logical' one based on distinctions between the truth-criteria used to evaluate propositions and theories, rather than a 'social' one which identifies disciplines with some historical tradition of enquiry and activity, or a 'commonsense' one which tacitly reflects elements of both.\(^\text{13}\)

He does this because in the case of Hirst, Hirst deals with the problem of demarcating disciplines by arguing for a logical definition making distinctions on the basis of truth-criteria. On other occasions Hirst appears to use a 'commonsense' definition not strictly founded on logical criteria. An example Ruthven gives is Hirst's explanation of the development of mind into seven or eight 'distinguishable cognitive structures.'\(^\text{14}\)

Similarly Ruthven criticizes Phenix for employing both logical and social criteria in such statements as

'\text{the general test for a discipline is that it be the characteristic activity of an identifiable organized tradition of men of Knowledge, that is of persons who are skilled in certain specified functions that they are able to justify by a set of intelligible standards.'}^{\text{15}}

As a concrete example of this ambiguity Ruthven cites the case of arithmetic, which both Hirst and Phenix regard as part of mathematics. However, Ruthven asks the question 'in what sense are the arithmetic propositions that we learn, construct and use dependent on reductions from axioms.'\(^\text{16}\) Rather, he argues, we use a number of geometric and physical analogies (such as the number line) and rules of calculation to construct and test arithmetic statements.
Although he says it might be argued that while we do not actually construct and test arithmetic propositions in such a manner, their truth is in some ultimate sense dependent on their deducibility from some set of axioms. This argument can only be sustained, he maintains, at the expense of the meaningfulness and applicability of arithmetic propositions.

Further, he claims, such an argument would be incompatible with Hirst's claim that 'it is quite impossible to learn facts, to know them as facts, without acquiring the basic concepts and criteria for truth involved.' Ruthven then continues that while it is part of our commonsense knowledge that arithmetic is part of mathematics, it does not satisfy the logical criterion for inclusion in the discipline of mathematics and thus here logic conflicts with common sense.

He maintains therefore that to adopt the logical definition of mathematics which Hirst and Phenix advance is 'to exclude virtually all of what is, and has been, commonly termed mathematics.' All, he asserts, Phenix and Hirst do, therefore, is not accomplish a 'description' of mathematics as a 'redefinition'. On the other hand, Brent accepts the mathematical category of knowledge on the basis that the relationship of what he calls the categorial concepts (number, measurement, deduction) and the substantive concepts (angles, logarithms, sets) is assymetrical.

In conclusion, Ruthven argues that it is a contingent social fact, rather than a logical necessity, that has led to the tradition of enquiry commonly known as 'mathematics' developing a concern for logical structure and becoming popularly associated with that concern. He feels therefore that Hirst and Phenix have missed the point.
Physical Sciences

Whereas Hirst makes a clear distinction between the physical and social sciences on the basis of their central concepts Phenix includes both in his second realm of 'empirics'. However, at no stage does Hirst make it absolutely clear just why the central concepts of the social sciences are different to those of the physical sciences or indeed just what their nature is in the first place.

Both men are at least agreed that the physical sciences are concerned with matters of fact and being able to formulate valid general descriptions of matters of fact. Phenix offers a far more detailed explication than Hirst of just what is involved in the physical science disciplines. They are, he argues, essentially constituted of generalizations or hypotheses, which through careful observation and experimentation are tested and revised as new generalizations, theories or 'laws'. This process, he argues, is never complete. 'Conventions are never true or false; they are only more or less convenient or appropriate to specified purposes.'

The Human Sciences

As explained above, whereas Phenix includes the social sciences with the physical sciences in his realm of empirics, Hirst considers them a distinct 'form' of knowledge. In his view the social sciences are logically complex, in part using truths that are a matter of empirical observation and experiment, in part concerned with explanations in terms of intentions, will, hopes, beliefs and other immeasurable entities on which experiments can not be made. Phenix
is also of the view that the social sciences differ markedly from the physical sciences; however, he feels that their concern for observation and generalization is sufficient overlap with the physical sciences to include both in the realm of empirics. This writer feels otherwise as there are far more differences than similarities especially in the area of formulating generalisations, rules and principles.

**Literature and the Fine Arts**

It would seem that in the aesthetic domain there is probably the least conflict between Hirst and Phenix. Hirst feels strongly that they constitute knowledge which is a unique form. He feels they 'have a significance that parallels the shape and sound of the words and sentences we use in making statements about the physical world.'\(^{21}\) The observable features of each of the aesthetic forms, he argues, are used as symbols, having meaning, which can be seen as making artistic statements and judged true and false as words and statements can be used to make scientific statements. However, he argues that as artistic statements they state truths which cannot be communicated again in the same way.

Phenix sees the main feature of the aesthetic meanings as being their 'particularity'.\(^{22}\) The object of knowledge he sees as the 'single particular form', which is 'essentially ... incomparable'. In this way therefore he argues one should not think in terms of music, art, literature and so on, but in terms of individual musical works, artistic works, literary works and so one, as they are not reducible to any other form. The media through which the artistic statements are made can
be examined and described, but the statements themselves are only partially expressible through other forms. Both Hirst and Phenix, however, fall into the trap of concentrating too much on the idea of the aesthetic category of knowledge in terms of propositions. Brent and Pring quite rightly criticize this characterisation as neglecting the much more real, creative and enjoyable aspect of learning how rather than learning that.²³

History, Religion and Philosophy

Whereas Hirst sees these three 'forms' as unique and categorically distinct from one another, Phenix sees them as but one comprehensive 'realm' - synoptics.

Phenix gives as his reasons for this the fact that all three of his 'sub-realms' have an integrative function, uniting meanings from all the realms into a unified perspective, and that they share the one fundamental purpose of synoptic understanding, differing only in the manner in which they effect the intended integration.

Using Hirst's criteria of logical differences and distinct truth criteria it is easy to see why he separates them, for if one were to affect an understanding of a phenomenon such as the Reformation then despite the fact that one would be using 'synoptic' logical and truth-criteria, distinctly different 'historical' or 'religious' or 'philosophical' understandings could be achieved.

Hirst's claims for history being a categorically distinct 'form' are based on his view of history in a similar way to his view
of social science: that is that it is logically complex, using truths that are a matter of empirical observation and experiment and concerned with explanations in terms of intentions, will, hopes, beliefs and so on.

Phenix's view of history seems self-contradictory, for on the one hand he acknowledges that its subject matter is distinct, namely 'what happened in the human events of the past', and that its methods of enquiry, namely investigating the factual evidence of the past, are also distinct along with the logical concepts of the discipline, namely forming hypotheses about particular events using relevant facts, personal understanding and ethical insight and constantly revising and improving these in the light of new evidence. However, on the other hand he refuses to acknowledge it as a unique 'realm', even though by his own criteria it would be one.

Hirst's view that religion is categorically distinct in a Kantian sense has already been explained in the previous chapter of this discussion. Phenix views it as a unique sub-realm but not as a unique realm, though as with his concept of history he contradicts himself, as all the criteria he puts forward for consideration of religion as a sub-realm are the same criteria he uses elsewhere for considering certain disciplines as 'realms'. In the case of religion the subject matter he puts forward is the concept of 'ultimacy'. The methods of gaining religious understanding he proposes are prayer, meditation, active commitment and ritual practices. The logical concepts he includes are 'Truth', 'God', 'Goodness', 'Evil', 'Perfection', 'Holiness' and 'Salvation'. 
Philosophy forms a similar problem for Hirst and Phenix to history and religion. They are both in agreement as to what the content, methods and concepts of the discipline are, though Hirst would add truth-criteria. However, Hirst considers it to be a distinct 'form' whilst Phenix only considers it to be a 'sub-realm'.

Hirst takes philosophy above all to be concerned with 'clarification of the concepts and propositions through which our experience and activities are intelligible.' He perceives it as interested in answering questions about the meaning of terms and expressions, about the logical relations and the pre-suppositions these terms and expressions involve. As he regards it, it is a 'distinctive type of higher order pursuit' with the aim of understanding all the concepts used in forms of 'lower-order knowledge and awareness.'

Phenix sees it as 'concerned with every kind of human experience' with the distinctive function of 'interpretation of meaning'. Hence, he and Hirst are not in disagreement over its essential features. However, the fact that he describes its methods and logical concepts [dialectic, analysis, evaluation and synthesis] as distinct from those of history and religion, undermines his contention that it is only a 'sub-realm'.

'Realms' not considered by Hirst as categorically distinct

Hirst does not consider Phenix's symbolic 'sub-realms' of ordinary language and non-discursive symbolic forms to be distinct 'forms' of meaning, but as simply the media through which knowledge
is expressed. These symbols are not expressible as propositions and thus have neither logic, nor truth-criteria in Hirst's scheme of things and thus totally fail to be acceptable as distinct 'forms'.

Phenix's realm of synnoetics has already been considered elsewhere in this discussion and although he considers the fifth of Phenix's realms to be a 'form', Hirst does not believe that there is an identifiably distinct discipline for ethical education. This Hirst believes is because invariably ethics comes into play in 'fields' such as political, legal and educational theory, but no specialised subdivisions of moral knowledge have developed. Moral questions he believes only ever arise alongside matters of fact and technique.

'Liberal Education' and 'General Education' - Their Justification

Hirst's 'liberal education' and Phenix's 'general education' are both intended as 'bridges' between 'mind' and 'reality', yet their justifications are totally different. Hirst's justification is solely in terms of the nature of knowledge itself. For Hirst the pursuit of rational knowledge pre-supposes some form of commitment to what one is seeking to justify. Justification is possible he maintains only if what is being justified is both intelligible under publicly rooted concepts and is assessable according to accepted criteria. It assumes a commitment to those two principles, he argues.

However, those very principles he proposes are in fact fundamental to the pursuit of knowledge in all its forms. The forms, he maintains, are in a sense simply the working out of these general principles in particular ways. This apparent circularity Hirst
contends is the result of the inter-relationship of the concepts of rational justification and the pursuit of knowledge.

It is because it is based on these ultimate principles that for Hirst a 'liberal education' is the ultimate form of education in a very real sense.

Phenix's justification uses no such philosophical sophistication. As far as he is concerned 'general education' is justifiable only in terms of a number of value-judgements related to contemporary society. He sees an 'abyss of meaninglessness' which is the result of the conditions of modern industrial civilization. This he wishes to overcome. To counteract the four contributing factors to this of:

1. The spirit of criticism and skepticism.
2. Pervasive depersonalization and fragmentation caused by the extreme specialization of a complex, interdependent society.
3. The sheer mass of knowledge modern man is required to assimilate.
4. The rapid rate of change of modern life.

Phenix proposes that the school curriculum be based squarely on the nature of meaning. By this he means his 'realms of meaning', the six patterns of meaning he designates as symbolics, empirics, esthetics, synnoetics, ethics and synoptics, which have already been considered in this discussion.
Footnotes Chapter 4

2. *ibid* p. 58
3. *ibid* p. 60
4. *ibid* p. 60
7. *ibid* p. 63
11. *ibid* p. 67
25. ibid
27. ibid p. 5.
Bibliography Chapter 4


P. Hirst, 'Chairman's Remarks' in A.C. Brown (Ed.), op. cit.


CHAPTER 5

IMPLICATIONS FOR THE CURRICULUM
Introduction

Despite the fact that both Hirst and Phenix argue vigorously for a curriculum based on what each perceives as the fundamental 'ways of knowing', neither man wishes to construct a school curriculum based entirely on the 'forms' or 'realms'. Hirst considers that the 'fields' of knowledge are often as important as the 'forms' depending on the special needs of the society children are being educated for, and so long as the 'forms' within the 'fields' are made clear.

Phenix feels strongly that a curriculum based solely on his realms would be seriously deficient. He argues that a curriculum needs to be responsive to the particular specialized needs of a given society as well as the need to educate its children in all the fundamental patterns of meaning.

Neither man tries to argue for a curriculum where the categories of knowledge have the same status and functions as 'subjects' or 'disciplines' in the traditional sense. Both freely admit to the importance of other powerful factors in the curriculum.

Phenix and Hirst both consider that physical education should be a vital part of the school curriculum, and although he does not consider that disciplines have evolved from the 'form' that Phenix calls 'ethics' Hirst believes that moral education for the sake of the improvement of society should be a fundamental part of the curriculum. Since there is no separate discipline of moral knowledge Hirst would prefer that as moral questions arise alongside matters of fact and technique they should be answered in that context at that time.
Then what is the true impact of a categorial perception of knowledge? Firstly, there is an added emphasis on ways of thinking rather than the subject matter of a discipline being seen as the primary focus.

Secondly, certain subjects are considered to have paradigmic status since they are considered to more clearly demonstrate the categories of knowledge. There are many critics of this sort of 'skewing' away from certain subjects in favour of others. Pring in particular considers this to be logically absurd.

He feels that to maintain that physics is a better paradigm example of the natural sciences than botany is ridiculous. He asks, '[how are] the logical features of a 'form' decided independently of the choice of paradigms. How else would we know what a paradigm is a paradigm of.'

Thus he maintains that to argue that a botanist's studies were simply 'a pale reflection of a form of knowledge best exemplified in physics is to misunderstand what he is doing.' He concludes in the absence of an a priori argument for a limited number of categories of knowledge then there is no logical reason for a non-proliferation of these depending on the choice of paradigms.

Nevertheless, whilst Hirst considers subjects like these to have no status as 'forms' he sees them as highly justifiable and can 'see no reason why such organisations of knowledge ... should not be endlessly constructed according to particular theoretical or practical interests.'
This is thus an open-ended view of knowledge, a moving away from the concept of the curriculum as an immersion in the features of the seven 'forms' or six 'realms', and far from the 'dangerously narrow' position that Hirst has been accused of by Soltis and others.

Furthermore, this and Phenix's theory are two theories of liberal education, not of specialist education and are really only promoting the concept of making young minds aware of and capable of using the different ways of looking at the world. They do not attempt to deny a place to the elements of interest, child psychology and other recognised educational considerations.

It is the aim of this final chapter therefore simply to explore the implications for the 'liberal' or 'general' education aspect of the curriculum of its being based on the 'ways of knowing'. These implications will be dealt with in terms of:

(1) The scope of the curriculum.
(2) The logic of sequencing the disciplines.
(3) The logical aspects of teaching a subject.
(4) Developmental factors in the sequence of studies.
(5) The problem of selection in the curriculum.
(6) The use of the disciplines.
(7) Representative ideas.
(8) Methods of enquiry.
(9) The appeal to imagination.
1. The Scope of the Curriculum

Phenix believes that individual student personalities, the socio-cultural context of the student and the available school and community resources are the most important factors which decide what a student needs to know and what the appropriate scope is of the course of study that ought to be provided.

In order to maximize the meanings in a course of study he lists five principal ways in which this can be accomplished:

(a) Through mastery: He considers that the meaningful life is that in which the person finds one thing to do and learns to do very well, and the realization of this comes in depth of understanding.

(b) Through belonging to a community: Whereas he maintains mastery requires specialization to achieve satisfaction, the second point of view, that personal fulfillment comes from belonging to a community, leads to a course of study which depends upon a person's place within the social complex. Each individual he believes should play his part and be required to develop skills that will equip him to contribute to the society. In general, therefore, he does not feel an individual should need to cultivate meanings in other than the special sphere in which he serves the community. In this type of curriculum Phenix maintains there is special provision for understanding the nature of the society as a whole.

(c) Through many-sidedness: This is a third answer for Phenix to the question of fulfillment. The desirable goal he believes is a well-rounded education with a variety of interests. This is
achieved via a curriculum which is broad and diverse. Rather than developing one skill to a high level, the student should be encouraged to gain a number of different competences.

(d) Through the integrity of the person: The aim he feels should be to secure a coordination of whatever meanings are acquired into a coherent whole. From this standpoint the most important consideration he argues is that the studies do not form a collection of unrelated pieces, but an interrelated whole.

(e) Through gaining a certain quality of understanding: This ideal he maintains is that rather than through depth, participation, extensiveness or coherence, through what it is deemed essential to know, whether a few things or many, fulfillment is realized.

Of course Phenix points out the above five positions are by no means mutually exclusive. Indeed since study often continues over many years, sometimes for the greater part of a lifetime in the long run he considers it would be possible to achieve fulfillment in all of the above ways.

Needless to say, Phenix would argue that a curriculum should include all of his six realms while Hirst would wish his seven forms to be included. These would satisfy the requirements for the fulfillment of the qualitative criterion and the criteria of wholeness and many-sidedness.

Pring and Brent, of course, would argue that this would only be of 'knowledge-that' and not of 'knowledge-how'. It is up to the curriculum designer to answer this objection.
As for mastery and belonging, Phenix argues that concentration on mastering one field does not exclude concern for anything else. Indeed he maintains that they are such that 'all of them are required if a person is to achieve the highest excellence in anything at all.' However, it is doubtful if moral understanding is essential for mastery of mathematics or religious understanding essential for mastery of ordinary language. Certainly the 'realms' or 'forms' do overlap in their significance for one another in some of the ways of knowing, but it is doubtful that they are as essential for mastery as Phenix would claim.

As for fulfillment through communal participation, a person cannot understand his place in the whole unless he is aware of the basic understandings of civilized man. Thus, a knowledge of all the meanings would seem essential for this criterion as well.

Unless mastery in the symbolic realms of ordinary language and mathematics is conceived as the sole means to fulfillment, then a programme for a secondary curriculum of 'liberal' or 'general' education may then be conceived as providing for instruction in all of the fundamental types of meaning over a period of four to six years. What these fundamental types would be would depend on the perception of the individual planner; however, this writer feels that to be fair to both Hirst and Phenix that Phenix's 'realms' perhaps in the guise of Hirst's 'fields' would be more or less up to the task. These would be accompanied by some opportunity for concurrent specialization where individual abilities, interests and social needs indicate its desirability.
Phenix feels that a well-balanced programme would have to be divided approximately equally between the types of meaning to offer variety, and to satisfy the criterion of fulfillment of richness and breadth of understanding as well as the other criteria discussed earlier. Of course the curriculum would also have to take into account the character, traditions and history of the community as well as the predispositions of its students. A general philosophy can only indicate the overall picture and certain principles for making decisions about sequencing and the selection and organization of materials for instruction would have to be established.

2. **The logic of sequencing the disciplines**

The sequencing of the order of studies is not governed by any 'law' of nature. Sequencing therefore tends to be arbitrary, unless the materials to be learned are logically interdependent. Then a certain ordering is necessary.

Logically the realm of symbolics has priority over all the other types of knowledge, despite Hirst's objections that it is not a 'form'. Current research suggests that failure to draw attention to the linguistic aspects involved in all of the subjects taught in a school (and, one might add, the other symbolic aspects) is to retard the progress of many students in gaining understanding.

On a philosophical level one cannot express empirical, ethical, literary or synoptic meanings without discursive symbolisms. Hirst's reduction of works of art to propositional statements with their own distinctive truth-criteria implies the need for discursive symbolisms to 'translate' their meaning.
Theoretically a student should be thoroughly grounded in the meanings of the symbolic realm before he or she begins the secondary curriculum, but the idea that one can dispense with it or downplay its significance at the secondary level is something done at the educator's peril.

For this reason the symbolic disciplines should continue to be offered side by side with all the 'forms' that Hirst categorizes, history, religion and philosophy being held back as subjects until the student acquired an experience of dealing with empirical data for history, language, truth, beauty, being and goodness (as elements in a vision of ultimacy) for religion, and a comprehensive world of meanings to analyze, evaluate and synthesize for philosophy.

Ideally, topics in all the subject offerings would have to be introduced only after the prerequisites to their proper understanding have been mastered. In many cases logical prerequisites could be offered directly in association with the topics for which they were needed. For example, certain phases in mathematics could be offered in connection with the study of those science topics for which they were required.

Besides the logic of sequencing each of the domains of knowledge, it would be necessary to also consider the logical factors in the sequences of study within each domain. At the secondary level Phenix argues that physics is the most fundamental science, since it deals with matter and energy. The biological, psychological and social sciences he considers less fundamental in the sense that they deal with more limited classes of things. However, as mentioned in chapter four of this discussion this need not necessarily be the case.
Among the arts no clear order of precedence is discernible, though a case could be made for the logical priority of the arts of movement, on the grounds that sensitivity to bodily movement is a prerequisite to full understanding of rhythms in music and drama, of tensions and balances in the visual arts, and of metre and cadence in poetry. For the most part however, each art could develop independently.

The three synoptic disciplines could all develop independently, though if any one should develop first it should be history, for all three of history, philosophy and religion make use of the past.

The third and most important aspect of logical sequencing concerns the order of learning within particular disciplines. If a topic of study is simply a collection of isolated items, obviously there is no inherent logical order. On the other hand, if there is an orderly pattern of inter-related items the teacher must order them so that the logic behind the ordering of each individual item is that each item be understood in terms of what precedes it. In other words, one should proceed from the simple to the complex.

3. The Logical Aspects of Teaching a Subject

Hirst considers that the effective teaching of a subject, whether it be a 'form' or a 'field' involves

'knowing certain features which characterize it, which can be disclosed only by logical analysis... though once the criteria for this are plain, empirical evidence about thinking based on the use of these criteria becomes important too.'\(^6\)
Further, he considers that it is a necessary truth about all forms of knowledge that there is some ordered sequence to the truths concerned and this being so if the grounds of validity for propositions are to be understood by pupils, then the teaching of the area of knowledge must reflect these logical priorities in the order of justification.

He believes that far too much has been made of empirical investigation of teaching methods and that much more careful examination of what the logically necessary features of areas of knowledge are would be more likely to lead to better teaching.

By ordering the terms and concepts of a given subject such that the meaning of certain terms and concepts presupposes the meaning of others, he feels a pupil's understanding of any 'form' or 'field' would be facilitated.

An understanding of the meaning of terms he proposes is not necessarily built up in any strict order. Concepts, he contends, are acquired by learning the complex use of terms in relation to other terms and their application in particular cases. A subject's logical 'grammar' and the order within it must be respected, he believes, in all teaching methods. However, he suggests this still leaves a vast area in which experimental investigations about the effectiveness of different methods can, and he feels, must be carried out. I agree with him.

Any subject like history or physics or mathematics he considers is based on the use of certain logical principles in terms of which
the explanation and theories distinctive of the subject are validated. He refers to the logic of historical explanations of scientific explanations, mathematical proofs and so on. These principles, however, he does not suggest determine only one logical sequence for the propositions. Therefore any teaching method for the subject he infers must respect the fundamental logical principles without which no understanding of the distinctive form of validity peculiar to the subject is possible. Thus, he continues, this means that some 'logical ordering of propositions using these logical principles must emerge in the teaching of the subject'. There are alternative logical sequences which may be taken, he suggests, and advances in knowledge often suggest new sequences.

Hirst maintains that to say that some logical sequence must emerge in the teaching of a subject is not to say that the teaching must follow that sequence in temporal order. He considers that it is an order that is understood to hold together in the end and does not have to be built up in any one way.

The logical grammar involved and the various possibilities for the logical sequence to be followed he strongly feels are matters for analytical determination rather than empirical investigation. How far these logical features do determine the teaching of a subject, and areas within the subject, he considers can only be worked out in detail in terms of the specific content to be taught.

It is only when the fullest logical analysis of what is involved in teaching a subject has been carried out that Hirst believes a profitable empirical investigation of methods can be conducted.
Hirst considers that as for the psychological aspects of teaching a subject, to make a distinction between logical and psychological organisation of knowledge is to misunderstand the nature of knowledge. There is no such thing as a non-logical organisation of knowledge, he feels. Dewey's idea that if someone acquires knowledge this is necessarily a personal psychological matter he agrees with, as he feels a person cannot have non-psychologically-organised knowledge. The contrast between the logical and psychological aspects of teaching he considers is only between the different organisations of knowledge which are presented to children, respecting both the logical features of the knowledge concerned and the necessity for the pupils to individually come to acquire this knowledge.7

To sustain interest by teaching elements from what Hirst calls the 'primary divisions' of knowledge, such as physics, mathematics, history or religion, he considers would be next to impossible. However, he feels that by teaching what he calls 'second order fields' such as 'the neighbourhood', 'power' or 'the seventeenth century mind' the interest of pupils may be aroused and they may therefore learn more effectively. The pupils' grasp of the meaning and validity of all the elements in such a second order organisation he proposes depends on their appreciating these elements as logically related to other elements within the primary divisions of knowledge. The distinction here then is about what is taught and not logical questions. As such he feels it can not be settled on philosophical grounds.
4. Developmental Factors in the Sequence of Studies

In addition to logical factors, the findings of developmental psychology can be used to help decide the order of studies. At every stage of a child's development the nature of the person affects what can and cannot be learned and how easily this can be done. It is patently absurd to suggest that for instance philosophy could be taught to a child at kindergarten in a satisfactory and satisfying way.

The possibilities of learning depend on the maturation of the child. Thus knowledge of mathematical sequences provides one type of clue to the order of studies. Maturation determines the limit of expected achievement and to a considerable extent determines the speed of learning.

Besides maturation the possibilities of learning are decided by previous learning. Thus emerges the developmental concept of readiness, which refers to the condition of being optimally prepared for some particular learning experience. The ideal order of studies is one in which each experience is introduced at the most propitious time in the person's development, that is as soon as he is ready for it.

This concept is really an aspect of what Phenix calls 'the more fundamental principle of maximum economy in learning', since he feels human beings can be made ready for learning that does not fit any standard readiness schedule. 8

How well a person learns is greatly influenced by the factor of motivation. If one has powerful needs or desires to fill, one quickly
learns how to satisfy them. To some degree these motives for learning can be controlled by rewards and punishments, but from personal experience it is this writer's contention that interesting and varied lessons are the best remedy for the unmotivated child, since the experience is more enjoyable than the knowledge within it which one is trying to impart. Thus, the experience is its own reward.

In planning the sequence of studies a basic developmental principle is that of continuity. Each step in the learning process must fit into previous steps to form a consistent whole. The successive experiences in learning should therefore be sufficiently different to provide stimulus for growth, but not so strange as to be incoherent.

Although it is possible to plan curricula in the light of studies in human development, it is only in broad terms that the kinds of experience appropriate to children and young people at successive periods in their development can be estimated.

In using knowledge from the field of human development Phenix believes that a threefold distinction should be kept in mind, namely, the distinction between what he terms 'actuality', 'possibility' and 'ideality'. By this he means that developmental enquiries yield knowledge of how certain people have 'actually' developed. However, he considers this knowledge may be inadequate for making curriculum decisions as the conditions of growth may not have been optimal.

Further, enquiries may reveal that under certain conditions specified learnings are possible. However, the demonstration of possibility is no guarantee of ideality, he feels, as it does not follow
from the fact that a person can learn something at a given stage in his growth that he ought to learn it then.

At the developmental stage of adolescence, the stage encompassing the secondary period of education, Phenix considers the search for individuality to be uppermost. He quotes the psychoanalyst Erik Erikson in *Childhood and Society*, who perceives the main task in adolescence as achieving a sense of identity, by internalizing and integrating the various social roles in which one is cast. However, at the same time he feels that trust, autonomy, initiative and industry are continuing aspects of personal growth that are important, together with, in some pupils, a development of intimacy, in which the person learns to find fulfillment by losing himself in loving others.

What this suggests is that some students may not be capable of realizing mature understanding of self and others, of moral insight and integrative perspectives during adolescence, which points to the need for continuing general education throughout life in these areas. Phenix proposes that it may be that the average person can profit most fully from such studies only after assuming adult roles rather than during secondary school. As such curriculum planners need to be aware of the limitations of the 'realms' or the 'forms' in the secondary school.

5. The Problem of Selection in the Curriculum

The problem of choosing what to teach is generated by the conditions of modern advanced civilisation. Knowledge has not only increased dramatically in the space of a few generations but is still
accelerating its increase. The solution to the 'knowledge explosion' is becoming aware of the essential basis of all knowledge 'forms' or 'realms'. Through promoting 'general' or 'liberal' education at the secondary level human existence can have its fundamental meanings restored.

The means to this end is via careful selection of materials based on the use of the disciplines, representative ideas and methods from them and stimulation of the imagination of the students through imaginative teaching.

6. The Use of the Disciplines

Phenix's first principle for the selection of the material for instruction is that all of it should be drawn from the organized scholarly disciplines. To distinguish between the consequential and the trivial he suggests analyzing the social sources of knowledge in advanced civilization, namely the groups of scholars who by their separate endeavours constantly shape and reshape each of the disciplines.

The special office of the teacher, he contends, is to mediate the knowledge of the specialized scholars to the students he teaches and thus reveal the general human relevance of this knowledge. The teacher he sees as the 'humanizer of knowledge', a person who selects materials from the disciplines that are also within the grasp of his students to understand and who teaches, explains and directs students to the meanings which they hold.
To achieve this he suggests not narrow, single discipline-related subjects, but broad multi-disciplinary subjects such as social science which could encompass the disciplines of history, economics, sociology and so on, or general science, which could encompass biology, physics and chemistry. 'Modern Civilisation' he suggests could encompass art, music, literature and the arts of movement. In this of course he is no different from Hirst with his 'fields'.

However, he is quite firm that within these multi-disciplinary subjects that the individual concepts and methods should be emphasized rather than shallow, non-disciplined thinking.

As an example of what he means, he suggests the topic 'The American Indian'. Rather than approaching the subject as an odd assortment of facts he suggests the study could be made from the standpoint of art, music, religion and so on.

Further, he proposes that every discipline should not be ashamed to make use of materials from other disciplines. Hence, he suggests a course in the problems of democracy might be organized in terms of the moral standards involved in responsible decision-making.

Apart from these suggestions he does not believe there are any definitive rules for organizing the subject matter for instruction, but proposes that if each individual teacher organized his material in terms of what was personally most meaningful, then this would be more likely to be intelligible to the students and they would respond better to his teaching.
7. Representative Ideas

Phenix contends that the second most important principle for selection of material is that it exemplify the representative ideas of the disciplines. These he feels should reveal the essence of the discipline and in no way be minor or subordinate. They are elements of the subject that stand for the whole or important aspects of it and epitomize what the subject is about. Phenix assigns the working out of the essential ideas of a discipline to specialists within each of the disciplines.

He proposes that it is of critical importance that these ideas should be learnt from examples rather than be taught as explicit concepts. Thus it would be extreme foolishness to teach the logical distinction between fact and obligation as an explicit topic in elementary moral education. Just as foolish would be to begin a study of music in terms of the analytical concept of the musical idea.

Instead, by carefully choosing the content of a subject, then slowly, individual item by individual item the jigsaw which is the essence of every discipline's representative ideas can be completed. By using the unusually illuminating specific example great economy and efficiency can be achieved in the art of communicating a discipline's core, and hence quickening a student's understanding and interest.

8. Methods of Enquiry

Phenix's third principle in the selection of curriculum content is really a corollary of the principle of representative ideas. He
proposes that a discipline's distinct methods of enquiry constitutes an especially significant set of 'representative ideas'.

He sees them as of central concern to the ameliorating of the main threats to meaning of cynicism, fragmentation, surfeit and transience.

Firstly, he maintains an understanding of methods overcomes cynicism because it provides clear means for the acquisition of understanding.

Secondly, he contends they are the unifying elements in a discipline and hence bind together the separate results of enquiry into one coherent domain.

Thirdly they help solve the problem of surfeit in knowledge, since with the possession of the tools of enquiry one does not need a vast store of accumulated knowledge.

Lastly, he believes they are especially helpful in respect to traneinsence as the methods generally change much more slowly than do the results of their application.

Taking an overview perhaps the most compelling reason for selecting the materials of instruction in order to exemplify methods of enquiry is that these methods are also the ways of learning. In being concerned with methods the student cannot assume a role of passive recipient but is forced into a role of active participant and thus more quickly acquires the fundamental meanings of existence.
9. The Appeal to Imagination

Without the above it does not matter how efficient the selection of curriculum content has been, for without teaching which is imaginative the qualitative learning experience of the student is likely to be routine, uninspiring and ultimately creative of negative feelings to the subject.

Thus there is a fourth important principle of content selection - appeal to the imagination. Phenix contends that the fundamental human motivation is the search for meaning. Imagination belongs to the active inner life of a person, and thus he feels that by constantly appealing to it, imaginative teaching has the power of fulfilling a person's existence.

To achieve this he maintains three important principles must be remembered:

(1) There is no unique model of imaginative teaching. A teacher has to take into account a whole range of social, cultural, age and environmental factors into account to be 'imaginative' in a given situation.

(2) The teacher himself must exemplify an imaginative quality of mind.

(3) There must be unconditional faith in the possibility of realizing meaning through awakened imagination no matter what appearances may indicate to the contrary.
Footnotes Chapter 5

2. ibid
3. ibid
7. ibid p. 128
9. ibid p. 293
10. ibid p. 294
Bibliography Chapter 5


P. Hirst, 'Chairman's Remarks' in A.C. Brown (Ed.), op. cit.
