CHAPTER 2

METHODODOLOGY OF COMPARATIVE EDUCATION AND THE THEORETICAL STRUCTURE OF THE EDUCATIONAL SYSTEM

2.1 INTRODUCTION

This chapter is divided into two parts viz. methodology of Comparative Education and the theoretical structure of the educational system. The divisions in question have been decided on the basis of the following reasons:

* The comparative method of Bereday with some adjustments will be used to compare the determinants of the educational systems of Bophuthatswana and Botswana. To obtain a clearer picture of Bereday's method it is essential to discuss it together with other methods in Comparative Education.

* In view of the fact that the whole study will be on the determinants of the educational systems of Bophuthatswana and Botswana it has been deemed fit to describe the theoretical structure of the educational system before coming to the actual description of the systems of education and the deriving of the determinants. The actual description of the systems of education of Bophuthatswana and Botswana is important in this study because it provides indicators to their determinants.

2.2 METHODOLOGY OF COMPARATIVE EDUCATION

2.2.1 INTRODUCTION

The contributions of George Bereday, Nicholas Hans, Brain Holmes,
Isaac Kandel and Edmund King towards a methodology of comparative Education have been chosen for this study because of the following:

- Their contributions are unique and also give new directions to methodology of Comparative Education.

- Their contributions are acknowledged by leading educationists in their writings such as, inter alia, A.R. Trethewey, S.S. Barnard and P.E. Jones.

The chosen exponents of the methodology of Comparative Education will be discussed in alphabetical order of their surnames.

2.2.2 BEREDAY'S CONTRIBUTION TO COMPARATIVE METHOD

2.2.2.1 Introduction

George Bereday was born in Poland in 1920, studied in England and holds the Chair of Comparative Education at the Teachers' College, Columbia University. He received some training as a sociologist at the School of Economics in London (Holmes, 1981:397). He is editor of the Comparative Education Review and Yearbook of Education. His most acclaimed work is Comparative Method in Education which reflects his convictions about this particular part-discipline (Van Schalkwyk, 1978:50; Trethewey, 1976:70-71; Barnard, 1984(a):256).

2.2.2.2 Bereday's method

2.2.2.2.1 Introduction

Bereday (1964:10-28) divides the method of Comparative Education into two main parts, viz. area studies, concerned with the country or region, and comparative studies, concerned with many regions simultaneously.
He divides the area studies into two phases namely descriptive and explanatory or interpretative while comparative studies are divided into juxtaposition and true comparison (Trethewey, 1976:71; Barnard 1984(a):27).

Bereday's method calls for the application of social science techniques and of the theories of the social sciences to the interpretation of the data about foreign educational systems or for the employment of social science theory in defining what data should be collected in the first place. He emphasises the use of a range of social sciences such as political science, anthropology, sociology and economics to explain pedagogical data (Cowen, 1981:385; Bash, 1981:508-516).

2.2.2.2.2 Area studies

Area studies refer to the study of the educational system of one country or region (Barnard, 1984:271; Prinsloo, 1980:62; Cirigliano, 1966:20).

The first phase (descriptive phase) proceeds in accordance with the following steps (Barnard, 1984(a):271):

* Reading programme of all the primary, secondary and auxiliary sources.

* Visits to all types of schools and educational institutions.

* The keeping of informative reports (records of data) of what has been read or seen.

* The formulation of certain hypothesis or tentative generalisations.

The initial step in area studies is the description of the educational
system and practices in the chosen area. This is accomplished through a combination of extensive reading and a solid programme of school visits, reading of primary, secondary and auxiliary sources and the need for systematic collection of data (Bereday, 1964:11-13; Trethewey, 1976:72).

Upon the handling of the descriptive phase, the researcher has at his disposal the collected facts in the form of descriptions, graphs, tables and illustrations in respect of education in the concerned country or area (Barnard, 1984(a):271).

In the second phase of the area studies the following actions take place: interpretation, evaluation, declaration of the particulars of a particular country in terms of the particular historical, political, economic, social, geographical, philosophical and other background factors which influence individual systems of education (Barnard, 1984(a):271).

In this phase (explanatory phase) the task of the researcher is to expose fully the collected pedagogical data on schools to a test of social relevance. The aim here is the explanation or interpretation of the described phenomena as absolutely as possible. This would lead one beyond narrowly educational or school dimensions of the issue and, as one moved Bereday's interpretative stage, one would turn deliberately and systematically to what other fields of study had to offer. From demography might come information on population composition and trends in city areas; from anthropology, studies of the cultures of particular migrant groups and problems of acculturation; from political science, studies of government policy towards migrants or the electoral strength of migrant
groups; from history, analysis of the programme or of the development of its attitudes to newcomers; from sociology, studies of social characteristics of migrant groups and their relation to the progressive educational and social systems; from economics, religious studies and others, their own special contributions (Bereday, 1967:169-181; Trethewey, 1976:73).

Bereday (1964:10) declares the indispensability of area studies especially in view of the heavy demands on scholarly equipment and resources that a comparative study will later require. It is clear that comparative study can only be meaningful if area study has been done thoroughly. It is therefore vividly clear that Bereday attaches great importance to area studies especially when he asserts that

"the student of Comparative Education must begin by acquiring a thorough familiarity with the educational system of one cultural area"

(Bereday, 1964:10).

Bereday (1964:10) lays down prerequisites for area studies as:
- the knowledge of the language of the area under study;
- residence in the area; and
- control of cultural and personal biases.

2.2.2.2.3 Comparative studies

The comparison of two or more countries or areas also proceeds in two phases.
The first phase of comparative studies is called juxtaposition. Bereday (1967:171) defines juxtaposition as
"preliminary matching of data from different countries to prepare them for comparison".

A matching of that nature should include the systematization of data so that they may be grouped under identical or comparable categories for each country under study. Hypothesis is also included in the process. The preliminary classification of these materials is followed by the formulation of a tight and vigorous hypothesis (Bereday, 1967:171; Trethewey, 1976:74).

Juxtaposition assumes two forms viz. tabular juxtaposition (vertical) and textual juxtaposition (horizontal). In tabular juxtaposition materials to be compared are put side by side in columns whereas in textual juxtaposition, they are written down one under another (Bereday, 1967:171).

The two forms of juxtaposition are represented in figure 2.1

**Figure 2.1 Representation of tabular and textual juxtaposition**
(Bereday, 1967:171)

<table>
<thead>
<tr>
<th>Tabular juxtaposition (vertical)</th>
<th>Textual juxtaposition (horizontal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary basis for comparison materials from the country</td>
<td>Preliminary basis for comparison</td>
</tr>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Final hypothesis for comparison</td>
<td>Final hypothesis for comparison</td>
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</tbody>
</table>
From figure 2.1 the following can be observed:

- In the case of tabular juxtaposition data from various countries are put side by side or matched.

- In textual juxtaposition sections of material are merely put down one under or after the other.

Farrel (1979:12) levels criticism against juxtaposition, maintaining that it is a wrong way to proceed, because one does not go for data first, with the hope that some basis for comparison will become evident. Rather, one goes to the data with a hypothesis, even if it is not properly specified, which directs one as to what to look for and what to ignore.

The second phase of comparative studies is the actual comparison when the data of two or more countries or regions are simultaneously handled with the aim of arriving at objective conclusions (Barnard, 1984(a):273).

Bereday (1967:175) divides comparison into two kinds, viz. balanced and illustrative comparison. Balanced comparison refers to a symmetrical shuttling back and forth between the areas under study. The crux of this method is that every type of information from one country must be matched, balanced by comparable information from other countries.

When balance comparison is not advisable, another comparison can be resorted to. This other type of comparison is called "illustrative". Illustrative comparison refers to the drawing at random of educational practices in different countries as illustrations of comparative points
suggested by the data. In the case of illustrative comparison the analyses are derived from comparative data only by implication (Bereday, 1967:178).

In step form, Bereday's comparative methodology assumes the following shape (Trethewey, 1976:74-76):

1. select a topic, issue or problem;
2. collect and collate educational data relevant to the topic in selected countries;
3. interpret the data applying such disciplines as are relevant to an understanding of it in the social context;
4. juxtaposition of the interpreted data in order to reveal possible bases for comparison;
5. develop hypothesis;
6. test hypothesis by a comparative analysis of the interpreted data; and
7. draw conclusions.

Jones (1973:89-92) levels the following criticisms against Bereday's method:

* Bereday's explanation of the means by which foundations of comparability are established is not of much help.

* The fact that hypothesis formulation comes very late in the discourse and therefore makes the researcher to process a big quantity of irrelevant data.
The finding of the so-called criteria for comparison is not well outlined and appears nothing more than an ad hoc list of common sense classification that one might establish from the data collected with a view to ordering it.

The division of the area studies in phases of description of pure educational data and the interpretation thereof in terms of predetermined factors create practical problems, in view of the fact that it is difficult to describe pure data about education without making reference to the environment of the educational systems.

Despite the above shortcomings, Bereday's method still remains an important instrument of comparison.

Bereday's method has been an immense contribution to the field of Comparative Education because area studies, which are a part of his method, provide good building blocks for comparative study. Trethewey (1976: 77) is correct in declaring that

"he reminds us of the central place of vigorous area studies, for they are both the means of accomplishing several of the purposes by which the field is justified and by providing the building blocks for comparative study".

It is also true that Bereday has succeeded in developing a logical form of comparison. Jones (1973:92) correctly asserts that

"in fairness it must be emphasized that he has attempted to develop a logical form of analysis and comparison".

Bereday's contribution is legion because he has invented a method which prescribes a methodology for Comparative Pedagogics (Prinsloo, 1980:60).

He has given weight to the contribution of the social sciences, because
he recognised that Comparative Education is not merely a series of area
studies with some comment on the common and the diverse of systems of

It is also relevant to mention here that Bereday's approach seems to en-
danger the independence of pedagogics especially when he argues that
those engaged in interdisciplinary co-operation in search of an educa-
tional system, must also know something about educational theory and
administration (Van Schalkwyk, 1978:51).

Bereday's method is diagrammatically represented in figure 2.2.

Figure 2.2 (see p. 21)

Bereday's method for area studies and comparative studies as refined by
Trethewey (Trethewey, 1976:76)

2.2.3 NICHOLAS HANS

2.2.3.1 Introduction

Hans had been attached to King's College, University of London, where
he held a Readership in Comparative Education. His major contribu-
tion to Comparative Education, viz. Comparative Education: A study of
Educational Factors and Traditions (1949) provides the clearest insight
into his approach to the field (Trethewey, 1976:62).

2.2.3.2 Hans' contribution to comparative method

Hans saw Comparative Education as following the same path as such
erlier studies as Comparative Law, Comparative Religion and Comparative
Anatomy. Comparative Education involves the description and comparison
Figure 2.2 Bereday's method for area studies and comparative studies (Trethewey, 1976:76)

<table>
<thead>
<tr>
<th>Area Studies</th>
<th>Stage 1</th>
<th>Pedagogical data only</th>
<th>Stage 2</th>
<th>Interpretation</th>
<th>Stage 3</th>
<th>Juxtaposition</th>
<th>Stage 4</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
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<td>Stage 2</td>
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<td>Interpretation</td>
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<tr>
<td>Juxtaposition</td>
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<tr>
<td>Stage 4</td>
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<td>Comparison</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Country A</th>
<th>Country B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics</td>
<td>Economics</td>
</tr>
<tr>
<td>Anthropology</td>
<td>Anthropology</td>
</tr>
<tr>
<td>Pedagogical data</td>
<td>Pedagogical data</td>
</tr>
<tr>
<td>Politics</td>
<td>Politics</td>
</tr>
<tr>
<td>Sociology</td>
<td>Sociology</td>
</tr>
<tr>
<td>History</td>
<td>History</td>
</tr>
</tbody>
</table>

Matching data and establishing criteria of comparison:

- 1
- 2
- 3
- 4

Simultaneous comparison - (by rotation or fusion) to test hypothesis:

- 1
- 2
- 3
- 4

Criteria of comparison hypothesis:
of existing phenomena in educational systems, the analysis of similarities and differences through historical study and the attempt to draw forth any general principles underlying the variations (Trethewey, 1976:62).

The first step in Hans' method was to make a study of each national system separately in its historical setting and in close connection with the development of national character and culture (Hans, 1958:7-8).

The second step was to collect data on existing systems of education (Trethewey, 1976:62).

In his view the growth of nations was influenced by three groups of factors, namely natural, religious and secular. Among the natural factors he includes race, national language and environment; among the religious factors he includes Christianity, Islam, Hinduism and other eastern religions such as Buddhism, Confucianism and Shintoism; among the secular were humanism, socialism and nationalism (Trethewey, 1976:63).

Hans' objective is to outline the educational systems in various countries in terms of the national character and culture, as they appear in the historical contexts (Prinsloo, 1980:53).

Hans' pre-determined factors of the educational system can diagrammatically be represented as follows:

Figure 2.3  (see p. 23)
Figure 2.3 *Diagrammatical representation of Hans' pre-determined factors of the educational system* (Prinsloo, 1980:57)

<table>
<thead>
<tr>
<th>INDIVIDUAL BECOMING</th>
<th>NATIONAL CHARACTER</th>
<th>EDUCATIONAL SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Judgement</td>
<td>i. Race</td>
<td></td>
</tr>
<tr>
<td>ii. Environment</td>
<td>ii. Language</td>
<td></td>
</tr>
<tr>
<td>iii. Training</td>
<td>iii. Environment</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>INTERNATIONAL IDEALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religious factors</td>
</tr>
<tr>
<td>i. Catholicism</td>
</tr>
<tr>
<td>ii. Anglicanism</td>
</tr>
<tr>
<td>iii. Puritanism</td>
</tr>
</tbody>
</table>

The following should be noted in reading figure 2.3:

- The solid double lines indicate the causal influence. That is how the national characters cause the educational system.

- The bold solid line indicates the influence of international ideals on the national character, which consequently influence the educational system.

- The single line between individual becoming and national character indicates the origin of factors which determine the national character.

- The broken lines indicate the possibility that the international
ideals, via education, can assist the formulation of the national character.

2.2.4 BRIAN HOLMES' CONTRIBUTION TO COMPARATIVE METHOD

2.2.4.1 Introduction

Ever since 1943 Holmes has been attached to the Institute of Education, London University. He is presently an expert on the systems of education of the USA and the USSR in particular and is secretary/treasurer of the Comparative Education Society in Europe. He has contributed substantially to the Yearbook of Education. His major work is Problems in education (1965) (Van Schalkwyk, 1978:52).

Brian Holmes is primarily known for his problem approach in Comparative Education.

2.2.4.2 Brian Holmes' approach

Holmes sees the problem approach as the ideal approach for solving educational problems and for the improvement of education.

His commitment to the problem-solving approach rests on his belief that it is scientific and that it can be used as an instrument of change (Holmes, 1965:3; Van Schalkwyk, 1978:52).

In developing the problem-solving method Holmes (1965:32) turned to the analysis of reflective thinking given by John Dewey in his book How we think and expressed it in the following sequence:
* Confusion or perplexity;
* hypothesis or solution-formulation;
* problem intellectualisation or analysis;
* analysis and specification of context;
* logical deduction of consequences; and
* practical verification.

Holmes (1965:34-47) stresses and elaborates four main aspects of his method:

* Problem selection and analysis: After the selection of the problem the next step is to analyse it, so that it can be delineated as clearly as possible.

* Policy formulation: Here a range of realistic policy choices which might solve the problem are identified.

* Identification of relevant factors: This refers to the identification of determinants which will affect any of the solutions attempted in a particular context.

* Prediction: An ingredient of science and planned reform.

The last phases of reflective thinking are prediction and verification. Comparative educationists who are interested in the planned development of education should of particular be keen to improve techniques of establishing causal relations.
Specification of the circumstances under which predictions are to be made involves three operations (Holmes, 1965:41):

** Contextual determinants; they refer to a detailed description and analysis of, say, the system and those political, economic, cultural and social factors which are in relationship with it and constitute the particular problem.

** Selection of those determinants relevant to the particular problem.

** Weighing of the selected variables.

On the grounds of what has been said in the preceding paragraphs Holmes advocates the problem-solving method. He advocates a problem-solving method on the grounds that it is forward-looking in contrast to methods based on historical analysis; that it represents an attempt to make comparative studies scientific; and therefore it is more useful in educational planning and reform (Trethewey, 1976:84).

Holmes (1965:48-98) contracts his own analytical model on the basis of "critical dualism" to be used in conjunction with the problem-solving approach. His model is composed of three elements:

*Normative pattern:* This comprises institutions and normative laws.

*Institutional pattern:* Comprising institutions and their associated sociological laws.
Physical or material patterns: The patterns are derived from factors outside the other two, which in relationship with them, may help to explain and later solve educational problems.

In respect of this method Holmes (1973(a):20) further declares that

"A central problem in Comparative Education has always been to demonstrate the relationship between general statements about the determinants of education and the 'facts' of national systems".

It is also Holmes' conviction that comparative studies presupposes that the dichotomy between empirical (experimental) and non-experimental and non-empirical (qualitative) research is false. In research an individual and society should be useful, both elements are needed (Holmes, 1973(b):42):

* Problems arising as a direct consequence of the interaction between education and its socio-economic and political infrastructure.

* Development in one sphere of the educational sub-system as a result of changes in the sub-system.

Holmes has attempted to put the comparative educational method on a theoretical basis. His method can further be explained by dint of the following diagram:

Figure 2.4 (see p. 28)
2.2.5 ISAAC KANDEL'S CONTRIBUTION TO COMPARATIVE METHOD

2.2.5.1 Introduction

Kandel had for many years been a Professor of Comparative Education at Teachers' College, Columbia University and a productive editor, writer, speaker and international traveller. He died in 1965 at the age of 84 (Trethewey, 1976:55).
A clear picture of his approach is to be found in the preface and introduction to his book *Comparative Education*, first published in 1933. He contributed substantially to academic journals and also re-wrote *Comparative Education* as the *New Era in Education* and published it in 1954.

**2.2.5.2 Kandel's Approach**

Kandel (1933:X) acknowledges the fact that various methods could be employed in comparing the educational systems of several countries by asserting that

"The comparison of the educational systems of several countries lends itself to a variety of methods of treatment, depending somewhat on its purpose".

One method said Kandel (1933:X) might be statistical in comparison of expenditure, enrolments or retention rates of children in education. Another might aim at comparing such measures of education's contribution to national welfare as statistics of illiteracy, volume of trade and commerce, or the incidence of crime and poverty. A third might undertake comparisons of quality of education in different countries.

In 1933 Kandel believed that these methods could not yet be used because he asserts that

"this, too, may be possible in time, but not before the instruments of measurements have been made more perfect and reliable than they are at present or when aims of education in different countries are nearly alike . . . ."

(Kandel, 1933:X).
The following are steps in Kandel's method (Trethewey, 1976:57-58):

* Description of the answers given in theory and practice to one or more of the problems common to all countries. Kandel (1933:XIX), however, declares that

"merely to study the educational machinery, the organization and administration of school system the curricular and teaching processes, and classroom procedures would be barren".

* Explanation or interpretation in terms of an analysis of the causes which produced them.

* Comparative analysis involving comparison of the differences between the various systems and the reasons underlying them.

* Disengagement of certain principles or tendencies and building up a philosophy of education on a basis of observed practice rather than metaphysics or ethics.

The task of Comparative Education is to discuss the meaning of general education, elementary and secondary, in the light of the forces - political, social and cultural which determine the character of national educational systems (Kandel, 1933:X).

Despite some shortcomings which might be highlighted by some students of Comparative Education in Kandel's method, Trethewey (1976:61) asserts that
"above all, his work reminds the newcomer of the need to establish a basis of accurate information about educational systems, to be aware of the importance of the historical-cultural context in which they develop, and to move beyond descriptions to explanations and hence to principles."

2.2.6 EDMUND KING'S CONTRIBUTION TO COMPARATIVE METHOD

2.2.6.1 Introduction

King, formerly a professor of Comparative Education at the University of London was well-travelled and has several publications on the educational systems in foreign countries to his credit. He has displayed interest in methodology especially in his later works in which he criticizes inter alia, Holmes' standpoint in respect of educational reform on a scientific basis. King acknowledges the fact that there are certain regularities in the life of the community which can be unearthed and subsequently give service to the indications of possible tendencies in the future (Barnard, 1984:278).

2.2.6.2 King's method

King sees education as a means of promoting security and social prosperity. Comparative Education is merely an instrument for decision-making. The practice of Comparative Education is thus justified in so far as it can present reliable evidence and information to facilitate and secure effective implementation of decisions and for securing this evidence he favours the more recent methods developed by the social sciences (Barnard and Vos, 1980:8).
In examining any problem there must be an element of purpose (King, 1968,43). The element of purpose as suggested by the following questions: What is it? What comes next? what for? persists until the highest level of academic research is reached. Scientific research is always preceded by a hypothesis.

King (1968:48) asserts that the hypothesis is important in order to keep the researcher on the track in terms of analysis, interpretation and priority. Hypothesis leads to the collection and collation of data. Upon the collection and collation of data, explanatory analyses, clarification and decision are required. Decision depends upon the present context and on the priorities and probabilities to be considered for the future.

King stresses decision-making and the implementation of decisions as important aims of Comparative Education, but allows that Comparative Education has a variety of aims (Barnard and Vos, 1980:21).

King emphasized the importance of social sciences in Comparative Education. He declares that

"we obviously need to make use of all the existing resources of the social sciences which penetrates our own field or border on it. After all they have whole batteries of data which may be relevant to our study . . ."

(King, 1968:47).

King (1968:47) maintains that the methodology of our comparative interests must increasingly rely on support from other social sciences. He further maintains that if methodology of comparative interests relies on
the support from other social sciences the comparative studies of educa-
tion can in return offer the following:

- a sense of the cultural "wholeness" or educational idiom of each
  area or occasion on which a decision must be taken; and

- a cross-cultural dimension resulting from the comparison of what
  seem to be similar factors or problems in a variety of relevant
  contexts.

The following are the elements of King's conceptual framework (Barnard
and Vos, 1980:21):

* Rapid social change;
* comparative Education's role of assisting in decision-making
* involvement in democracy: it would be better if those who are most
  able and acknowledgeable were involved democratically in educational
  reforms; and
* the pragmatic approach: this refers to the rejection of the idea
  of laws and the recommendation of the use of hypothesis.

The conceptual framework of King depends on simple methods (Barnard
and Vos, 1980:22):

Step 1: Collection of data for comparison.

Step 11: Analysis of the data to render them meaningful and to take
        into account the multiplicity of interesting causes and forces
        relevant to the problem.
Step 111: Comparative analysis: Sets of data for different countries or areas are placed side by side for comparative purposes.

King (1968:69) further contends that in comparative studies results are also communicated. Any comparative study must provide relevant data, and communicate relevantly.

The following are aspects of King's connection with the newer scientific vision (Stone, 1981:154-156):

* Sympathy with the idea of science in the service of practice, a dynamic practice which requires a dynamic science is evident in his methodology. He is also convinced that Comparative Education should be an instrument of reform in education. The foundations of Kings's comparative investigations are decision-making and factors determining it. Positivism, induction and deterministic social laws have no place in his thinking.

* King's work is based on two epistemological presuppositions:
  First, he denies the existence of objectivity.
  Secondly, he believes that it is impossible to formulate laws for the social sciences and that there is consequently no absolute scientific certainty or validity. He does not have respect for quantification of methods. King maintains that he would be more scientific if he acknowledged his own subjectivity, since he will be projecting certain meanings a priori into his collecting and classifying of information. King therefore acknowledges that to be truly scientific requires the acknowledgement of subjectivity in scientific research.
* He maintains that science is in search of what is general. He does not regard generalities as universal laws.

2.2.7 CONCLUDING REMARKS
Having discussed various methods in comparative studies it is essential to state here that Bereday's method has been chosen for further use in this work. The reasons for having chosen Bereday's method will be advanced later in this paragraph. It is further essential to state briefly why other methods have not been chosen.

Isaac Kandel's method have not been chosen for further use in this work because it has the following weak points (Jones, 1973:64):

* It neglects the findings of social sciences by assigning a legion role to the state; and

* Kandel does not provide sufficient evidence to substantiate his generalizations.

Hans' method has also not been chosen because it concentrates mainly on the history of education with less emphasis on statistics (Jones, 1973:68). Comparison is therefore not easy with this method.

It has not been easy to choose Brian Holmes' method because it is difficult to comprehend; he himself suggests that it is mainly research workers and advanced students who might find it of use. Holmes has also not made provision for a simple and clear application of his conceptual framework. (Jones, 1973:117).
Kings's method has not been chosen for further use in this work because his recommendations that official decision-making bodies be left out in educational administration would prove impossible because if educational administration is the exclusive responsibility of the experts the politically-elected representatives of the people would hesitate to go against expert advice, even though they might believe it to be wrong in the light of all the circumstances (Jones, 1973:133).

The comparative method of George Bereday will be used to compare the determinants of educational systems of Bophuthatswana and Botswana because it provides a more logical form of comparison. The area studies of Bereday's method are both the means of accomplishing several of the purposes by which the field is justified and of providing building blocks for comparative study as indicated in paragraph 2.2.2.2.3. With this method Bereday has been able to give more weight to the contribution of the social sciences. Above all, this method provides a logical set of procedures (Trethewey, 1976:77).

With some modifications this method becomes most suited for this study. Instead of discussing the determinants of the educational systems of Bophuthatswana and Botswana at the level of area studies, the educational systems of the countries in question will first be discussed because it is difficult to describe pure data about education without making reference to the environment of the educational systems (Jones, 1973:89-90). These systems of education are discussed with the aim of providing indicators to the determinants of those systems which will be organised and structured in the juxtaposing phase in chapter 5. It therefore
stands to reason that indicators will be extracted and organised under different determinants in order to prepare for the next phase of comparison in the second half of chapter 5. In juxtaposing various determinants textual form of comparison will be used.

The 15 modalities will be used as criteria for finding the determinants of the system of education in question.

In actual comparison the balanced form of comparison will be used (see paragraph 2.2.2.2.3). This means that information from Bophuthatswana will be matched and balanced with comparable information from Botswana. "Comparable" in this case refers to the fact that similarities and differences will be shown.

Another change from the method of Bereday was the development of hypothesis after the juxtaposing phase. Hypothesis has not been stated because it is not necessary to develop it at this late stage (Trethewey, 1976:77) and this study has been structured in terms of the aims of research as stated in paragraph 1.3.

2.3 THE THEORETICAL STRUCTURE OF THE EDUCATIONAL SYSTEM

2.3.1 INTRODUCTION

Various people and bodies have defined an educational system in a variety of ways. The following are some of the definitions of the educational system:

Van Schalkyk (1978:92) defines the educational system as
"a social structure which differs from all other social structures in that it is an interwoven structure".

Barnard and Vos (1980:25) define it as

"an entity of different kinds of social structures".

Archer (1979:54) maintains that

"a state educational system is considered to be a nationwide and differentiated collection of institutions devoted to formal education, whose overall control and supervision is at least partly governmental, and whose component parts and processes are related to one another".

Stone (1981:3) asserts that the

"national educational system, man's most comprehensive cultural product in the field of education is an interwoven structure in which social structures of a given society combine with educational institutions so that, by the co-ordination of each one's contribution to education and by organisation, they may bring about the accelerated development of the young in the territory of a specific state, in compliance with cultural and natural demands of time and place".
According to Malao (1983:124) in every society there are a number of institutions, each one with its own function but all directed to the service of society. Wentzel (1979:1) cites examples of such institutions as the church, the school, the state, commerce and industry and legal institution. Malao (1983:124) further declares that

"the interwovenness of these structures to bring about education is known as an educational system".

The national educational system is an integrated part of the community's culture and is connected with the culture of the community for which it is intended (Barnard, 1978:24).

The educational system has the following main characteristics:

* Universal and individual aspects; and

* the individual characteristics are attributed to the determining factors present in its particular situation (Ruperti, 1982:1).

From the above definitions and remarks one may conclude that the educational system is the working-together or co-operation of various social relations or structures within the community's cultural setting, with the maintenance of authority in the sphere of operation of each social structure to bring about education. The educational system therefore has the following basic and fundamental elements: social structures, interwovenness, sovereignty in its sphere of operation and relevance and connection to the culture of the given community.
The various moments of the educational system will be discussed in the subsequent paragraphs. The modal-structural moment of the educational system will be discussed in more detail than the others because the 15 modalities will be used as criteria for the determination of determinants of the educational systems of Bophuthatswana and Botswana in chapter 5.

2.3.2 THE STRUCTURAL MOMENTS OF THE EDUCATIONAL SYSTEM

2.3.2.1 Introduction

The actual structure of the educational system reveals itself in four structural moments, viz. the religious, the temporal, the modal and the individuality-structural moments (Barnard, 1984(a):170-171).

2.3.2.2 The religious structural moment of the educational system

Everything in the cosmos is created by God and He also controls every aspect of the cosmos. The religious convictions of man colour his view of reality in respect of view and approach to the content and direction of religion (Barnard, 1984(a):171).

The religious ground motif of the community is decisive in national systems of education. All systems of education which function normatively are based on the religious ground motif of those communities. The religious ground motif further determines the educational motif of a community.

The religious ground motif is the spiritual force or root of the community which determines direction of various activities of that community (Ruperti, 1976:5; Van Schalkwyk, 1981:217). It therefore stands to reason that normatively the religious ground motif of the community will be mirrored in the educational system of that community.
There are problems in the Bophuthatswana system of education in terms of education and the religious ground motif of the Tswana community. In this connection Malao and Barnard (1984(a):589) assert in respect of Bophuthatswana that

"it is just unfortunate that the educational practice contrasts with what one would expect to be the expression of the religious ground motif . . .".

The Botswana system of education also has similar problems as indicated in paragraph 4.5.1.

2.3.2.3 The temporal-structural moment of the educational system

The existence of all things, also including the educational system, is determined by temporality and it is inseparably tied to time. It is only God who is not bound by time (Barnard, 1984(a):175).

Education takes place in time. The child becomes school-ready, for instance, at a certain time. In Bophuthatswana and Botswana children are admitted to schools at the ages of six and seven respectively (Bophuthatswana, 1980:6; Kgosidintsi, 1978:8).

Teaching and learning take place at school during certain times of the day. The school time-table indicates times when lessons start and when children should go for break. Examinations are written during certain times of the year, therefore the entire process of education is time-bound.

2.3.2.4 The modal-structural moment of the educational system

2.3.2.4.1 Introduction

Man displays 15 modes of existence which give him a unique identity.
These modes are in accordance with Dooyeweerd's approach of modality. The modal existence of man has implications for the structure and content of the educational system, for example, the body-build and size (a spatial factor), of children make certain demands in respect of school-building and other equipment, sports-fields and other physical facilities (Van Schalkwyk, 1981:55).

2.3.2.4.2 The natural aspects

2.3.2.4.2.1 Introduction

The natural aspects of modalities refer to natural circumstances which are subject to the laws of nature which man cannot change.

2.3.2.4.2.2 The numerical aspect

The numerical aspect is the least complicated mode of existence of all cosmic matter. Although the concept "number" exists in theory it is a modal function and not a thing (Barnard, 1984 (a):178).

Like all of creation the educational system exists in certain ways or modes (Van Schalkwyk, 1982:43). Number is another way of existence of the educational system. The numerical way of existence is manifested in statistics. Statistics plays a decisive role in education. No proper planning can be done in education without the use of numbers. In order that the school should come into existence there must be a certain number of pupils. School enrolments in a particular system, the extent of compulsory education, the incidence of absenteeism, the sizes of schools and classrooms, teacher pupil-ratios, provision of teaching personnel and financial estimates are expressed in figures (Stone, 1974:24).
Number plays a very important role in education hence the connection of the educational system to numerical laws (Barnard, 1984:178).

There can never be spoken of the growth of the educational system without simultaneously implying the growth of numbers of schools and pupils. Number therefore plays an eminent role in the growth of any system of education. Barnard (1984(a):178) correctly asserts that the development of any educational system is largely influenced by numbers.

The size of the population also has an influence on the educational system. The word "size" refers to the number of people. The size of the population, its variations in density and its composition have an effect on the expansion and the cost of education (Callaway, 1974:24).

In terms of education, increases in numbers of children require many more schools and teachers and therefore higher capital investments and recurrent costs to keep present proportions of school-age children in schools (Callaway, 1974:26). Paragraph 3.9.1.3.7, inter alia, shows that the Bophuthatswana system of education among others functions numerically. Paragraph 4.7.5.3.2 also shows that the Botswana system of education also functions in terms of numbers.

2.3.2.4.2.3 The spatial aspect

Spatial aspects are closely related to numerical aspects because the spatial aspects are expressed in terms of numbers. Spatiality is not a reality but the existence of all matters of reality (Barnard, 1984(a):178).
The spatial factor also has an influence on the educational system and in particular on the differentiation in respect of educational facilities. It is uneconomic to provide a variety of institutions (academic, technical, agricultural, vocational, commercial) in a sparsely populated area. The spatial aspect is intimately related to the numerical aspect (Stone, 1974:25).

Paragraph 3.2 amongst others shows the size of Bophuthatswana and also the fact that Bophuthatswana has seven separate geographical units. The separate geographical units making up Bophuthatswana have a bearing on the administration of education. The spatial functioning of the Botswana system of education is indicated in paragraph 4.2

2.3.2.4.2.4 The kinematic aspect

Movement affects the educational system in more ways than one. Stone (1974:27) argues that

"Leerlingimigrasie is 'n bekende probleem van 'n opvoedingstoestel . . .".

The effect of movement on the educational system is more conspicuous in South Africa. Equal standards of education throughout the four provinces of South Africa, guaranteed through the introduction of core syllabuses, is an attempt to guarantee that pupils who migrate from one province into the other should not be punished. In the Bophuthatswana and Botswana systems of education this factor has been catered for because of the same curricula respectively throughout these states. Paragraphs 3.9.1.3.5 and 4.5.2 indicate how the Bophuthatswana and Botswana systems of education respectively function in terms of the kinematic aspects of reality.
2.3.2.4.2.5 The physical aspect

The educational system is connected to the physical conditions of climate, season, relief of the land, and minerals. The physical nature of the country, climate, season, topography or raw materials, have a visible effect on the educational system (Stone, 1974:28; Stone, 1981:69). The type of architecture and the building material of schools must suit the climate and the local supply of wood and stone (Hans, 1958:6).

The age-limits of compulsory attendance are also affected by the climatic conditions of the particular country.

The Bophuthatswana system of education also functions in terms of the physical aspects of reality. In this connection Malao (1983:180) declares that in respect of the school buildings the physical aspect of reality is well accommodated in the educational system of Bophuthatswana. Paragraph 4.7.3.2.2 shows how the Botswana system of education functions in terms of the physical aspects of reality.

2.3.2.4.2.6 The biotic aspect

School subjects such as Physical Education, Physiology, Biology and Hygiene, food schemes in poorer communities and medical and dental auxiliary services makes it obvious that education also has a biotic dimension (Stone, 1981:69).

The population growth rate in Southern Africa is usually higher in poorer than in rich communities. This means that the need for educational facilities increases at a greater rate among the poor people who are least
able to afford them (Ruperti, 1976:39). The fertility of a given society affects education in that the children who are born must be catered for in the educational system. The population explosion has a direct impact on pupil enrolments (Verwey, Du Plessis and Mamabolo, 1983:5).

The educational system has intimately to do with the demands of the growth and the development of the community (Stone, 1974:29).

School buildings and amenities should be adapted to the sizes and needs of growing bodies of children and consecutive age groups, safe playgrounds, hygienic classrooms, correct ventilation, lighting and sound-proofing, medical services for pupils in a school context, special education for the physically handicapped; all these show clearly that education has a biotic side. Paragraph 3.9.2.6 shows that education in Bophuthatswana also functions in terms of the biotic aspect of reality because of the inclusion of sport and recreation in the educational system. The biotic aspect of the Botswana system of education is indicated in paragraph 4.7.9.3.

2.3.2.4.2.7 The psychic aspect

One of the most important principles in teaching is differentiation of pupils on the basis of their aptitude. Some schools prefer to classify pupils on the grounds of their abilities. Psychological test results prove to be helpful to teachers who wish to classify their pupils on the strength of their aptitudes.

Mentally retarded children who cannot obtain benefit in a normal school
are admitted in institutions specially meant for such children. The recognition of this factor in education gives rise to the establishment of special schools. Scholastically retarded children are also given remedial education. In well-developed systems of education mentally gifted children are taught in special schools, usually adjacent to universities. Stone (1974:31) in this regard declares that

"Omdat die opvoedingstelsel rekening hou met individuele verskille betreffende die psigiese vermoëns, aanleg en ontwikkeling van die kind is differensiasie in enige stelsel 'n noodsaaklikheid".

All the educational systems are influenced by the above factors but the manner of influence depends on local circumstances. The influence of the psychological factors of reality in the Bophuthatswana system of education is indicated in paragraphs 3.9.1.4.5 and 3.9.2.8 through the inclusion of special schools in the school system and Bureau for Psychological Services in the Ancillary Services respectively. The psychic functioning of the Botswana system of education is demonstrated in paragraph 4.7.5.5.

In addition to natural aspects there are also cultural factors which influence the educational system.

2.3.2.4.3 The cultural aspects

2.3.2.4.3.1 Introduction

In cultural aspects the educational system does not function subject to deterministic laws, but in obedience to the demands of what ought to be, therefore norms which can be transgressed. In cultural factors determinism does not occur (Stone, 1981:72).
2.3.2.4.3.2 The analytical or logical aspect

The logical factor or aspect is obvious in education in that the activities of every school for instance are controlled by well-worked-out time-tables. Planning is an essential feature of every Department of Education and every school. The various aspects of the educational system are arranged in a systematic and orderly fashion, and this is a clear proof that an educational system has an analytical side (Stone, 1981:73).

The general organisation of the educational system rests on classifications, orderliness and planning. In the educational system, for example, differentiation is made between grades of posts, grading of schools, between different types of institutions and between study directions (Barnard, 1984:181; Stone, 1974:33). The fact that the school system in Bophuthatswana has assumed a certain definite pattern has been demonstrated in paragraph 3.9.1.1. All schools in Bophuthatswana have time-tables. Organogram 3.1 also shows order and system in the administration of education in Bophuthatswana. The analytical aspect of the Botswana system of education is demonstrated in the arrangement of the school system in paragraph 4.7.5 also through the organisational structure of the Ministry of Education in organogram 4.1.

2.3.2.4.3.3 The historical cultural aspect

Everything which is time-bound has a cultural-historical dimension. All the activities of man which take place in time and therefore give concrete forms to cultural norms, contribute to history. It is only God who is not time-bound, therefore the educational system develops in the course of time and history.
In a more embracing sense of the word it can be stated that educational systems are part of cultural history (Stone, 1981:75).

The appearance of social structures such as the church, school and state into communities falls, with man's cultural forming and civilization, into time. The educational system must therefore be understood and explained from the cultural history which is so intimately intertwined with it. The involvement of every educational system with the culture of its own national community gives rise to great differences between the systems. It is important to mention here that an educational system does not only ensure cultural assimilation and dissemination, but that it is also in itself part of the nations culture (Barnard, 1984(a):181-182).

The fact that the Bophuthatswana and the Botswana systems of education have a cultural-historical side is vindicated by the fact that those systems of education developed from the RSA and the British systems of education respectively. Paragraph 3:7 shows the historical development of the Bophuthatswana system of education while the historical development of the Botswana system of education is indicated in paragraph 4.7.

2.3.2.4.3.4 The linguistic aspect

The system of education should, amongst others, be determined by the language situation in a country (Malao, 1983:89). Pupils are taught through a particular language. The medium of instruction, especially in developing countries, remains a controversial issue. Various educationists such as Cingo, Stone, Hans and Luthuli have proved the importance of the mother tongue as the best medium of instruction (Cingo, 1967:135; Hans, 1958:62; Luthuli, 1980:11).
If the nation loses its language or deliberately discards it from the educational scene, it is well on the way towards losing its culture. To a nation, the loss of its culture is the harbinger of a loss of identity. The nation itself is in an obvious danger of disappearing (Department of Education and Training, 1984(a):29).

Cingo (1967:135) maintains that

"the principle of mother tongue instruction as seen in practice and in the educational policies of other lands and peoples in the world is too vital and sacred to be sacrificed at the altar of expediency, opportunism and chance".

Language and thought are closely connected to each other, and therefore thought cannot develop unless language develops. The neglect of the mother tongue, especially in junior classes, results in the retardation of thought (Dreyer, 1969:12; Luthuli, 1980:11; Hunter, 1963:4; Spencer, 1963:135).

Educationists who boldly undertake to impose a foreign language as the medium of instruction will most certainly lose the fruits of all their efforts by producing a generation with a superficial verbal experience (Hans, 1958:62).

All the foregoing remarks on the language aspect of the educational system are focussed on the mother tongue as the best medium of instruction. Hans (1958:42) best summarises the reason for believing that the mother tongue is the best medium of instruction by asserting that
"before entering school the pupils have acquired a proficiency in their mother tongue, have built up a vocabulary covering most of the objects of sense-impressions and their daily activities. At school they have to superimpose on this basis a language of ideas and abstract relations expressed entirely in a foreign medium. Their minds become split into two water-tight compartments - one for ordinary things and actions expressed in their mother tongue, and another for things connected with school subjects and the world of ideas expressed in a foreign language. As a result they are unable to speak of their home affairs in the school language and about subjects in their mother tongue".

This factor has symbolic meaning. It has a bearing on the educational system's language symbols and terminology (Stone, 1974:35).

The Bophuthatswana system of education also functions in terms of the linguistic aspect of reality. Paragraph 3.9.1.3.6 shows the language situation in the educational system of Bophuthatswana. The linguistic aspect of the Botswana system of education is demonstrated in paragraph 4.7.5.3.4.

2.3.2.4.3.5 The social aspect

Man is a gregarious being. He lives in community with others. Without other community members his life becomes meaningless and empty.

The word "social" as used here applies to the aspect of communication
or intercourse displayed by the educational system (Stone, 1981:79). The social aspect of the educational system is revealed in the following instances:

* The school's headmaster meets his staff members in formal staff meetings and also informally on the school campus.

* Teachers (the headmaster included) meet the pupils in the didactic situation, during the lessons.

* The headmaster and teachers are in continuous communication with the parents of the pupils.

* The Ministry of Education also communicates regularly with schools.

Man is the only creature who has a subjective social function. School interaction on the interpersonal level is seen in the pedagogical situation between educators and educands, between the headmaster and assistant teachers and so forth (Stone, 1974:37-38).

The school is there to serve the society. Skorov (1966:37) correctly maintains that

"the skills produced by the educational system must correspond, in timing, numbers and quality, to the requirements of society . . . ".

Education is a social science, however, and while the tempo of development may be quickened in any country by the amount of money invested in it, its character is determined in other ways - by traditions and customs, by the rate and direction of social change.

The fact that there are various councils in the Bophuthatswana system of education who meet frequently to deliberate in education shows that education in Bophuthatswana functions in terms of the social aspects. Various councils in the Bophuthatswana system of education are discussed in paragraphs 3.8.2.2.3, 3.8.2.3.1, 3.8.2.3.2 and 3.9.2.2. The social aspect of the Botswana system of education is indicated by membership of different bodies from those discussed in paragraphs 4.7.3.2.2 and 4.7.3.2.3.

2.3.2.4.3.6 The economic aspect

The materialistic-economic as well as the effective-economic aspects form the integral and inherent part of the educational system (Barnard, 1984:184).

It is almost impossible to speak of educational planning without at the same time talking of educational financing. In order to remain in school the child needs money. Stone (1974:41) in this respect maintains that

"n verdere faset van die ekonomiese aspek is onderwysfinansiering".

The economic strength of a country has a very close relationship with its educational system. The stronger the economy of a country the more facilities can be afforded. A sound economic development can provide the financial basis for the rapidly growing education formal and informal
The educational system is also the supplier of manpower into the economy of the country. It therefore stands to reason that the demands in the labour market affect curricula in schools. Hans (1958:63) is correct in maintaining that

"Economics, in its turn, determines to a great extent the content and methods of education. Even in the practice of primitive tribes the training of adolescents is differentiated in accordance with their main occupations. The tiller of the soil, the hunter, the fisherman, the warrior, were the chief products of tribal training, which required especially devised exercises and oral instruction for each separate occupation. In civilized countries the central and local authorities have to plan their systems of education in close relation with national and local economic conditions and needs".

The economic conditions of the country must be kept in mind when the content and methods of education are determined (Barnard, 1984(a):184).

Education can also be rightly looked upon as an investment, because the money that the state loses through financing of education must be ploughed back by means of the services that a person renders to the community. Education is a very important type of investment for the exploitation of modern technology. This fact underlies current educational development in all the large industrial societies. Despite idiosyncrasies of national history, political setup and social tradition, in every case the development of education bears the stamps of a dominant pattern.
imposed by the new and after opposing pressures of technological and economic change (Halsey, 1961:1).

Like all systems of education the Bophuthatswana system of education also functions in terms of the economic aspects of reality. In paragraph 3.9.1.5 it has been stated that in 1982 RSA loaned the Bophuthatswana Government funds for university buildings. The fact that the Botswana system of education also functions in terms of the economic factors has been proved in paragraph 4.7.5.4.1.

2.3.2.4.3.7 The aesthetic aspect
The educational system has an aesthetic dimension. In terms of education, the appearance of school buildings and school grounds has a meaning. The crux of the aesthetic is harmony. In a metaphorical sense, harmony is a crucial condition for a differentiated structure such as an educational system (Stone, 1981:83).

Music and singing are taught in schools. Children are also taught to appreciate poetry and art.

In paragraph 3.9.1.3.5 it has been stated that music is taught in Bophuthatswana schools, and this is evidence that the educational system of Bophuthatswana, amongst others, also functions aesthetically. The aesthetic functioning of the Botswana system of education is indicated in paragraph 4.7.9.3.
2.3.2.4.3.8 The ethical aspect

The character-building of the young in education is the first ethical concern which springs to mind. Character formation is one of the most important functions of education. A schoolteacher is therefore continuously engaged in character formation (Stone, 1981:85). In this regard Bridges and Serinshaw (1975:2) maintain that

"but surely anyone who has chosen to work in schools today . . . engaged in an enterprise which generates some of the most complicated moral problems that our society provides".

The number of physical attacks on teachers by the students and other immoral things done by students and pupils point to deficiencies in character of education and moral values, which is not attributed to deficiencies in the educational system in the first place, but rather to home upbringing and social conditions as well as to a world-wide overemphasis on individual freedom at the cost of responsibility (Stone, 1981:85).

It has been stated in paragraph 3.8.2.3.1.2 that one of the functions of School Councils in Bophuthatswana is to help the principals to look into reported cases of misconduct and subsequently to suspend or expel the pupil who is found guilty of immorality and other forms of misconduct. This shows beyond doubt that the Bophuthatswana system of education also functions in terms of the ethical aspects. Paragraph 4.7.6 amongst others, proves the ethical functioning of the Botswana system of education.
2.3.2.4.3.9 The judicial aspect

Every educational system is controlled by legislation or an Educational Act. The Educational Act is usually decided upon by Parliament. It is also the responsibility of the state to see to it that the activities of schools do not clash with the policy of government of that particular country. The state correlates the entire authority, dictates, rights, powers and limitations of a variety of societal groupings in their relation to public education, and also co-ordinates the operation of many educational institutions in its area in the interests of general welfare (Stone, 1981:83). Educational legislation is an expression of the state's commitment to the educational system.

An educational system has a judicial dimension in that it, inter alia, comprises an integration or coherence of various societal structures concerned more or less directly with public education under the rule of public law. The rights, privileges, duties and limitations of the state are laid down for the educational system by public law. The internal law of the church, the school and the university enjoys legal competence (Stone, 1981:84; Barnard, 1984(a):85).

Jenning (1977:5) also reveals the judicial involvement of the educational system when he declares that

"When questions about education are been discussed, someone usually observes that everything will be all right if the politicians will keep out of the issue. However, when solutions are proposed, they very often include requests or demands for government action".
The Bophuthatswana National Education Act (Act 2 of 1979) which is discussed in paragraph 3.8.1.2 vindicates the claim that the Bophuthatswana system of education also has a judicial dimension. The judicial aspect of the Botswana system of education is indicated in paragraph 4.7.2.2.

2.3.2.4.3.10 The pistical aspect

The pistical aspect which, amongst others, refers to surety, faith and strong trust is the most complex factor. It is essential to note that the pistical factor is not in opposition to material factors. Hans (1958:85) correctly asserts that

"The spiritual factors are not necessarily opposed to the material background - often they are complementary to it; and when both are working in harmony they produce a flourishing of national culture".

Among all the spiritual influences religion is the most effective because it takes charge of the whole person. Hans (1958:85) also confirms this by stating that religion is the most powerful of the spiritual influences because it appeals to the entire man and not only to his intellect. Religion penetrates the emotional depth of human nature, it conditions habitual reactions in daily life and it colours the reasoning power of a creative mind.

Man acts from the bottom of his fund of certainty; he acts in accordance with his convictions, also when building an educational system (Stone, 1981:86). Stone (1974:49) further declares that
"Omdat die kultuurontsluiting onder leiding van die geloof in laaste instansie plaasvind en die opvoeding inherent tot daar- die kultuur behoort, vind ons dat die pedagogiese denke, onder= wysebeplanning en -beleidsformulering, asook die opvoedingspraktyk self onder leiding van bepaalde grandoortuigings geskied".

The Bophuthatswana system of education also has the pistical side, for instance article 10(b) of the Bophuthatswana National Education Act of 1979 stipulates the conditions under which Religious Education shall be taught in schools. The pistical functioning of the Botswana system of education is demonstrated in article 23(1) of the Education Act of Botswana.

2.3.2.4.4 Summary

From the foregoing it is clear that the cultural involvement of the educational system occurs analytically, historically, linguistically, socially, economically, aesthetically, ethically, judicially and pisticaly. The fact that all systems of education are culturally involved through the factors listed immediately above points at the universality of the educational systems, while the fact that the local culture determines the extent of the influence of cultural factors on the educational systems points at the uniqueness of the systems.

2.3.2.5 The individual structural moment of the educational system

Everything in the cosmos has its own individuality and identity. The educational systems of Bophuthatswana, Botswana and RSA, to name a few, can never be anything other than educational systems. The structure of the educational system is the blueprint of its existence. The Educational Act determines the functioning of the educational system within
the structure. Every entity is unique (Barnard, 1984:189).

2.3.3 SUBJECTIVITY AND OBJECTIVITY OF THE EDUCATIONAL SYSTEM

Subjectivity refers to the createdness of each creature on the basis of which it is determined by the laws of nature. Objectivity on the other hand means qualities, properties or possibilities (Van Schalkwyk, 1982:35-36).

The laws which are applicable to the education system determine that an education system becomes or remains an education system and nothing else. To understand this, one must begin with the purpose or qualities of the educational system (objectivity) because subjectivity and objectivity are complementary to each other.

The Bophuthatswana National Education Act of 1979 and the Botswana Education Law of 1966 determine that the systems of education in those countries remain nothing other than educational systems.

2.3.4 UNIVERSALITY AND INDIVIDUALITY OF THE EDUCATIONAL SYSTEM

Universality refers to common features that a creature or a thing has with others of the same kind, while individuality indicates the other-ness of each thing within a common species (Taljaard, 1975:62-63).

All educational systems have common features and yet local circumstances give every educational system its individuality (Van Schalkwyk, 1982:39). The educational systems of Bophuthatswana and Botswana conform to the universal structure of the educational systems yet the Bophuthatswana system of education is different from the Botswana system and from
all other systems of education, so is the Botswana system of education.

2.3.5 GENETICITY

Van Schalkwyk (1982:39) maintains that geneticity refers to

"the constancy of or restraints on a creature with regard to its species specificity".

Although there are continuous development and changes in the educational system, such developments and changes take place within the principles or that which was originally given.

It has been stated in paragraph 1.1 that the educational systems of Botswana and Botswana are still developing. This development will, however, not completely change these systems from what they are, basically.

2.3.6 THE EDUCATIONAL SYSTEM IS DIRECTED TO EDUCATION AND TRAINING

2.3.6.1 Introduction

Two South African comparative educationists, viz. H.J.S. Stone and Ruth Ruperti have in the 1970's started doing pioneering work on the theory of the educational system (Barnard, 1984(a):170). Their colleagues in the subject, viz. Comparative Education (amongst others O.J. van Schalkwyk and S.S. Barnard) have followed closely in their footsteps and continue to extend the theory of the educational system.

The quality of education and training is to a large extent determined by the quality of administration and management of education in terms of systems, local school and classroom levels (Barnard, 1984(a):205).
Educational administration and management are two separate study fields, although in practice they cannot function in isolation from each other (Barnard, 1984(a):205). Ruperti (1976: 57) asserts that "Educational administration . . . refers to executive or implementary organs as well as their functions".

The primary aim of education administration is to bring teacher and pupils together so that education and training could be attained through the learning content. Educational administration therefore puts the educational system into functioning by way of providing education and training to the inhabitants of the land (Barnard, 1984(a):205-206).

Educational management entails all the different executive organs or functions which are executed by a person in the position of authority so that education and training could be realized. Management is the theory and practice of planning, organizing, guidance, and the exercising of authority with the aim of causing effective education to take place (Barnard, 1984(a):206; Ruperti, 1976:57-59).

2.3.6.2 Educational administration

2.3.6.2.1 Introduction

In creating a situation in which effective teaching can take place, it is necessary for a variety of administrative processes to function or operate collectively in what is known as educational administration (Van Schalkwyk 1982:143-144). Most of the definitions found in literature on educational administration can be divided into three categories, viz. structural view, functional view and administrative work view (Barnard, 1984(a):206).
2.3.6.2.2 The structural view of educational administration

According to the structural view, the educational administration is the entire educational system in which education and training are operating. Put differently, the educational administration represents the totality of the social structures which function harmoniously in the interwovenness to make organised school education possible (Barnard, 1984(a):206-207).

In the educational system of Bophuthatswana one can distinguish between the following levels of organisational structure: central, local and school (see paragraphs 3.8.2.2 and 3.8.2.3).

Like the Bophuthatswana system of education the Botswana system of education has three levels of organisational structure, namely, central, local and the school. The central and local organisational levels of the Botswana system of education are respectively discussed in paragraphs 4.7.3.1 and 4.7.3.2.

2.3.6.2.3 The functional view of the educational administration

2.3.6.2.3.1 Introduction

The functional component of educational administration is the functioning within the structure of the educational system in all its facets to reach the aims and objectives of that system of education (Barnard, 1984(a):21).

A few of the processes of educational administration which are distinguishable from one another but harmoniously intertwined and functioning together are policy determination and legislation, planning, creation
of organisational structure and organising, financing, provision of personnel relationships, job-division, exercising control, co-ordination, delegation, guidance, development of leadership and evaluation (Barnard, 1984:210).

2.3.6.3.2 Educational legislation

When the education of any country is under review reference is frequently made to the role of the state. Ruperti (1976:45) has this to say about the state:

"The state is the only societal relationship which acting through the central legislature, speaks for the whole or for any part of a nation and whose ruling is binding for the whole or for the part".

It is essential to note that the state remains a structure in which man has authority and which allows it to realize its tasks and functions normatively. The state must realize that it is not competent to undertake actual teaching, for that is exclusively the task of the school.

Legislation states definitely which organs will be responsible for its implementation. In view of the fact that an Education Act, ordinance or decree is usually not minutely detailed for immediate execution, a clause is usually inserted to the effect that more detailed regulations in terms of the enactment concern may be drawn up at a later date. Promulgation of regulations is an official act. The implementation of inactments by legislative bodies and of resultant subordinate legislation usually calls for all types of supplementary services drawn
up in terms of the inactments. This is done by bodies such as Ministries of Education (Ruperti, 1976:46).

All the states control the education of their people by means of legislation which mirrors the policy of the state in respect of education. In Bophuthatswana, for instance, the Bophuthatswana National Education Act (Act 2 of 1979) presently forms the legal basis of education in that state, whereas the Botswana Education Act (Act 40 of 1966) forms the legal foundation of education in Botswana. A full exposition of the Bophuthatswana Education Act (Act 2 of 1979) and the Botswana Education Act (Act 40 of 1966) is respectively given in paragraphs 3.8.1.2 and 4.7.2.2.

It is essential to note that before what has been said above in respect of legislation is implemented it must be planned how educational legislation will be realised in practice according to the demands of natural environment to achieve each child's cultural nature (Van Schalkwyk, 1977:301-303).

2.3.6.2.3.3 Supreme organisational structure and administrative processes

2.3.6.2.3.3.1 Introduction

The administrative processes which are distinguishable but inseparable take place within the supreme organisational structure (for example the Department of Education). The Education Departments should ensure, through the medium of administrative processes, that educational acts are correctly and effectively executed by educational institutions, ancillary and supplementary services (Barnard, 1984(a):211).
The following are the most important administrative processes: educational planning, organisation, financing, staff administration, determining procedures and supervision (Van Schalkwyk, 1982:148-170).

2.3.6.2.3.2 Educational planning

For the sake of convenience educational planning can be divided into the following part-processes (Van Schalkwyk, 1982:148-150):

* Goal determination

Goal determination is done at all levels of educational administration and assumes various forms, from determining the broad national policy to the planning of a lesson. Educational goals can be divided into general, broad or long term goals on the one hand and particular short term objectives on the other. The one single all-embracing goal includes several smaller objectives (Van Schalkwyk, 1982:148).

* The planning of goals

After the goals have been determined one must plan how to achieve those goals. The planning of the achievement of goals is a scientific, logical and intellectual activity by means of which a master plan is drawn up. In planning, both the long and the short term view must be kept in mind (Van Schalkwyk, 1982:149-150).

2.3.6.2.3.3 Educational organisation

Administration and organisation are connected to each other. When administration refers to the structure of the institution, organisation will entail more specifically the executive aspect of administration.
Functionaries in the execution of a particular task are ordered, arranged, divided, delegated and co-ordinated through the process of organisation (Barnard, 1984(a):215).

The organisational structure of the educational systems of Bophuthatswana and Botswana is depicted in organograms 3.1 and 4.1 respectively.

2.3.6.2.3.4 Educational financing

Financing of education is usually laid down by legislation. The entire Parliament decides on a financial budget of the Ministry of Education presented by the Minister of Education. After Parliament has approved the budget on education, it remains the responsibility of the Ministry of Education to utilize it.

The ideal education budget contains three parts:

* The work plan: This means a definite statement of the educational policies and programme.

* The spending plan: This refers to the translation of the accepted policies into proposed expenditures.

* The financing plan: It proposes means for meeting the costs of the educational needs (Wynn, De Young and Wynn, 1977:308).

The money voted for education by Parliament actually comes from the taxpayer. For that reason strict regulations must be laid down to ensure that the taxpayer not be offended through embezzlement by those
in authority. Inspectors of finance and accountants must be appointed to make sure that such public funds are honestly used for what they are intended for.

Good education costs good money, therefore the state must always be prepared to spend enough money on education. Expenditure which does not further productive capacity or lead to an increase in economic prosperity is unproductive from an economic point of view (Cowden, 1969:39). Wynn et al. (1977:288) also correctly assert that

"The trouble with a cheap education is that we never stop paying for it . . . Good schools with good facilities can produce good citizens. Which is why money spent on education represents the best investment we can make. An investment that never stops paying".

2.3.6.2.3.5 Personnel administration

Personnel administration involves personnel planning and projecting, appraising human performance, selection and staffing, training development, maintenance and enhancement of performance and productivity (Schneier and Beatty, 1978:1).

Staff administration may also be looked upon as organizing and treating people at work so that they will get the highest possible realization of their intrinsic abilities, thus attaining optimum proficiency from themselves and their groups and thereby giving to the organization of which they are a part, its determining advantage and its optimum results (Pigors and Myers, 1969:30).
Staff administration consists of two processes, namely staff supply and staff utilization (Van Schalkwyk, 1982:154). These two processes of staff administration have the following part-processes: record-keeping, job analysis and description, recruitment and promotion (Torrington, Chapman and Cooper, 1979:357; Gordon, 1976:149).

2.3.6.2.3.6 Determining of procedures

The co-ordination, integration, ordering and planning as a unity of the administrative processes discussed in the foregoing paragraphs are essential. It is important to decide which processes should function, when, where, to what purpose, in what order, in order to come to effect. This exercise is known as the determining of procedures. Determining of procedures is always accompanied by other matters such as planning, organising and staff administration (Van Schalkwyk, 1982:161).

Van Schalkwyk (1982:162) advances the following reasons for a truly rationalised, effective and uniform work procedure of the educational system as a whole and for every part of it:

* Bringing about uniformity in the conduct and actions of the group;

* ensuring that every staff member's activities remain directed towards the goal;

* increasing the efficiency of mutual formal communication between all members;

* to be able to continue the functional control of all activities, to evaluate them and if necessary to correct them;
* ensuring that every individual member understands the total functioning of the educational system so that he can see his own work in its context and understand its significance; and

* to bring about uniformity in the training of new staff members, so that the public will know which procedures to follow when making contact with schools, ancillary services and education departments.

2.3.6.2.3.7 Control and supervision of education

This administrative process affects classroom activities more directly than the others because in the classroom it must be made sure through control and supervision that the determined educational aims and objectives can be achieved in practice (Barnard, 1984(a):220).

Control of education may either be centralised or decentralised. Centralised educational control refers to a situation where the central state legislative body delegates authority in respect of the control of education to a single chief executive organ. If the central legislative body delegates authority in terms of the control of education to several bodies then the control is decentralised (Ruperti, 1976:60).

The control of education in Bophuthatswana and Botswana stands midway between centralised and decentralised forms of control as indicated in paragraphs 3.8.3 and 4.7.3 respectively.

Supervision of education is closely linked with the inspectorate. By dint of supervision the state sees to it that there is no infringement of the freedom, responsibility, rights and calling to mandate
acceptance of every one involved in the educational system, by allowing everyone to realize their freedom, responsibility rights and mandate (Malao, 1983:220; Van Schalkwyk 1978:141).

The exposition of the Bophuthatswana inspectorate in paragraph 3.8.2.2.2 shows that there is supervision of education in the Bophuthatswana system of education. The presence of inspectors and Education Officers in the Botswana system of education as indicated in article 27(1) of the Education Act of Botswana (Act 40 of 1966) proves that Botswana education is also supervised.

2.3.6.2.4 Execution

2.3.6.2.4.1 Introduction

The educational legislation and policy of the state must, amongst others, be executed by educational institutions, auxiliary services and supplementary services.

2.3.6.2.4.2 Educational institutions

When legislation is put into practice different kinds of institutions came into being (Ruperti, 1976:82; Barnard, 1984(a):30).

One of the essential characteristics of the school system is that it is rooted in the cultural setting within which it functions (Van Schalkwyk, 1982:171). Real educative teaching takes place in and around educational institutions (Van Schalkwyk, 1978:139).
2.3.6.2.4.3 Supplementary services

In contrast with educational auxiliary services which are formally of assistance to education from outside the school system, supplementary educational services are not found everywhere or connected to all educational institutions (Van Schalkwyk, 1982:203). These services do not give direct aid to education.

2.3.6.2.4.3.1 Extra-mural activities

In schools with a hint of the British tradition a system of external activities has developed, supplementary to the intra-mural school curriculum (Ruperti, 1976:135).

Extra-mural activities are those activities which take place outside the ordinary classroom, but are also calculated to be contributory to the education of the child. Some of the activities are aimed at enriching the cultural make-up of the child, for instance in Bophuthatswana children are encouraged to take part in traditional singing (Bophuthatswana, 1982:16). In the Botswana system of education extra-mural activities also form a prominent feature of the curriculum (Botswana, 1984:59).

2.3.6.2.4.3.2 Pupils' accommodation

Distance between home and the school especially post-primary schools may necessitate the erection of school hostels. Most school hostels are single-sex institutions regardless of the level of the institution (Ruperti, 1976:137).
There are hostels in some of the schools in Bophuthatswana for instance in 1981 there were 40 school hostels in Bophuthatswana (Bophuthatswana, 1981:22). In 1984 there were 7520 dormitory beds in the Botswana school hostels (Botswana 1984:60).

2.3.6.2.4.4 Ancillary services
Ancillary services are external aids given to individual schools so that teaching and learning may proceed effectively in them (Ruperti, 1976: 112).

Ancillary services are included in a system of education in order to reinforce the educative teaching of the child.

In Bophuthatswana the following services have been included in the system of education: library services, psychological services and sports and recreation (Bophuthatswana 1980:8). The following services have been included in the Botswana system of education: Curriculum Development and Evaluation, Research and testing, School Broadcasting, and Teaching Aid Production (Report of Department of Curriculum Development and Evaluation, 1980:1).

2.3.7. THE EDUCATIONAL SYSTEM AS AN INTERWOVEN STRUCTURE

2.3.7.1 Introduction
In contrast to other social structures the educational system is an interwoven structure.
The interwoven structure suggests an interwovenness of various structures. The interwovenness of the social relationships which form the educational system differ from community to community (Barnard, 1984(a):190). Structures which constitute the interwovenness of the educational system may be grouped as follows:

* Educationally qualified structures;
* educationally interested structures; and
* nodal structures.

2.3.7.2 Educationally qualified structures

The most obvious educationally qualified structure is a school. Sugarman (1973:11) defines the school as

"an organisation specialised in providing 'education', which can, be defined in many ways".

The school does not come into existence by accident but develops in the course of human history (Kim, 1984:11).

The school is the focal or central point of the educational system.

2.3.7.2.1 The school as a central point of the educational system

The school as a cultural product of the community also remains the central point of the educational system. The school is qualified and equipped to undertake the formal education of the child.

The school is a cultural product which comes into existence through the wish of especially the parents that their children can be given a
specialised type of knowledge. The school has necessitated the existence of certain social structures which in their turn intertwine with it (Barnard, 1984(a):189).

2.3.7.2.2 The structure of the school
The structure of the school is determined by the fundamental motifs of the community (Department of Education and Training (DET), 1984(a):7).

The following are the characteristics of the school (Van Schalkwyk, 1981:84-89):

* It is a teaching and learning centre;
* it entails pupils;
* it has teachers;
* it entails subject-matter;
* it has a determined aim;
* it is efficiently administered; and
* it has sovereignty within its own sphere of operation.

2.3.7.3. The educationally interested structures
2.3.7.3.1 Introduction
The educationally interested structures are structures which are interested in education but are not qualified to undertake the specialised education of the child, such as, inter alia, the family, the state, the church, teachers' corps, commerce and industry.
* The family

The family is interested in the education of the child in more ways than one. First, they want their children to be educated or taught in accordance with the philosophy and the religious ground motif of the family and the community. Secondly they want their children to acquire a specialised type of knowledge which is only offered by the school.

The family contributes up to 50 percent towards the education of the child (DET, 1984(b):64:6419).

* The state

The state’s main function in education is to harmonize, integrate, supervise and finance education in the interests of the community (Van Schalkwyk, 1978:94). The state does so because it is the only body whose authority is binding to all.

* The church

The church takes part in education through its members who may, amongst others, serve as School Committee members, School Board members and Parent Teachers’ Association members (Van Loggenberg and Jooste, 1976:102-105). The church is interested in education because through education its members will be able to read the Bible and other church material.

* The teaching corps

In the course of the development of the systems of education teaching became a specialised profession. Therefore neither the parents nor the
state can prescribe what subject-matter should be taught and which methods should be used.

The fact that the teaching corps has such an important function of deciding on methods to be used in schools places high demands on their training.

* Commerce and industry
There are within the community some concerns which provide the basic needs such as clothes, food, education, furniture with the aim of making profit and rendering services (Barnard, 1984(a):197; Van Schalkwyk 1981:105).

These concerns need trained manpower and this means people who must go through an educational system.

To show their interest in education they make bursaries available for those students who may follow the fields of study relevant to their business. Big concerns such as the Anglo-American Corporation also donate schools to the communities. President Mangope Technical and Commercial High School was, for instance, donated by Johannesburg Consolidated Industries to the Bophuthatswana Department of Education.

Having discussed the interwoven structure of the educational system, it becomes relevant that we should now focus our attention on the nodal structures in the interwovenness.
2.3.8 THE MAIN NODAL STRUCTURES IN THE INTERWOVENNESS AND THEIR FUNCTIONS

2.3.8.1 Introduction
Each of the social structures which is interested in education has representatives in organised bodies where they regularly meet, for example, the School Committee.

Every nodal structure has to a certain extent competence in dealing with certain matters within the sphere of its operation (Barnard, 1984(a):199).

A number of some of the important nodal structures of the educational system can be shown as follows (Van Schalkwyk, 1981:109-115; Barnard, 1984:198).

2.3.8.2 The nodal structure between the school and the state
* The Department of Education

The Department of Education is a nodal point between the schools and the state. Some of the important functions of the Department of Education are that

** It arranges, organises and administers the functioning of educative teaching and continually plans it;

** it establishes schools, auxiliary services and various educational services;

** it sets examinations, supervises, controls and conducts them;
** it trains and employs teachers;

** it inspects institutions, teachers and pupils;

** it determines and provides for the staff requirements of schools;

** it sets the school calender;

** it determines and provides educational facilities;

** it liaises with education in a worldwide context; and

** it initiates and conducts educational research


2.3.8.3 The nodal structure between the school and the parents

The School Committee forms a nodal point between the school and the parents. In Bophuthatswana the term School Committee has been replaced by the term School Council. The Bophuthatswana School Councils are discussed in paragraph 3.8.2.3.1.

Van Schalkwyk (1981:112) correctly declares that

"Die Skoolkomitee ... is fundamenteel pedagogies geërweliseer en beskik oor 'n interne soewereiniteit wat deur geen ander sosiale verband vervang kan word nie".

The following are important functions of the School Committee

(Van Schalkwyk, 1981:112):
* They make recommendations to the Department of Education in respect of the appointment of teachers.

* They see to it that school buildings and surroundings are kept clean.

* They look after the discipline of the schools by bringing cases of misconduct of teachers to the notice of the Ministry of Education, and also recommend the action to be taken against such teachers.

2.3.8.4 The nodal structure between school and life-world

Different facets of the life-world are intertwined with the school. The nodal structures which organise the coherence between the school and the life-world are, amongst others (Van Schalkwyk, 1981:114):

* School curriculum services: The life-world is selected, worked out and ordered into subject matter which is presented to the youth in the form of a curriculum.

* School library services: School education and life-world cohere through the collection in the school library.

* Extra-curricular education services: The coherence between the school and the military life-world is for example brought about by the school cadets.
* School trips: The service brings about coherence between the school and the broader cultural and natural life-world.

* Music and singing: The school is brought into coherence with facets of music and singing of the life-world by this service.

* Medical and dental services: This coheres the school and national health as a facet of the life-world.

2.3.8.5 The nodal structure between school and the university

In Bophuthatswana the South African Joint Matriculation Board provides coherence between university and the school because it is stated in paragraph 3.9.1.4.3.2 that the Bophuthatswana matriculants still write the South African examination. The nodal structure between school and the university in Botswana is formed by Cambridge University and the University of Botswana as indicated in paragraph 4.7.5.4.2.

2.4 CONCLUSION

The above exposition of the theoretical review of the educational system has been deemed necessary because it gives the reader a picture of the educational system before coming to the actual systems of education of Bophuthatswana and Botswana as described in chapters 3 and 4.

From the exposition of the educational system in the above paragraphs it has become abundantly clear that the educational system has various structural moments and also that it is an interwoven structure.
From the above discussion it has become clear that in discussing an educational system the following headings can be used: legislation, organisational structures and control, school system, ancillary and supplementary services. The educational systems of Bophuthatswana and Botswana in the following chapters will therefore be discussed under those headings because these topics give a comprehensive picture of the educational system.

2.5 CHAPTER SUMMARY

This chapter has two parts namely methodology of Comparative Education and the theoretical structure of the educational system.

In respect of the methodology of Comparative Education the views of George Bereday, Brian Holmes, Nicholas Hans, Isaac Kandel and Edmund King have been discussed.

As regards the theoretical structure of the educational system structural moments and the components of the educational system have been discussed.

The application of Bereday's method begins in the next chapter, which deals with the educational system of Bophuthatswana. Area studies will therefore commence in the ensuing chapter. It is, however, necessary to note, as indicated in paragraph 1.4.6, that Bereday's method will be adapted for the purpose of this study.