CHAPTER : III

METHODOLOGY

3.1 Introduction :

In this chapter the investigator has detailed out the process and procedures which she has adopted while carrying out study in order to achieve the particular objectives specified below. The methodological procedures adopted are presented in the sections that follow.

3.2 Objectives :

a) To prepare a programme of psychological education based on William Glasser's Reality Therapy.

b) To study the effectiveness of Reality Therapy in bringing about changes in students with respect to the following major components of their academic as well as psychological development.

a) Assertiveness.
b) Sense of Responsibility.
c) Attitude toward school.
d) Educational Aspiration.
e) Academic Achievement.
f) Self concept.

3.3 Hypotheses of the study:

In the light of the concept of Reality Therapy presented earlier and the objectives stated above, the following Research Hypotheses were generated regarding the effectiveness af the Reality Therapy Intervention programme. When the teacher understands the students, when the students see themselves accepted

and valued, they begin to regain their lost powers, and as a result improve their academic performance, discover their hidden talents and thus become confident. This also could bring about better co-operation with their peers and a feeling of belongingness to the group. They develop positive ways of looking at things around them and the learning experience thus turn out to be a satisfying one. The present study attempts to test some of these hypotheses. The following research hypotheses have been stated for the present study.

Students' behaviour in respect of –

a) Assertiveness
b) Sense of Responsibility
c) Attitude toward school
d) Educational Aspiration
e) Academic Achievement
f) Self-concept.

before and after the intervention orienting the group along a Reality Therapy perspective will differ.
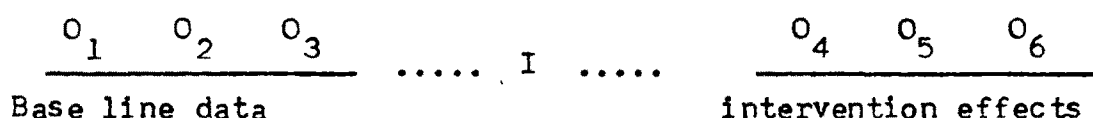
3.4   The Design :

The present investigation is an intervention study and the approach is developmental in nature. The study aims at evaluating the effects of the intervention of the sample. Therefore, the investigator thought that the time series design is most apt for the purpose of the present study.

The Time-series researches are represented as "a set of observations taken at specified times usually at equal intervals" (Spiegal, 1978) The time series design is of great significance to the present researcher for the reasons given below :-

a) It helps in understanding past behaviour- By observing
    data over a period of time one can easily understand
    what changes have taken place such analyses will be
    extremely helpful in predicting the future behavior.

b) It helps in planning future operations - plans for
    the future cannot be made without forecasting events
    and relationships they will have statistical tech-
    niques have been evolved which enable time series to
    be analysed in such a way that the influences which
    have determined the form of that series may be
    ascertained. If the regularity of occurence of any
    feature over a sufficient long period could be clearly
    established, then within its limit prediction of
    probable future variations would become possible.

c) It helps in evaluating current accomplishment - The
    actual performance can be compared with the expected
    performance and the cause of variation analysed.
    Time series analysis will enable us to apply the
    scientific procedures of holding other things
    constant as we examine one variable at a time.

d) It facilitates comparison - Different time series
    are often compared and important conclusions drawn
    therefrom.

However, one should not be led to believe that by time
series analyses one can fore tell with hundred percent
accuracy the course of future events. This could be possible
only if the influence of the various forces which affect these
series would have been regular in their operation.

The basic outline of the design may be summarised as follows :-

$$\underline{O_1 \quad O_2 \quad O_3} \quad \ldots\ldots I \ldots\ldots \quad \underline{O_4 \quad O_5 \quad O_6}$$

Base line data   intervention effects

O = Observation

I = Intervention

Figure : 1 - Basic outline of the design of the study.

The measurement for most of the dependant variables were made thrice before the intervention to see the baseline data and thrice after the intervention to determine the intervention effect. The observations were repeated with an interval of four full weeks.

3.5   The sample :

For the present study thirty students have been selected from three English medium schools of Baroda city, ten students from each school in the academic year 1993-94.

Vadodara, formerly known as Baroda, used to be one of the more progressive princely states of India. It had a walled inner city which was the centre of residential and trade activities. The demographic composition of the city was mainly restricted to Gujarati and Marathi speaking families and it is now a major city of the Gujarat state and a busy metropolis of India.

The three schools from which the samples have been drawn
are :- Rosary School, Fatehgunj, Baroda High School, Alkapuri
and M.G.M. School, New Sama Road respectively.

Rosary school of Baroda is one of the old school of the city.
It is a high school managed by the society of Jesus and recog-
nised and aided by the Department of Education, Gujarat State.
It is co-educational high school. Though a catholic institution
it welcomes pupils of all castes and creeds and prepares them
for the secondary school certificate and the higher secondary
school certificate examination of the two Boards of Education
of the Gujarat State.

Mar Gregorios' Memorial School (M.G.M.) Baroda was esta-
blished in 1981 and is managed by Mr Gregorios Orthodox Syrian
Church, Baroda. It is a co-educational school and prepares stud-
ents for the Gujarat State Secondary school Examination. It is
also a co-educational school.

Baroda High School, Alkapuri was founded in 1974. It is a
big co-educational school which has two more branches in other
parts of the Baroda city and prepares students for the second-
ary school certificate and the higher secondary school certi-
ficate examination of the two Boards of Education of the Gujarat
state.

These three schools are situated at different parts of the
Baroda city and the students have come from different socio-
economic backgrounds.

The choice of the particular schools for the study was made
because of the principals' appreciation for the kind of study
proposed and their willingness to provide all the necessary

facilities, especially getting the support of the teachers deal-
ing with the particular class (namely standard IX) was made by
the Principals themselves. The sample of subjects for the study
were selected on the basis of the following criteria.

a) School performance - The students whose academic
    performance is generally low over the last three to
    four years.

b) Disciplinary problems - students, who without any
    apparent or sufficient reason create disciplinary
    problems in the school.

c) Opinions of the concerned teachers - opinions of
    different teachers of class IX of the three schools,
    regarding the students' poor academic performance,
    disciplinary problems have been taken. The past
    records of school performances also have been taken
    into consideration.

d) Personal and informal interview   of the investigator
    with all students of class IX of the three above-
    mentioned schools. The interviews were mostly related
    with questions regarding the student's home, school,
    peer groups, aspirations, hobbies, interests etc. to
    draw out more first hand information from the students
    themselves and thus to reach a concrete decision
    regarding the choice of students for the intervention
    programme.

3.6 Instruments for quantitative data :

In the present study the following measurement tools were used for quantitative data collection. The necessary particulars regarding each tool are as under :-

a) Tasneem Naqvi's Assertiveness Scale (AS).

b) Responsibility Scale for the high school students (RS) made by the investigator.

c) Lawrence J. Dolan and Marci Moro Enos School Attitude Measure (SAM)

d) Nageswara Rao's Educational Aspiration Scale (EAS)

e) Academic Achievement (AA) (Students' Academic Achievement in the form of percentage of marks obtained in the various tests of class VIII and IX)

f) Rosenberg's Society and Adolescent Self Image Scale (SAS).

(a) Tasneem Naquvi's Assertiveness Scale (AS) :

This scale was used to measure the assertiveness of the students. The present Assertiveness Inventory has two parts. The first part measures assertive behaviour and the second part measures blocks to acting assertively. In the first part of the inventory some questions have been given. These questions were helpful in assessing one's assertiveness. All that one has to do is to draw a circle around the number that describes one best.

For some questions the assertive end of the scale is at 0, for others it is at 4.0 means No or never, 1 means somewhat or sometimes, 2 means average, 3 means usually or a good deal, 4 means practically always or entirely. The second part of the inventory is in questionnaire form

which covers six areas dealing with own angers, authoritarian behaviour, refusing requests, making requests and initiating communication. Items were collected from different sources of literature, bulletins, reports etc.

The scoring procedure of the scale can be available in the appendix - where on the basis of a table the scores can be interpreted.

Scores	Interpretation
110 - 135	Practically assertive
91 - 109	Usually assertive
60 - 90	Average Assertive
34 - 59	Non assertive
7 - 33	Entirely Non-assertive.

(For the interpretation of the part - 1)

The part 2 is the questionnaire by which one can know blocks to acting assertively.

(b) Responsibility Scale (RS): for the High school students - The Responsibility Scale (RS) was prepared and standardized by the investigator herself. The Scale is comprised of fifteen statements. This scale has been made for class IX students in the age group of 12-15. The objective of this scale is to see whether the student has some sense of responsibility or he/she lacks it. Here the term responsibility has been used in some specific sense. According to the investigator a responsible person is one who thinks about present and future in a consistent way and takes charge of it and also takes charge of his own action and speech. A responsible person can meet his own needs and

also looks after others' needs. He feels that he has some duty toward his family, school and society and never tries to deny it. A responsible person has a positive attitude about himself and his dealings with other is generally consistent, direct and honest.

The fifteen items of this scale is marked on a four point scale from strongly agree, Agree, Disagree, Strongly disagree but they are scored only as agreement or disagreement. This test reports a test-retest reliability and validity. Items of this scale were collected from different sources and a group of experts from different disciplines were consulted regarding weightage for each category. The maximum score for the scale is ten, representing high responsibility and the lowest score is zero, representing no sense of responsibility. The scale is simple and also easy for administering and scoring. The maximum time limit taken by the students were ten minutes.

(c)   Lawrence J. Dolan and Marci Moro Enos School Attitude Measure (SAM) :

The following objectives such as Motivation for schooling, Academic Self concept both performance based and reference based sense of control over performance and instructional mastery were measured by the sub-scales of School Attitude Measure. It is a Self-report Survey for school success as cognitive ability. The school Attitude Measure comprises five sub scales. They are :-

Sub-scale: A

Motivation for schooling - It consists of seventeen (17) items and is concerned with the effect of students' reactions to past school experience upon their motivation

in school. The way students have come to feel about their total school experience can influence how hard they want work in school, how highly they value school, and how much they want to pursue further schooling.

Sub-scale : B

Academic Self-concept performance based - The Scale items are concerned with the student's confidence in their academic instrument, to provide evaluation of student's affective responses to their school experience. To understand better the performance of students in school, it is useful to examine their perceptions of themselves as competent learners. The affective domain is related to students' attitudes, interests and emotional responses. Based on their experiences in school, students develop both negative and positive affective responses toward many dimensions of school life. These affective responses lead to the crucial perceptions that students form of themselves as learners. These affective responses can be as important abilities, their feelings about their school performance. Students' feelings about their academic abilities can contribute to their success or lack of success in school. This subscale also consists of seventeen (17) items.

Sub-scale : C

Academic Self-concept - Reference based - The Seventeen (17) statements which comprises this sub-scale are concerned with how students think other people (teacher, family, friends) feel about students' school performance and their ability to succeed academically.

Sub-scale : D

Students' sense of control over performance - The State-
ments comprising this sub-scale are concerned with
students' feelings about being able to exercise control
over situations that affect them at school, like grades
and promotions and to take responsibility for them.

Sub-scale : E

Student's Instructional Mastery - Unlike the first four
sub-scales which dealt with student's feeling the items
of this sub-scale ask students to report the state of
their actual school skills, like their ability to use
school time effectively, persistence in instructional
tasks, ability to seek and use feedback from others and
ability to evaluate their own work.

The SAM is available in three levels, for use with
students ranging from grades four through twelve. In the
present study level II survey was used. It has a total
of Eighty-three (83) items. Each item is marked on a
four point scale from never agree to always agree. It
reports a test-retest reliability of 0.94 with four weeks
apart. SAM is appended under Appendix.

(d) Nageswara Rao's Educational Aspiration Scale (EAS) -

Nageswara Rao's Educational Aspiration Scale was used to
measure educational aspiration of the students. This
scale was originally constructed and standarized by
Dr.R.B. Mathur of RCE, Ajmer (1969). The reported validity
of the scale against the opinion of the teachers was 70
and test-retest reliability of .59 (after 26 days)
Nageswara Rao (1982) modified this scale. Thus the
educational aspiration scale used in this scale was an

adapted version of the original scale. In this scale a
list of seventeen educational plans are listed and students
were asked to select one of them. If their plan does
not fall in any of the category they are asked to specify
it in the eighteenth category. A group of experts from
different states in the society were consulted for their
opinions regarding weightage for each category. The
maximum score for the scale is 9 while minimum is 1. The
scale is simple and also easy for administering and
scoring. The maximum time limit taken by the students
were 10 minutes. The full scale can be found in the
appendix.

(e) Academic Achievement (AA) -

For measuring Academic Achievement a deliberate decision
was made not to go for standardised achievement tests.
Instead teacher made tests were made use of students'
academic achievement in the form of percentages of marks
obtained in the various tests of standard VIII and IX were
taken as criteria for academic achievement in the present
investigation.

(f) Rosenberg's Society and Adolescent Self-Image Scale (SAS)-

Students' self-esteem was measured by this scale. The
scale measures the self-acceptance aspect of self-esteem.
It was developed by Rosenberg (1965) for use with high
school students. It is a short scale of ten statements,
compressed into six scales. It is easy to administer.
The items are answered on a four point scale from strongly
agree to strongly disagree but they are scored only as
agreement or disagreement following Guttman Scaling. It
has a test-retest correlation coefficient of 0.85 over

two weeks and Guttman Scale reproducibility co-efficient
of 0.92. The maximum score on the scale is 6, represen-
ting high self-esteem and the lowest score is zero,
representing low self-esteem. The scale is appended
under Appendix.

3.7 Instruments used for collecting qualitative and descriptive information :

Qualitative data were exploratory in nature, probing into
the "what" and "how" aspects of the various home and social
environmental elements, processes and interactions during the
intervention programme; influencing an urban adolescent students
response to the demands made on him by the formal schooling to
perform and the change that occurs during the intervention
programme and after. These questions could not be answered
conclusively by compartmentalising the phenomenon in terms of
variables expressed in quantitative measures and analysing
their relationships through statistical techniques. What was
called for on the other hand was a more comprehensive and
descriptive information which were qualitative in nature. The
approach here had to be idiographic as opposed to the nomoth-
etic approach selected for establishing causal relationships
among variables. For establishing causal relationships the
approach was to observe the group during intervention elicited
information regarding the distribution of the group on
selected variables and analysing the relationships among them
on the other hand for seeking answers to the other questions
the investigator had gone for a case study approach for a
limited number of students and attempted descriptive surveys
covering their school and home observations and lengthy
interviews involving the student, his parents and significant
others were the main inputs for building each case study.

The following measurement tools were used for qualitative data collection :-

a) Interview schedule for students.
b) Interview schedule for parents.
c) Case studies.
d) Anecdotal Records.
e) Educational Environment at home scale.
f) Home Interaction pattern scale.
g) Social competence scale
h) Behavioural adjustment to the intervention programme.

(a) <u>Interview schedule</u> : In order to get more first-hand information about the learners, the student and their parents were interviewed. For this purpose the investigator prepared an interview schedule for both of the groups which are appended in the Appendix.

(b) <u>Case studies</u> : In order to discover in depth how the Reality Therapy Intervention programme in the group has been operating for individual students, six case studies, three representing students who showed much gain and three who had no such gain on some variables studied, and in the opinion of the investigator based on her class-room observations and personal interviews were conducted. In order to do the case studies the selected six students were interviewed for several times. The investigator also interviewed their parents. The items of the student's interview schedule and parent's interview schedule were used as lead questions which have been presented in the Appendix.

(c)   Aneedotal Records : Observation as a technique becomes
       necessary in recording the classroom procedures during
       intervéntion program. This information was not to be
       put through the rigours of quantification but was
       essential in building the backdrop and identifying the
       processes during the intervention programme that was
       responsible for their behaviours.

       It was thought that a qualitative accounting of the
       going on of the class-room would be recorded. Therefore
       a day to day observation record of the students during
       the intervention program was kept by the investigator.

(d)   Educational Environment at home scale : The educational
       environment essentially is the support and guidance the
       family provides for the education of the child. For the
       present study Dave's (1963) concept of educational
       environment has been taken as a guiding principle to
       define the variable "educational environment at home." $\overline{x}$
       The tool has four press variables as the core of the
       educational environment at home. They are :-

       1.   Working habits of the family.
       2.   Academic guidance and support.
       3.   Stimulation to explore and discuss.
       4.   Academic aspirations and expectations.

       The full scale is included in the appendix.

(e) <u>Home Interaction Pattern Scale</u> : The home is the Social
arena where on the one hand there is the adolescent boy/
girl with his/her individual capacities, interests and
pre-occupations and on the other hand are the parents or
the adult family members who too have their own individual
capacities, interests, temperaments, frustrations etc.
These two are in a constant interaction with each other.
The parents often attempt to alter the child's behavior
to suit their notion of a good child. These interactions
differ in homes in tune with the parental personalities
and other varying factors like the number of family
members the type of family, the economic level of the
family etc. They also acquire a certain amount of
stability over a given period time fluctuating within a
given range only. There are a number of issues or area
as in which these parent child interaction occur. For
the present study however four crucial aspects of the
interactions were identified. The four aspects were:-

1. The autonomy given to the child.
2. The type of disciplining used.
3. The reinforcement given to the child.
4. The sibling interaction.

However the full scale is appended in the Appendix.

(f) <u>Social Competence Scale</u> : Social competence refers to the
degree of competence the adolescent exhibits in dealing
with the situations of everyday life in his/her content
of the social environmental milieu.

These situations could be wide ranging. Tackling
personal tasks, social transactions with peers and
adults or even undertaking a task or an activity. The
social competence here was generally here to be taken as
the initiative the student takes in different spheres of
personal tasks, social interaction with peers and adults
and in play and work. Also it is the interest and
perseverance with which the adolescent follows age suitable
tasks of work and play. It was used both as an observation
tool and an interview schedule. The scale was circulated
to a panel of experts consisting of educationist,
psychologists school teachers and parents. This was done
to ensure the content validity of the scale suggested
changes were duly incorporated. The schedule was
prepared by the investigator. The full scale is available
in the Appendix.

(g) <u>Behavioural adjustment to the intervention programme</u> :

This scale is the behavioral adaptation the student made
to the different components of the intervention programme.
.This self-reporting inventory was developed by Youngman
(1969) Youngman's inventory was essentially used to
describe the typical school behavior and the second
criterion followed by Youngman while framing the items
was that they be as objective as possible. Youngman's
inventory presently under discussion was arrived at after
administering and factor analysing a 40 items inventory
with 274, 12 years old and 288, nine years olds
secondary school students as the sample. The Youngman's
inventory was designed to measure the behavioral adjust-
ment to school. It measured three specific dimensions.
One the studieusness, two the compliance and three the

teacher contact. All the three sub-scales as well as the total score showed acceptable reliability and well defined construct validity within normal lower secondary population. Youngman further suggested the idea of a teacher form for the scale so that the teacher can assess the children's adjustment rather than rely on self-report-9 more appropriate procedure with students or poor readers. However, the items of the present scale has been taken from Youngman's inventory discussed above. The inventory was in a form of a teacher rating inventory. The full scale has been added in the Appendix.

3.8 Intervention :

An intervention programme was prepared by the investigator following the guidelines of Reality Therapy as given by Dr. William Glasser. However the intervention programme has three separate phases.

1st phase : Involvement with the students by creating a warm and supportive climate in the group.

2nd phase : knowledge about one's own unrealistic behavior and gradual avoidance of it.

3rd phase : Learning of Responsible ways to fulfill one's needs within the confines of reality.

3.9 Procedural details :

The study was conducted in three phases. Pre-intervention phase, Intervention phase and the Post-Intervention phase. During the pre-intervention phase the investigator ascertained

the status of the variables by collecting data three times with
a time period of four weeks apart. The procedures in the three
school were more or less the same.

On the first day the principal took the investigator to
the particular class and introduced her to the students saying
that she was a researcher in the "Centre of Advanced Study in
Education" and that she wanted to conduct an educational
programme in the class. The investigator then added that this
educational programme was introduced by Dr.William Glasser a
famous educationist in the United States of America. It is a
very effective programme for the school students to bring out
their hidden qualities and to make them a successful person
in every sense. She also told that she is the first person
to introduce this programme in India and for this purpose she
has selected three schools in Baroda to conduct the programme.
She told the students that she wanted to make learning an
enjoyable experience for students. Afterwards she added that
for the time being she would select 10 students from the class.

After the selection of students the investigator expre-
ssed her intention to get to know each one of them, their
interests and the kind of difficulties they face in the class.
During the pre intervention period the investigator familia-
rized herself with the students informally during recess time.

After having enough involvement with the students for a
month or so, the investigator administered the different data
gathering instruments on the students and repeated them two
times more with a time gap of four weeks apart. However the
Responsibility Scale was administered on the students two
times before the intervention and the instruments for qualita-
tive data were administered once during the intervention period.

The procedural details of different scales administration for quantitative data in the pre-intervention phase are as follows:-

(a) Assertiveness Scale :

The investigator read aloud and explained the meaning of all items of the Assertiveness Inventory. She then told the students to go through all the items first to get a clear perception of the scale, and then to mark the items according to the instruction as was given in the front page of the scale.

(b) Responsibility Scale :

Cyclostyled copies of the scale were distributed to the students. The investigator explained the meaning of all the items of the scale to the students and instructed them to mark the items according to the instruction given to them.

(c) School Attitude Measure :

Copies of the test were distributed to the student and they were explained the marking procedure. The investigator read the 83 statements of the inventory and cleared the meaning where the students were facing problems.

(d) Educationa Aspiration Scale :

The students were given a copy of the Educational Aspiration Scale. They were asked to write their name age, class and the name of the school in the respective space provided for them. After allowing the students sufficient time to go through the items of the scale, the investigator told the students to mark any one item of the scale. She also told the students that if he/she didn't find any

of the item suiting his/her choice, he/she can write his/
her specific choice at the empty space provided at the
end of the scale.

(e)   Academic Achievement :

Percentage of marks obtained by the sample of students
in the various tests of standard VIII and IX were taken
as criteria for determining academic achievement in the
pre and post-intervention phase.

(f)   Rosenberg's Self-esteem scale :

Cyclostyled copies of the Scale were distributed to the
students and they were asked to fill in their names and
other details as required. The investigator read aloud
the instruction and illustrated the procedure for marking
before they were asked to mark the scale. The items
were read to the student to check if they clearly under-
stood them before they were asked to mark the scale.

Regarding the instruments which were used for gathering
qualitative data were used during the Intervention
period. The procedures of administration for all those
scales were as follows.

Cyclostyled copies of the scale were distributed to the
students. The investigator explained the meaning of all
the items of the scale to the students and instructed
them to mark the items according to the instruction given
to them.

However the Intervention programme went for one full academic year that is 1993 to 1994. After the Intervention programme the scales used for quantitative data were used three times with a gap of one full month between each administration.

Interview schedule -

Once during the pre-intervention phase and once during the post intervention phase each student was interviewed individually. The interviews were held during the school hours. The interview schedule for the parents were sent to them through their wards.

Case Studies :

Six students were chosen to study indepth. Their choice was done applying the following criteria: one student from each group who gained a great deal in all criterion measures like assertiveness, sense of responsibility, positive attitude toward school, educational aspiration, academic achievement and self-esteem and in the overall judgement at the investigator which she arried at as a result of her months of observations and interaction during the experimentation period and during the interviews. Similarly one student from each group was identified from among those who did not do well in the above criteria.

3.10 Data Analysis :

The data thus collected being both quantitative and qualitative were subjected to both quantitative and qualitative analyses.

However, for quantitative data, the Means, standard Deviations and Frequency Distributions of each variables of all the

six observations were computed. Again the t-tests were conducted to determine the levels of difference among successive data points, separated by different time intervals in the series. The data were then transformed into line graphs using means of observation and were plotted over different intervention phase.

For qualitative data the group processes during the intervention programme were recorded in detail without using any structured observation schedule. Class-room incidents as they occurred were faithfully recorded using aneedotal recording technique. The six children were selected on the basis of their achievement on the selected variable. Three of them were high achivers and three low achievers in all the variables. Unstructured interviews were conducted with those students and through a series of scales and inventory administration case study reports were prepared for each of these six children.

A detailed analyses of data and the results are presented in chapter - V.

3.11 The chapters to follow :

The design of the present study discussed in this chapter clearly indicates that the methodology of collecting empirical evidences to answer the hypotheses are both quantitative and qualitative. The subsequent chapters therefore are organised according to this scheme. In the fourth chapter various materials are developed by the Investigator or drew up by her from various sources for intervention for the students to orient them on the Reality Therapy perspective. This chapter

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however has been titled as "Materials developed and used for
intervention". The processing of quantitative data, the
analytical procedures adopted and an interpretative discussion
are presented in the chapter five entitled "Data Analyses".
Chapter Six (6) ties up the loose ends of both the quantitative and *qualitative data*
and discusses the emerging composite reality. This chapter is
called summary and conclusion.