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PREFACE

For some years now South Africans have been watching television, and the effect of this mass communication medium on children is a matter of wide interest. Television viewing is a very popular pastime among children - researchers in the USA have established that during their school careers children spend approximately the same amount of time watching television as they do at school.

The advent of television in South Africa has created unique opportunities for research as this is the last Western industrialized country where television has been introduced and where use can be made of pre- and post-television surveys to investigate its effect.

Very little information is available on the effect of television on a child's personality. In this study, which is based on data collected by the HSRC in 1974 and 1976, an attempt is made to determine the effect that television may have on some personality dimensions of a group of adolescents.

This report was expanded into a thesis for a D.Phil. degree in Psychology that was conferred on the author by the University of Pretoria.

J. G. Garbers
PRESIDENT

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OPSOMMING

In hierdie studie, wat deel vorm van 'n groter projek wat deur die RGN onderneem word om die invloed van televisie op die skoolgaande jeug te bepaal, word die invloed van hierdie massakommunikasie-medium op die persoonlikheid van Afrikaanssprekende standaard-agt-leerlinge ondersoek. Hierdie leerlinge is in 1974 (voor die instelling van televisie) en in 1976 (na die instelling van televisie) getoets. 'n Kontrolegroep, wat geen toegang tot televisie gehad het nie, is met die eksperimentele groep afgepaar en in dieselfde jare met dieselfde meetinstrumente ondersoek. Verskille tussen die eksperimentele- en kontrolegroepe ten opsigte van telings soos verkry op die Hoërskool Persoonlikheidsvraelys (HSPV), en die Persoonlike, Huislike, Sosiale en Formele Verhoudingevraelys (PHSF) dui daarop dat televisie 'n invloed op sekere persoonlikheidsdimensies by die eksperimentele groep gehad het. Televisie het blykbaar die kykers beïnvloed om meer hartlik in hul interpersoonlike verhoudings te wees, meer te hou van sosiale deelname en van groepsaktiwiteite, en meer lewenskragtig as die nie-televisiekykers te wees. Enkele moontlike verklaarings word aangebied vir hierdie bevinding.

SUMMARY

In this study, which forms part of a more extensive project undertaken by the HSRC to determine the effect of television on school-going young people, the effect of this mass communication medium on the personality of Afrikaans-speaking Standard Eight pupils is investigated. These pupils were tested in 1974 (prior to the introduction of television) and in 1976 (after its introduction). A control group, which had had no access to television were matched with the experimental group and tested with the same measuring instruments in the same years. Differences between the experimental and control groups in respect of scores as obtained on the High School Personality Questionnaire (HSPQ), and the Personal, Home, Social and Formal Relations Questionnaire (PHSF) indicate that television had an effect on certain personality dimensions in the case of the experimental group. Television apparently influenced the viewers to be more hearty in their interpersonal relations, to have a greater preference for social participation and group activities and to be more vigorous than the non-television viewers. Some possible explanations for this finding are offered.

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CHAPTER 1

INTRODUCTION, BACKGROUND AND AIM

1.1 INTRODUCTION

On 5 January 1976 the new broadcasting centre of the SABC in Auckland Park began its first official television transmissions on a national basis. The RSA was the last Western industrialized country to introduce television - the most powerful mass communication medium yet developed by man (Harrison and Ekman, 1976).

Like the invention of printing, the invention of television has had a great influence on man. Next to eating, sleeping and working, television viewing is the activity most often indulged in by modern man (cf. Brown, 1976, p. 19). It has been calculated in the USA that by the time he turns 18 the child who is born today will have devoted more time to watching television than to any other single activity, except sleeping (Liebert, Neale and Davidson, 1973). Unlike printing, television has been known to man for only a few decades, and its effect, especially on children, has not been clearly delineated and many questions still have to be answered.

The first television patent was issued in Germany in 1884, and in England the pioneer John L. Baird developed a complete television system in 1926. The first long-distance television broadcast over a distance of 320 kilometres was transmitted in 1927 when Herbert Hoover spoke in a studio in Washington and the sound and image were received in New York. The first public television programme was transmitted in 1936 from the BBC studios in London, and in 1939 the National Broadcasting Company began with regular transmissions in the USA. By 1941 some Americans were able to watch sports transmissions and it was only the outbreak of the Second World War that checked the spectacular development of this medium.

The spread of television in every country where it has been introduced has been phenomenal. For example, one million television sets had been sold in the USA by 1949, ten million by 1951 and more than fifty million by 1960. At present there are more television sets than any other electrical appliance in American homes (Liebert, Neale and Davidson, 1973). Why is television so popular? This is still one of the fundamental questions in television research and

unfortunately only a few attempts have been made to find the answer (cf. Himmelweit, Oppenheim and Vince, 1958; Noble, 1975; and Brown, 1976). In conjunction with this question it is mainly questions on the effect of television on children that have given the necessary stimulus to research into this medium. Although at present there is extensive knowledge on certain aspects of the effect of television on children, there are still many hiatuses. Brown (1976) maintains "... it is surprising, ... that so few books have been published which deal with children and television" (p. 7).

One of the main reasons for the inadequate research into and knowledge of the effect of television on children is the absence of control groups with which children who are exposed to television can be compared.

This study is part of a wide investigation that is being conducted by the Institute for Communication Research of the Human Sciences Research Council into the effect of television on school-children. The study sheds light on the problem of the effect of television on the personality of the child, a field which, as far as could be established, has not been exploited. Since the Institute for Communication Research was able to make surveys before the introduction of television in 1974, it was possible to make full use of this unique research opportunity.

1.2 DEFINITION OF TERMS

In this report two terms, communication and personality, are used that require accurate definition as various connotations are attached to them in the literature.

1.2.1 *Communication*

Because television, the independent variable in this investigation, is a medium of mass communication it is necessary to define the term communication. The word has been defined as making known, imparting, linking up. But communication can be looked at from different points of view, which makes the definition more complex (Beyers, 1969). It can be defined from a psychological, sociological, pedagogical and anthropological viewpoint. Cherry believes, for example, that "communication is ... still not a unified subject, to any degree, but is studied within many academic disciplines, in various ways" (Eysenck, 1972). However, communication science is developing into an independent subject field, as

is shown by the introduction of departments of communication science at several South African universities.

The psychological and sociological approaches to the term communication will now be discussed.

In South Africa the works of Blignaut (1967), Beyers (1969) and Fourie (1968) can be cited as examples of the psychological approach to communication science. In this approach the individual is taken as the starting point.

In the psychological approach need gratification plays an important role in the definition of communication. The person who is communicating has a need to share something, to reveal it, or to make it known. The person to whom the communication is addressed, accepts or rejects it according to whether it satisfies his needs or not (Fourie, 1968).

Blignaut (1967) distinguishes between organismic communication, intracommunication and intercommunication. Organismic communication, which is found in man as well as in animals, is concerned with the physical needs of the organism which are communicated to it on a physical level. For example, the need for food is communicated to the organism through the hunger drive. These basic organismic needs function in man in a far more complex and dynamically interrelated way, than they do in animals.

When intracommunication occurs, dynamic processing and integration take place in the individual on an intellectual, emotional and spiritual level. The person thus communicates with himself. According to Blignaut (1967) organismic communication precedes, but also occurs concurrently with intracommunication (p. 5).

Intercommunication occurs when the individual communicates outwardly in interaction with other people.

Although Blignaut (1967, p. 14) maintains that mass communication is a phenomenon of modern times, communities or groups of people have always experienced the need for a communication system that could warn them against danger, spread ideas, entertain them and convey knowledge. This need was mainly dealt with through intercommunication. However, to supplement intercommunication various mass media were developed through the centuries, for example jungle drums, smoke signals and bells (Fourie 1968).

The development of writing and the art of printing gave rise to modern mass communication. Complicated technical media such as films, radio and television made mass communication more sophisticated and effective.

Schramm (1965) describes effective mass communication in terms of the following four conditions:

- a. The message should be designed and delivered in such a way that it reaches the attention of the intended target.
- b. Symbols that relate to the experience of the source as well as to that of the target should be used in the message.
- c. The message should arouse personality needs in the target and should suggest ways of satisfying these needs.
- d. The message should suggest ways that will satisfy those needs that are applicable in the group situation in which the target finds himself when he is persuaded to make the desired response.

In contrast to the psychological approach, the sociological approach lays more emphasis on communication in a group context - which overlaps to a considerable degree with the above discussion. Rhoadie (1967) believes that sociological interest in communication lies in the fact that the social behaviour of man is dependent on communication. "Without the ability to communicate no individual can be a social being and the foundation of socially useful activities disappears. Without communication there can be no art, science, literature, political systems or charity; in fact, without communication there can be no civilization and no culture" (p. 4).

However, communication as a separate specialization field of sociology came into being towards only the middle of this century, with Paul Lazarsfeld as its main pioneer (Rhoadie, 1967). Rhoadie agrees with Schramm that "Communication, of course, has not become an academic discipline, ... but it has become an extraordinarily lively area of research and theory. It is one of the busiest crossroads in the study of human behaviour, which is understandable because communication is a - perhaps *the* fundamental social process" (Rhoadie, 1967, p. 6).

The preceding discussion shows that the term mass communication has many connotations and that a specific definition will not be easy to formulate.

The following definition by Larsen (1964) will be accepted as a working definition for the purpose of this study: "(mass communication is) ... the relatively simultaneous exposure of large heterogeneous audiences to symbols transmitted by impersonal means from an organized source for whom audience members are anonymous" (Fourie, 1968, p. 4).

1.2.2 *Personality*

Since the term personality is used in such a wide context and so many meanings are attached to the word, it is necessary to define it for the purpose of this study. In a generally popular sense two broad meanings can be linked to the term personality. In the first instance personality is seen in terms of social adeptness or persuasive powers in which a person with a good personality is one who is socially adept and readily accepted. This interpretation has particular significance for the developing adolescent (cf. Hurlock, 1974, p. 5, as well as Hall and Lindsey, 1970, p. 7). According to a second popular definition personality is that which makes an impression on people. An individual may thus have an aggressive or a submissive personality. An element of evaluation is present in the above cases—whether the personality of an individual is regarded as good or bad (Hall and Lindsey, 1970, pp. 7-8).

The word personality is derived from the Latin word *persona* which means a mask. Greek actors wore masks to hide their identities on stage, and the Roman actors took over this practice from them (Hurlock, 1974, p. 6; Maas, 1975, p. 3). The persona was eventually generalized to include all people because of the suggestion of an essential and not merely an external change that occurred on the stage (Maas, 1975, p. 3).

The person who pioneered the attempts to define the term personality satisfactorily was Allport who in 1937 had already identified almost fifty definitions in the relevant literature on the subject (Hurlock, 1974, p. 6). Where Allport reported six kinds of definitions of personality, Hall and Lindsey (1970) added a seventh category. The classifications of Arndt (1974) and Maas (1975) correspond to a large degree to those of the authors mentioned above, although they have included additional categories in theirs.

TABLE 1.1
CLASSIFICATION OF VARIOUS DEFINITIONS OF PERSONALITY

CLASSIFICATION BY	TYPE OF DEFINITION	DESCRIPTION	THEORIST
(Maas, 1975) (Hall and Lindsey, 1970)	PERSONALITY AS STIMULUS (BIOSOCIAL DEFINITIONS)	Social stimulative value	Popular
(Maas, 1975) (Hall and Lindsey, 1970)	PERSONALITY AS RESPONSE (BIOPHYSICAL DEFINITIONS)	Certain objective manifestations of behaviour	Allport Watson Wolpe Eysenck Cattell
(Hall and Lindsey, 1970) (Arndt, 1974) (Maas, 1975)	OMNIBUS DEFINITIONS	Personality is the sum of a person's component parts	Historical value. Prince
(Arndt, 1974) (Hall and Lindsey, 1970) (Maas, 1975)	INTEGRATION DEFINITIONS	Personality is more than the sum of the parts	Guilford Allport Cattell
(Maas, 1975) (Hall and Lindsey, 1970)	TOTALITY DEFINITIONS (ORGANISMIC DEFINITIONS)	The integration in totality definitions is conducted to the extent that the com- ponent parts are neg- lected	Goldstein Maslow
(Arndt, 1974) (Maas, 1975) (Hall and Lindsey, 1970)	PERSONALITY AS ADJUST- MENT	Personality is the individual's charac- teristic pattern of adjustment	Allport
(Arndt, 1974)	HIERARCHICAL DEFINITIONS	Focus on the levels of adjustment	Freud
(Hall and Lindsey, 1970)	PERSONALITY IS UNIQUE	Personality is equa- ted with unique or individual aspects of behaviour	Allport
(Hall and Lindsey, 1970)	PERSONALITY IS THE ESSENCE OF MAN	Personality is that part of the indivi- dual which is the most representative of him	Allport

In Table 1.1 there is a survey of the various personality definitions.

The classification in Table 1.1 is highly arbitrary, and authors differ widely on the method of classification as well as on the contributions of the different theorists. According to Maas (1975) "this classification is useful, since it reviews the entire diverse spectrum of various schools of thought with regard to personality" (p. 7).

It is thus clear that there is no one comprehensive personality theory that is satisfactory in all respects. Hall and Lindsey (1970) favour empiric research that is based on theory. "However vague and poorly developed the theory, and however inadequate its syntax and empirical definitions, if it can be shown to have had a generative effect upon significant areas of research we would have to conclude that it passes the crucial test" (p. 20).

Another important characteristic of a personality theory from a research point of view is that it should have a utility value according to which individual differences between people can be determined. Measuring is a fundamental part of empirical research, and to be practically useful in terms of measurement the specific personality definition should stress individual differences (cf. Maas, 1975, pp. 7-8; Hall and Lindsey, 1970, p. 11).

Cattell's factor analytical theory is thus a "particularly useful reference framework for any research in which personality traits are measured quantitatively" (Maas, 1975, p. 8). Cattell's theory stimulated a lot of research (cf. for example Cattell and Dreger, 1977).

Cattell (1950) is very careful not to compromise himself by giving a full definition of personality. However, he works on the assumption that personality has a fixed, measurable structure: "we know that there are unitary common traits or dimensions in personality, that is, personality has a structure, as the human body does in its organs" (Cattell, 1973, p. 5).

Personality is then defined in the following way: "It is necessary only to give a denotative definition, by indicating the fields of phenomena to be studied and the kind of principle or law at which we should aim. Within preliminary outline of the object of study presented by such a definition our inquiry can proceed. For this purpose we may say:

Personality is that which permits a prediction of what a person will do in a given situation" (Cattell, 1950, p. 2; Maas, 1975, p. 11).

This definition is used as the operative definition of personality in this study.

1.3 LITERATURE SURVEY

1.3.1 *Introduction*

Research into the effect of television on children was started in most Western countries soon after the introduction of television. Since these investigations were only conducted after the introduction of television, comparisons with conditions before the introduction were extremely difficult. Leo Bogard describes the situation in America as follows: "Unfortunately no research group - commercial or academic - undertook, while there was still opportunity to do so, a systematic study, over a period of time, of the social changes which television brought in its wake. To describe American life before television, we must reconstruct it from memory or from documents" (Robinson, 1969, p. 211).

Despite this problem, up until 1958 a considerable number of researchers studied the effect of television on children: Riley, Cantwell and Ruttiger (1949), Lewis (1949), Battin (1952), Clark (1951), Fagar and Smith (1951), Maccoby (1951), Fine and Maccoby (1952), Silvey (1952), Greenstein (1954), Maccoby (1954), Parker (1954), Lazarsfeld (1955), Gratiot-Alphandéry (1956), Hakuodo Advertising Company (1956), Albert (1957), Cunningham and Walsh (1958). Specific topics were investigated, for example the effect of television on the marks of a group of junior school pupils, on family life and on the use of leisure.

These investigations, however, did not cover the subject in its entirety, and they showed certain basic shortcomings in design, for example their samples were too small. During the fifties and the early sixties four comprehensive studies were undertaken into the effect of television on children. The first study, which is today regarded as the pioneer work in this field, was conducted in Britain in 1955-1956 by Himmelweit, Oppenheim and Vince. Their findings were published in 1958 in the well-known book *Television and the Child*. At more or less the same time

Maletzke (1959) of the Hans Bredow Institute in Hamburg, West Germany, also conducted an investigation, while Takeo Furu (Japan) in 1962 published *Television and Children's Life: a before-after study*. Schramm, Lyle and Parker (1961) conducted a comprehensive investigation in the USA.

Research continued during the sixties and several smaller investigations resulted in publications: Becker and Wolfe (1960), Belson (1960), Markowski (1960), Mehling (1960), Panski (1960), Ukawa (1960), Bandura and Huston (1961), Bandura, Ross and Ross (1961), Gratiot-Alphandéry and Rousselet (1961), Stückrath (1961), Witty (1961), Berkowitz (1962), Bandura, Ross and Ross (1963), Berkowitz and Rawlings (1963), Bandura and Mischel (1965) and Harper *et al.* (1966).

These studies consisted mainly of laboratory experiments on the effect of television violence on children. Reports on research into this aspect appeared increasingly in the late sixties and early seventies. More recently, especially in the work of Noble (1975) and Brown (1976), emphasis has fallen more on the socialization effect of television and the positive influence this may have on the child.

In the discussion on the effect of television on the personality dimensions of the child attention will be focussed more specifically on personality in the purely technical context. This means that the child's personality is seen as a measurable theoretical construct.

Attention will first of all be devoted to the investigations that have been conducted into the effect of television on the personality of the child, i.e. personality in the generally accepted sense. The effect of television on the personality of the child will then be discussed from a clinical point of view. A needs and gratifications approach will also be considered, followed by a personality dimensional approach and, finally, by a discussion of the question whether personality can change as a result of exposure to television.

1.3.2 *Personality in the generally accepted sense*

Personality plays an important role in the interaction between television and children. Examples of this are the wide spectrum of programme selections that are made, and the different needs that can play a role in the choice of programmes (Institute for Mass Communication of the Univer-

sity of Nijmegen, 1966). Himmelweit *et al.* (1958) believe that personality plays an important role with regard to the time a child spends watching television: "One important factor determining the amount of time a child watches television and the importance viewing assumes for him, lies in the personality of the child" (p. 34).

Personality is also an important determinant in the reaction of the child to the content of television programmes. The degree of the child's identification with characters on the screen, and the degree to which he becomes frightened or upset by the programmes are largely a function of his personality make-up and dynamics. The so-called television addicted child is also described by Himmelweit *et al.* (1958) in terms of personality traits. "... personality make-up tends to be at least equally important, and here an addict type emerged who is not exclusive to television, his emotional insecurity and maladjustment seem to impel him towards excessive consumption of any available mass medium" (p. 29).

The question arises as to whether television can in fact cause such radical personality changes that a normal child may lose his emotional balance as a result of it.

Schramm *et al.* (1961) believe that this is not possible and that at most television may accelerate a process which is already in progress.

The problem with regard to the results of the studies concerned is that personality is not described as a clearly defined, measurable construct, an indication of what the author means by personality is only given in vague general terms. There is no mention of standardized personality measuring instruments.

1.3.3 *A clinical approach*

Freedman (1961) discusses the effect that television may have from a clinical point of view. He believes that the negative effect of television on intelligent, normal children from harmonious homes should be relatively small. On the other hand, children with schizoid, hysterical or psychopathic tendencies may be harmfully affected by television programmes. Unfortunately hardly any empirical data are available in these cases. Additional clinical information on the possible effect of television on the persona-

lity of the child is provided by Halpern (1975). Observations of children under three years of age who were brought to a child guidance clinic because of various behaviour deviations showed that they repeatedly carried out certain actions. It was established that this form of behaviour could probably be ascribed to the programme Sesame Street.

"The latter, in particular, had left its mark on the behaviour of the children, who compulsively recited serial numbers and letters learned from Sesame Street. Usually these recitations occurred in the absence of any apparent cues. While they delivered themselves of these speech fragments, the children often inspected their inanimate surroundings like restless, wound-up robots" (p. 68).

1.3.4 *Needs and gratifications approach*

The connection between needs and the use of mass media has been investigated since the forties. In fact, the obvious question that arises when studying the effect of television is which needs of the individual are satisfied by this medium. Other questions that follow on from this, include: Can a medium such as television, stimulate and elicit new needs? Can a mass communication medium have any influence at all on the needs of the individual, especially of children?

Research into these questions was initially confined to a description of the orientation of audiences and subaudiences with regard to certain media contents. The reports of Lazarsfeld and Stanton (1942, 1944, 1949) are good examples in this connection. Herzog (1942) studied the needs that are satisfied by the so-called "soap operas" on the radio. Suchmann (1942) tried to determine how to interest people in serious music on the radio. Wolfe and Fiske (1949) studied the development of children's interest in comic strips. During the late sixties emphasis in the needs studies shifted to the use of social and psychological variables that could lead to the identification of differentiated media usage patterns. The current tendency is to try to find explanations for aspects of the communication process to which the motives and expectations of the audience can be linked (Blumler and Katz, 1974). Researchers such as Kline *et al.* (1974) and McLeod and Becker (1974) tried to prove that media effects can only be understood in the light of knowledge of needsatisfying patterns. Greenberg (1974) investigated the reasons why children watch television. He identified seven factors, namely to

learn, as a habit, to be stimulated, for companionship, for recreation, to forget and to pass the time. However, these needs or satisfaction of needs were seen rather superficially and were not clearly defined. Brown, Cramond and Wilde (1974) also tried to link media usage to psychological needs. They studied the so-called transfer effect among the children in Greenberg's study and obtained a chain reaction effect. Himmelweit, Oppenheim and Vince (1958), Schramm, Lyle and Parker (1961) and Furu (1971) did not test children's needs empirically and thus had to make certain assumptions on the nature of the needs that are satisfied in children by these media (more specifically television). On the other hand, Brown, Cramond and Wilde (1974) put direct questions to children on the satisfaction of needs they obtained from the media. The problem with an approach of this kind is that the child may not be aware of the needs that may be affected by the medium and that underlying need patterns may be overlooked.

It is clear, however, that the term "need" has not been adequately defined. In a popular sense needs are associated with some aspect of personality, but this is precisely where the problem develops, because in most personality theories needs are incorporated in the personality in different ways. Thus McDougall (1908) sees needs as basic motivations and motives, whereas Fromm (1955), Horney (1942) and Sullivan (1950) integrate needs with other factors in their theories.

A clear definition will have to be given of the term "need" if it is to be used consistently. The so-called gratifications approach, as described by Blumler and Katz (1974), is not very satisfactory since it offers no clear description or definition of the term gratifications. The need to define the term "need" is clearly illustrated by Snyman (1976) when he uses it synonymously with the term motivation (p. 5).

The precise measurement of needs also causes problems. It is apparent from the literature on the subject that very few investigations into mass media have been conducted with the use of a standardized measuring instrument. Snyman's "The connection between personality needs and the preference for subjects from the mass media" (1976) was probably one of the first investigations in this field in which use was made of standardized questionnaires.

Thus it appears that the connection between needs and mass communication media, such as television, has not been ex-

plained satisfactorily, *inter alia* because it is so difficult to measure needs empirically.

Since needs are not easily measured, the gratifications approach to the study of the effect of television on the personality of the child is still suspect. However, other objections can also be raised against the needs and gratifications approach regarding the connection between a mass medium such as television and personality dimensions. Needs may play only a very small role in this regard. McGuire (1974) mentions the reasons why the connection between the audience's needs and their motivation to use the mass media may be less important than generally thought.

(i) *External factors that determine the use of the mass media*

The buying and reading of newspapers may depend much more on the paper's distribution system and the time at which it appears than on the gratification of needs. Television viewing may also be determined more by meal times or the work schedule in the home than by personal needs. The amount of schoolwork a child has to do at home may have a greater influence than his individual needs on his decision to watch television.

(ii) *Unimportance of the mass media in the gratification of needs*

Another argument against the view that people expose themselves to the mass media in order to gratify certain needs is the second-hand nature of these media. Apparently picture substitutes are far inferior when compared to real experiences.

(iii) *Poor indexing and description of needs that are satisfied by the mass media*

As indicated above, it is hard to determine which needs are satisfied by which media.

McGuire (1974) refutes some of the above objections to the needs gratification model, but concedes that external factors do play a very important role in the choice and uses of mass media, especially with regard to the initial exposure to the media. As far as continued exposure is con-

cerned, McGuire believes that other more inherent factors may play a role.

"While the initial tuning in to a television program (or newspaper column or magazine feature or whatever) may have been largely haphazard and unmotivated, behavioral theory's 'law of effect' reminds us that such exposure would soon extinguish in the absence of reinforcement to maintain the habit" (Blumler and Katz, 1974, p. 170).

With regard to this last point, McGuire continues by discussing the needs gratification aspect in mass communication media in respect of motivation theories. Unfortunately no evidence of empirical investigations can be found to support or to refute his approach.

As far as the preferences for topics from the mass media are concerned, Snyman (1976) indicates that these preferences can be explained in terms of needs. "The origin of the preference for a specific topic from the mass media lies in the need, but just as a tree develops from a seed but is not supported and nourished throughout its life by the seed, so the preference is not sustained for ever by the need" (p. 136). (Translation.)

These apparently contradictory views emphasize the hiatus in the research in the field of needs gratification and mass media. The more the pity as this is undoubtedly a very important aspect of the whole question of the interaction between the personality of children and the possible effect of television. Although there is not much empirical proof at this stage, it can be assumed that needs gratification does play a role in the effect of television on the child.

Television may both satisfy and stimulate the need for security (knowledge of events) and the need for beauty, whereas needs such as group solidarity and self-realization (through identification) may be affected in a unique manner. When one considers the possibilities of the effect of television on the need for food (by means of advertisements) and even on the need to dream, one realizes that a large part of the need spectrum, as Alberts (1974) and Maslow (1954) phrase it, in a child may be affected by television.

Since these needs are not easily measured and since the personality structure of pupils *can* be determined by means of standardized measuring instruments, a possible way to

overcome this problem would be to try to determine the effect of television on the personality structure of pupils. Changes reported by Werner (1971) in the occupational choice pattern show that such changes may occur. According to Super (1963) there is a close connection between an individual's self-concept and his choice of a career.

1.3.5 *The effect of television on some personality dimensions*

As indicated above, an attempt to determine the effect of television on the personality of a child by means of a standardized test or tests would not be inappropriate. It is not clear from the available literature in what way such an interaction may occur. Morissett (1975) has the following to say: "Although a number of studies, including those of Himmelweit and colleagues in England and some of the studies in the Surgeon General's program, have shown that television interacts with personality, these interactions are often ignored in the design of research. Rather, it is assumed that television will have a uniform effect across personality differences" (p. 11).

One of the few investigations in which the effect of television on specific personality dimensions was studied was that by Braun (1971) in Poland. A sample of 200 boys and 200 girls was divided into children who had never watched television and children who had been exposed to television. Several measuring instruments were used, such as the Polish versions of the California Test of Mental Maturity, Porter and Cattell's Children's Personality Questionnaire and questions on manifest anxiety. The results showed no significant differences between the two groups, except that the television viewers revealed attenuated spatial orientation and abstract understanding.

1.3.6 *Can television change personality?*

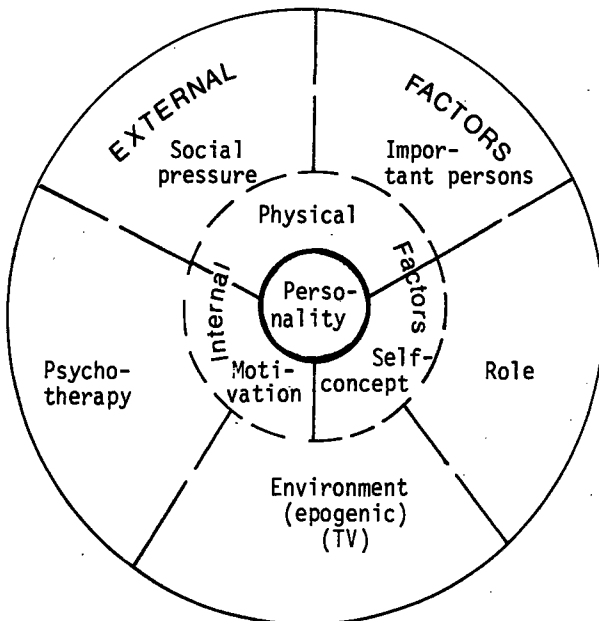
The question under discussion here is whether personality as a theoretical construct is unchangeable like intelligence. Two points of view are maintained: Firstly, it is averred that personality is determined quite early in a person's life and that it undergoes little change during the individual's lifetime. This view was maintained by Plato when he stated: "He who is of a calm and happy nature, will hardly feel the pressures of old age, but to him who is of an opposite disposition, youth and old age are equally a burden" (Hurlock, 1974, p. 107).

This viewpoint thus stresses the idea of hereditary personality patterns that are unchangeable. According to Hurlock (1974) this is a very negative approach since "its acceptance leads many people, adults as well as children and adolescents, to blame their parents for passing on to them, through their hereditary endowment, personality patterns, that lead to poor adjustments and unhappiness" (p. 107).

A second point of view postulates the possible change in the personality of the individual during his life. According to this view changes in personality may occur at two stages in life, namely during puberty and in old age (Hurlock, 1974). Hurlock maintains that these possible changes can be ascribed to eight different factors. For the purpose of this report these factors will be divided into factors within the individual (internal factors) and factors outside the individual (external factors). Schematically this may be shown in the following way:

FIGURE 1

FACTORS THAT MAY HAVE AN EFFECT ON PERSONALITY CHANGES IN THE CHILD



(i) *Internal factors*

a. *Physical changes*

The various organic changes that occur in the individual during adolescence force him to change his physical self-image. Changes of this nature also occur in middle age and old age. If these changes are unfavourable they have an adverse effect on the self-image of the individual.

b. *Strong motivation*

If the motivation for changing the personality pattern is strong enough, changes can occur during adolescence and the desire for independence will be very strong. The dependence of the childhood days is changed through motivation.

c. *Change in self-concept*

It is mainly during adolescence that changes in the self-concept of the individual occur as a result of environmental and maturation factors. Erikson (1968) believes that the late adolescent period can be typified as a time of identity crisis. Once the individual has resolved this crisis a stable self-concept will result. Thus changes occur mainly during adolescence.

(ii) *External factors*

a. *Changes in important persons*

When people that are important to the individual change, and when the individual tries to adapt his own attitudes, values and aspirations to these persons, changes can be perceived in his personality pattern. These changes may be subtle and are not always permanent.

b. *Changes in social pressure*

Strong social pressure to conform to certain socially acceptable forms of behaviour may suppress certain unacceptable personality traits in a person. The parent's and the teacher's influence is obvious in this regard.

c. *Changes in roles*

The role an individual has to play in a group changes as a result of changes in age, economic circumstances or affiliation with a new group. These changes may be advantageous if they improve the individual's status within the group. Such a person's self-concept then changes positively.

d. *The use of psychotherapy*

The aim of the study of psychotherapy is to help surmount problems with regard to weaknesses in the individual's personality.

e. *Changes in the environment*

Changes in the individual's physical and social environment may result in changes in his self-concept. Hurlock (1974, p. 125) mentions four conditions that these changes have to satisfy in order to have a positive effect on the personality.

- (a) The person's status should improve as a result of the change.
- (b) The changes should help to bring the person into equilibrium with his environment. In other words, the environment must satisfy his needs.
- (c) The changes should bring him closer to his ideal.
- (d) If the changes create opportunities for more extensive experience, the person is enabled to see himself more realistically and to match his aspirations to his abilities.

Environmental influences do not have the same effect on the individual at different ages. Thus his parents' divorce would have a more harmful effect on a young child than on one who has already left home and has become independent.

As stated earlier, television is a powerful mass communication medium which penetrates to the child's immediate surroundings. It can have such an effect on the child that

changes may occur in his personality structure. Cattell (1973) calls an unusual event in a community an epogenic event "expressing the effect peculiar to an epoch and a given culture" (p. 149). He also believes that such an event may change certain personality traits. "The stress and crowding of the industrial revolution and the complexities of life in our times may well have induced less welcome personality trends. Within the period in which psychological testing has existed, the obvious change of environment ranging from the two world wars and a great economic depression for one generation to the comparatively placid and health and welfare regulated life of the young today might be expected to show in test results" (p. 149).

As an example of change Cattell (1973) mentions that Factor F (soberness - enthusiasm), as measured by the 16PF and the HSPQ, in recent times has shown a shift towards enthusiasm. Whether a new mass communication medium such as television may affect changes in the personality patterns of adolescents remains an open question.

1.4 STATEMENT OF THE PROBLEM AND AIM

The above discussion shows that not only locally, but also internationally there is still an hiatus regarding investigations into the connection between television and the personality of the child. It has also been established that there is insufficient empirical evidence at the present time to show that television does have an effect on the personality structure of the child. The reasons for this can probably be found in the methodological problems confronting overseas researchers. There is practically no Western, developed country in which so-called before and after studies, or studies comparing television viewers and non-viewers can be used (cf. Harrison and Ekman, 1976). For example, it has been estimated that 96 per cent of homes in the USA have at least one television set (Lyle, 1972), which makes it difficult to find comparable control groups. Despite the complexity of the problem there are indications in the literature on the subject that influencing by television may occur. If television is seen as part of the child's total environment, it may, as a powerful agent for change, affect not only his behaviour but also his personality structure.

What has to be examined here is the effect that television may have on the personality structure of pupils.

In operational terms the aim of this investigation can be formulated in the following way: To determine whether television viewing has any significant short-term effect on certain personality variables of Standard Eight pupils, as measured by the HSPQ and the PHSF.

As this is an exploratory study and no indications could be found in the literature as to which personality variables may be affected by television, no specific hypothesis is formulated. The following general working hypothesis will consequently have to suffice: Television has an effect on certain personality variables as measured by the HSPQ and the PHSF in a group of Standard Eight pupils.

CHAPTER 2 METHODOLOGY

2.1 BACKGROUND

This research is part of a larger project that is being undertaken by the Human Sciences Research Council to determine the effect of television on school-children. The research resulted from recommendations contained in the Report (1971) of the *Commission of Inquiry into Matters pertaining to Television* that was accepted by the Cabinet.

The relevant parts of the report read as follows:

- 411 The Commission recommends that even before the introduction of television a scientifically oriented and co-ordinated research programme should be undertaken to determine the effect of this medium in South Africa. The research should be undertaken on a continuous basis (Par. 141).
- 412 As research can be started long before the public will be in a position to experience television, the results of such a research programme will be unique in the world, since a similar situation does not exist anywhere else (Par. 141).

A Technical Advisory Committee was subsequently appointed by the Minister of National Education to advise the SABC and the Minister on any matter it considered important for the introduction and expansion of the most effective television service within the framework of the country's resources and circumstances.

The Technical Advisory Committee instructed a subcommittee to consider the recommendations of the Commission and to make more pertinent recommendations with regard to the advisability and possibility of a research project. This subcommittee recommended that a comprehensive research project regarding the effect of television on the socio-cultural way of life in South Africa should be launched as soon as possible and gave the following indication of the extent of the task: "It will be necessary to begin as soon as possible with a comprehensive analysis of the socio-cultural way of life in South Africa over a wide field, including a general study of specific values and studies of normative behaviour patterns in different spheres of

society. The above includes aspects such as the following: the use of leisure time, the current use of the mass communication media, daily habits, as well as less measurable aspects such as attitudes towards authority, permissiveness, the present mass media, religion, education, etc., as well as what is actually expected of a possible television service. In the research programme particular attention will have to be devoted to the family and adolescents. To facilitate the execution of the task, the field of study will have to be divided into a number of projects ..."

The Technical Advisory Committee, the SABC and the Cabinet accepted the recommendations of the subcommittee and voted money for the research which was entrusted to the Institute for Communication Research of the HSRC which, in addition to a series of other projects in this regard, also launched a project with regard to the effect of television on school-children.

This is a long-term project that is being undertaken in conjunction with the four provincial education departments and the SABC. The intention at first was to collect reliable information for subsequent comparisons and to study the relation between the variables before the introduction of television. During and after the introduction many aspects were considered: Television viewing habits, the effect of television on time utilization patterns and the use of other mass media as well as the possible results of exposure to the contents of television programmes. These aspects were investigated by means of questionnaires and standardized tests. Attention was focused, *inter alia*, on social behaviour, value orientations, occupational interests, study habits and attitudes, proficiency in the second official language, natural and social sciences, time utilization, and more specifically, personality and relationships (personal, social, home and formal). A biographical questionnaire was compiled to obtain as much biographical and background data of every pupil as possible. Additional information on scholastic achievements, IQ and behaviour patterns was obtained from class teachers.

For practical purposes this extensive project was divided into five main sections or topics. Naturally these topics overlap, but a focal point is created on which each of the five researchers involved in the project can concentrate. The classification was carried further in order to obtain a degree of similarity with the levels of research mentioned by Schramm (1964). The topics are (on the first, most

superficial and most easily measurable level) the effect of television on the time utilization of the child; (on a second, slightly deeper and not quite so easily measurable level) the effect of television on the child in a school context and in a family context; and (on the third, deepest level, which is also the most difficult to measure) the effect of television on the value orientations of the child and on the personality of the child.

It is hoped that this study will make a contribution in respect of the third, and deepest level, namely the effect of television on the personality of the child.

The study of the effect of television on the personality of the child makes particular demands on the researcher and poses special challenges. On the one hand there is the challenge of an unexplored field of psychology, and on the other the demand of evaluating a component of man that is extremely difficult to measure, namely personality.

2.2 MEASURING PERSONALITY

The measuring of personality is very closely linked to the development of personality theories as well as to the history of the development of psychology itself. Cattell (1965) distinguishes three historical phases in the study of personality; namely:

1. The literary and philosophical phase which is characterized by "a game of personal insight and conventional beliefs extending from the first thoughtful caveman to the most recent novelist and playwright" (Cattell, 1965, p. 13).
2. The phase of organized perception and theorization. This is also called the proto-clinical phase and grew out of attempts by medical science to deal with abnormal mental behaviour. Well-known researchers such as Kraepelin, Janet and Freud were the main contributors in this phase. "All this theory flowered not only in the work of Freud, but also of Kretschmer, McDougall, Jung, Adler, and others who wrote of fascinating, if not always soundly based notions concerning personality, from late in the last century until well into this one" (Cattell, 1965, p. 13).
3. The quantitative and experimental phase. According to

Cattell this phase began shortly before the end of the previous century, and that it was only a decade or two ago that it became clearly recognizable. The measuring of personality is the central theme in this phase accompanied by attempts to evaluate personality objectively.

Two obvious streams can be distinguished in this phase. Firstly there is the work of Ivan Pavlov which centred on the conditioned reflex and the theory of learning. In conjunction with Pavlov, Cattell mentions Wilhelm Wundt and classifies the direction in which these two men worked as the "univariate experimental approach". A second approach that can be distinguished is the so-called "multivariate experiment". The correlation technique that was developed by Sir Francis Galton and Karl Pearson, was used *inter alia* by Sir Cyril Burt and Thurstone in an attempt to determine what the average person was like, instead of concentrating on abnormal individuals.

Janis *et al.* (1969) distinguish three kinds of measurements of personality that correspond more or less to Cattell's (1965) classification. They call these measurements informal evaluation, the clinical approach, and objective personality evaluation. Informal evaluation embraces the first impressions that are formed on meeting a strange person. Despite various objections to this method of evaluating personality, Janis *et al.* conclude that "it should be clear by now that the methods of informal assessment used in everyday life are subjective, empathic, and even intuitive; yet they *can* be subjected to rigorous, objective investigation" (1969, p. 615).

The second approach mentioned by Janis *et al.* (1969) is the clinical. This evaluation developed from attempts by clinicians to improve their understanding of their patients. The classical methods in psychology, as practised by Kraepelin, Freud and most other psychoanalysts are used in this method of personality evaluation, namely structured interviews (in contrast to unstructured interviews in informal evaluation), free association, and psychological tests.

In the psychological tests use is made of diaries, personal letters and especially indirect testing under the collective name "projective techniques". These techniques demand a sound knowledge of personality theories and a disciplined handling of the facts, because ... "the methods of clinical

assessment generally, are no better than the man who interprets them" (Janis, *et al.* 1969, p. 628). However, the validity and reliability of projection techniques are generally considered to be very low (cf. Anastasi, 1961, pp. 590-598).

The third, and objective approach discussed by Janis *et al.* largely corresponds to Cattell's (1965) quantitative and experimental phase. Here emphasis falls on scientific, objective measuring in keeping with the strict requirements of psychometrics.

According to Sarason (1966) many authors believe that the best method of evaluating personality is to ask the individual to describe himself. This self-reporting can be divided into two broad categories. The first involves an unstructured or free response situation in which the individual describes himself or talks about himself. The second category is more restrictive and more structured. It incorporates personality tests in which specific questions are put to the individual.

Alberts (1974) refers to personality evaluation and warns that ... "it should be borne in mind that no measuring area is pure and independent and certain cognitive elements will thus also play a role in the emotional sphere" (p. 71).

However, for Alberts the measuring of personality remains a structured activity. He divides the measuring of personality into personality questionnaires and projective techniques. This classification corresponds to that of Traxler and North (1966) who subdivide measuring into global and atomistic classes. In the first case it is mentioned that "personality as a whole is studied qualitatively and intensively by means of projective techniques", while the second case is described as follows: "an attempt is made to analyse personality into component parts" (as quoted by Alberts, 1974, pp. 71-72).

Although the objective, quantitative method of evaluating personality is thus generally regarded as the most objective way in which an individual's or a group's personality dimensions can be determined, the intuitive and clinical methods are by no means worthless and are still commonly used.

Cattell (1965) believes that the literary or arm-chair method does, in fact, have value in personality evaluations,

but his objection to this method is that it is not easy to separate the wheat from the chaff"... the literary 'method' offers no objective way of sorting out the truth" (p. 14).

The objection to the clinical method is that it began as a study of the abnormal person. The personality of the normal individual then had to be measured in terms of the abnormal person. A second important shortcoming of the clinical method is that it does not make use of quantitative measurements. "There is not a single measurement in the work of Pierre Janet, Sigmund Freud, Alfred Adler, and Carl Jung - and very little in that of Emil Kraepelin" (p. 15). Many of these theories are based on the description of a single case.

Thus if an objective method of evaluating personality is to be used, as is the case in this study, multiple experimental methods will have to be studied since they ensure measurements that can be statistically compared in an experimental situation. According to Cattell (1965, pp. 21-22) this method, with measuring instruments developed on the strength of multiple correlation techniques, is particularly suitable for studying behaviour in a natural environment.

This means that in the case where the effect of television on the personality of children is studied, measuring instruments that are objective, psychometrically accountable, and practicable in a school situation will be the most suitable.

2.3 THE QUESTIONNAIRE METHOD

Questionnaire methods were used throughout in this investigation. The personal interview method could possibly have produced better results with regard to certain information, but for the following reasons it was not used:

1. The main reason is its impracticability. With the large numbers of children that were tested it would have been impossible to use this method.
2. The probability that the people conducting the interviews would not be objective is increased by the large number of them that would have been necessary in a study of this kind.
3. The rumour prejudice. Pupils would have had to be taken one by one from the same class or school for interviews..

Pupils who were interviewed later might have been prejudiced by discussions with pupils who had already been interviewed.

4. The problem of accommodation. A suitable room in which interviews could be conducted free of disturbances would have been difficult to obtain in most schools. Such interviews would have continued for weeks at a time at a particular school and this would not have met with the approval of the education authorities.
5. Parental prejudice. If interviews had been conducted at home it would have been difficult to obtain objective answers from the children because there would have been an element of intrinsic subjectivity, especially in the presence of the parents. (Points 2, 3, 4 and 5 are mentioned with reference to Himmelweit *et al.*, 1958, p. 71.)

2.4 MEASURING INSTRUMENTS

2.4.1 *The High School Personality Questionnaire (HSPQ)*

"The HSPQ is the result of extensive research to meet with particular requirements. It was developed in the USA by Raymond B. Cattell of the University of Illinois and Mary D.C. Cattell of the Institute for Personality and Ability Testing, Illinois. It aims at giving the maximum information in the shortest time about the greatest number of dimensions of personality. It was adapted for use in the Republic of South Africa by the Institute for Psychometric Research of the Human Sciences Research Council and was standardized for the age range 13 to 18 years". (Manual for the junior - senior High School Personality Questionnaire, p. 25.) It measures 14 factorially independent personality dimensions or primary factors. Each factor is represented as a bipolar continuum of which the two extreme poles are described (Manual for the junior - senior High School Personality Questionnaire, 1974, p. 8). With the aid of these 14 scores the psychologist can make predictions with regard to scholastic achievement, occupational suitability, the danger of juvenile delinquency, the presence of leadership qualities, the need for clinical assistance to overcome neurotic conditions, etc. The reading level of the test was adapted for the age groups 12 to 18 years and the answer sheet can be scored very quickly with the aid of two scoring stencils.

The following primary factors are measured: (They are explained in full in the *Manual*.)

Factor A

Low score (-A)
(Stens 1, 2, 3)

RESERVED
(Sizothymia)

Critical
Stands by his own ideas

Cool, aloof
Precise, objective
Distrustful, skeptical
Rigid

Cold
Prone to sulk

High Score (+A)
(Stens 8, 9, 10)

WARMHEARTED
(Affectothymia)

Good-natured, easy-going
Ready to co-operate, likes
to participate

Attentive to people
Soft-hearted, casual
Trustful
Adaptable, careless, "goes
along"

Warmhearted
Laughs readily

Factor B

Low score (-B)
(Stens 1, 2, 3)

LESS INTELLIGENT
(Dull)

Low mental capacity

Unable to handle abstract
problems

High Score (+B)
(Stens 8, 9, 10)

MORE INTELLIGENT
(Bright)

High general mental capacity

Insightful, fast learning,
intellectually adaptable

Factor C

Low score (-C)
(Stens 1, 2, 3)

AFFECTED BY FEELINGS
(Ego weakness)

Emotionally less stable
Easily upset, changeable
Gets emotional when frustrated

High score (+C)
(Stens, 8, 9, 10)

EMOTIONALLY STABLE
(Ego strength)

Emotionally stable, mature
Faces reality, calm
Emotionally mature

Changeable in attitudes and interests

Easily perturbed
Evasive of responsibilities,
tends to give up

Worrying
Gets into fights and problem situations

Factor D

Low score (-D)
(Stens 1, 2, 3)

PHLEGMATIC

Undemonstrative, deliberate,
inactive, stodgy

Stoical
Complacent
Deliberate
Not easily jealous
Self-effacing
Constant
Not restless

Factor E

Low score (-E)
(Stens 1, 2, 3)

SUBMISSIVE

Obedient, mild, easily led
Docile, accommodating
Submissive
Dependent
Considerate, diplomatic
Expressive
Conventional, conforming
Easily upset by authority
Humble

Stable, constant in interests

Calm
Responsible, adjusts to facts

Unruffled
Shows restraint and avoids difficulties

High score (+D)
(Stens 8, 9, 10)

EXCITABLE

Demanding, overactive, unrestrained

Impatient
Attention-getting, showing off
Excitable
• Prone to jealousy
Self-asserting, egotistical
Distractible
Shows many nervous symptoms

High score (+E)
(Stens 8, 9, 10)

DOMINANT

Assertive, aggressive
Competitive, stubborn
Assertive, self-assured
Independent-minded
Stern, hostile
Solemn
Unconventional, rebellious
Headstrong
Admiration-demanding

Factor F

Low score (-F)
(Stens 1, 2, 3)

SOBER
(Desurgency)

Sober, taciturn
Serious, concerned, reflective
Silent, introspective
Full of cares
Uncommunicative, sticks to
inner values

Slow, cautious

High score (+F)
(Stens, 8, 9, 10)

ENTHUSIASTIC
(Surgency)

Enthusiastic, heedless
Happy-go-lucky
Talkative
Cheerful
Frank, expressive, reflects
the group

Quick and alert

Factor G

Low score (-G)
(Stens 1, 2, 3)

EXPEDIENT
(Low superego strength)

Does not accept moral standards,
disregards rules, expedient

Quitting, fickle
Frivolous
Self-indulgent
Slack, indolent
Undependable
Disregards obligations to people

High score (+G)
(Stens, 8, 9, 10)

CONSCIENTIOUS
(High superego strength)

Conscientious, persistent,
moralistic, staid

Persevering, determined
Responsible
Emotionally disciplined
Consistently ordered
Conscientious, sense of duty
Concerned about moral standards
and rules

Factor H

Low score (-H)
(Stens 1, 2, 3)

SHY
(Threctia)

Timid, restrained, threat-sen-
sitive

Withdrawn

High score (+H)
(Stens 8, 9, 10)

ADVENTUROUS
(Parmia)

Socially bold, "thick-skinned"

Likes meeting people

Retiring in face of opposite sex

Active, overt interest in opposite sex

Emotionally cautious
Apt to be embittered
Restrained, rule-bound
Restricted interests
Careful, considerate, quick to see dangers

Responsive, genial
Friendly
Impulsive
Emotional and artistic interests
Carefree, does not see danger signals

Factor I

Low score (-I)
(Stens 1, 2, 3)

High score (+I)
(Stens 8, 9, 10)

TOUGH-MINDED
(Harria)

TENDER-MINDED
(Premsia)

Rejects illusions

Sensitive, dependent, over-protected

Unsentimental, expects little

Fidgety, expects affection and attention

Self-reliant, takes responsibility

Clinging, insecure, seeking help and sympathy

Hard (to the point of cynicism)

Kindly, gentle and indulgent to self and others

Few artistic responses
(but not lacking in taste)

Artistically fastidious, affected, theatrical)

Unaffected by "fancies"

Imaginative in inner life and in conversation

Acts on practical, logical evidence

Acts on sensitive intuition

Keeps to the point
Does not dwell on physical disabilities

Attention-seeking, flighty
Hypochondriacal, anxious about self

Factor J

Low score (-J)
(Stens 1, 2, 3)

High score (+J)
(Stens, 8, 9, 10)

ZESTFUL
(Zeppia)

Liking group action
Likes attention
Sinks personality into group
enterprise

Vigorous
Accepts common standards

Factor 0

Low score (-0)
(Stens 1, 2, 3)

SELF-ASSURED

Untroubled adequacy
Placid, secure
Complacent, serene
Self-confident
Cheerful, resilient
Impenitent

Expedient
Insensitive to people's approval
or disapproval

Does not care
Rudely vigorous
No fears
Given to simple action

Factor Q₂

Low score (-Q₂)
(Stens 1, 2, 3)

SOCIABLY GROUP-DEPENDENT

Group-dependent
"Joiner" and sound follower

CIRCUMSPECTLY INDIVIDUALISTIC
(Coasthenia)

Reflective, internally restrained
Guarded, wrapped up in self
Fastidiously obtrusive

Neurasthenically fatigued
Evaluates coldly

High score (+0)
(Stens 8, 9, 10)

APPREHENSIVE

Guilt proneness
Self-reproaching, insecure
Worrying, troubled
Anxious
Depressed, cries easily
Easily touched, overcome by
moods

Strong sense of obligation
Sensitive to people's approval
and disapproval

Scrupulous, fussy
Hypochondriacal, inadequate
Phobic symptoms
Lonely, brooding

High score (+Q₂)
(Stens 8, 9, 10)

SELF-SUFFICIENT

Resourceful
Prefers own decisions

Factor Q₃

Low score (-Q₃)
(Stens 1, 2, 3)

High score (+ Q₃)
(Stens 8, 9, 10)

UNCONTROLLED
(Low self-sentiment integra-
tion)

CONTROLLED
(High strength of self-senti-
ment)

Lax

Exacting will-power, socially
precise

Follows own urges
Careless of social rules

Compulsive
Follows self-image

Factor Q₄

Low score (-Q₄)
(Stens 1, 2, 3)

High score (+Q₄)
(Stens 8, 9, 10)

RELAXED
(Low ergic tension)

TENSE
(High ergic tension)

Tranquil, unfrustrated
Torpid, composed

Driven, frustrated
Overwrought, fretful

Second-order factors

The 14 primary factors are unitary traits that are concep-
tually and dynamically almost independent, but they are
not statistically entirely independent. The intercorre-
lations between the primary factors can be ascribed to
second order factors. An analyses rendered five factors
(see *Manual*, p. 21). Two of these factors, Extraversion-
Introversion and Anxiety-Adjustment, are discussed in the
Manual (pp. 21-24). Extraversion-Introversion (Exvia-
Invia according to Cattell) is described as "a general
tendency towards social interaction as opposed to a gen-
eral reactive inhibition in Pavlov's sense" (p. 22).
Scores on this factor thus predict the child's quest for
or avoidance of social interaction in general.

Anxiety-Adjustment is described in the following way in
the *Manual* (p. 22): "In regard to this factor, too, an
interaction theory is accepted. The interpretation of
this HSPQ factor comes close to the Freudian 'transference

neurosis' theory: that ego weakness (-C) in the face of ergic tension (+Q, 'undischarged libido' to psycho-analists) and superego threat (O, guilt proneness) generate anxiety".

Statistical data of the HSPQ

The test-retest reliability coefficients are satisfactory throughout, although they refer to retesting after only one week. Thus no criticism can be levelled against the stability of the test.

With regard to the homogeneity of the test, correlations vary between 0,36 and 0,71. The correlations were calculated between the two forms of the test, factor by factor, and corrected for the full length (both forms) of the test.

The validity coefficients, based on equivalence coefficients vary from 0,63 to 0,84, which points to a reasonable degree of general validity of the test.

2.4.2 *The Personal, Home, Social and Formal Relations Questionnaire (PHSF)*

The aim of the PHSF Relations Questionnaire is to measure the personal, home, social and formal relations of high school pupils, students and adults according to eleven components in order to determine their degree of adjustment.

According to the manual for the test (Fouché and Grobbelaar, 1971), adjustment is defined as the dynamic process by which a person strives by means of adult, effective and healthy responses to satisfy his inner needs while at the same time successfully coping with the demands made by the environment, so that a harmonious relation can be established between the self and the environment.

The individual's degree of adjustment in each of the various components of adjustment is determined by how often his responses are mature or immature, effective or ineffective in relation to the self or the environment.

The PHSF measures eleven components of adjustment that are classified under four primary fields of adjustment. A desirability scale is also included. Each of the twelve components consists of fifteen items, i.e. a total of 180

items that must be answered on a separate answer sheet.

The components of the PHSF are as follows:

1. *Personal Relations (P)*

This refers to the intra-personal relations which are of primary importance in adjustment, e.g.

(a) Self-confidence

The degree to which a person has confidence in his ability, real or fancied, to be successful.

(b) Self-esteem

The inner appraisal based on evaluation and acceptance of real or fancied personality characteristics, abilities and defects.

(c) Self-control

The degree to which a person succeeds in controlling and channeling his emotions and needs in accordance with his principles and judgement.

(d) Nervousness

A high score on this component indicates an absence of symptoms of nervousness as expressed by anxious purposeless, repetitive behaviour.

(e) Health

A high score on this component indicates an absence of preoccupation with the physical condition.

2. *Home Relations (H)*

This refers to the relations experienced by the person as a dependant within the family and home environment, e.g.

(f) Family Influences

The degree to which a person as a dependant in a home, is influenced by factors such as his posi-

tion in the family, family togetherness, relationship between the parents, and socio-economic conditions.

(g) Personal Freedom

The degree to which a person feels that he is not restricted by his parents.

3. *Social Relations (S)*

This refers to the manner in which a person engages in harmonious and informal relations within the social environment, e.g.

(h) Sociability - G

The degree to which a person has a need for and spontaneously participates in social group interaction (extravert) in comparison with the degree to which a person is averse to social group interaction (introvert).

(i) Sociability - S

The degree to which a person has a need for sociable interaction with a specific person of the opposite sex.

(j) Moral Sense

The degree to which a person feels that his behaviour corresponds to the accepted norms of society.

4. *Formal Relations (F)*

This refers to the relations occurring in formal situations in the school, college or university, or occupation, e.g.

(k) Formal Relations:

The degree to which a person at school, college, university or in his occupation, is successful in his formal relations with fellow-pupils/fellow-students/colleagues, as well as with figures of authority and superiors in the learning situation/

work.

5. *Desirability Scale*

- (1) This is a validity scale indicating the honesty with which the person answered the questionnaire. The questions are of such a nature that only exceptional people can justly give favourable answers (Fouché and Grobbelaar, 1971, pp. 6-8).

The reliability of the various components of the test ranges from 0,69 to 0,89.

According to the manual of the PHSF it appears that the test shows a high degree of concept validity. Significant differences were found between the mean scores obtained at two schools for behaviourally deviant children and that of the norm group.

2.4.3 *Biographical Questionnaire*

This questionnaire was specially compiled for the project *The effect of television on school-children* with the aim of collecting as much biographical and other background information of every pupil as possible. These data include identification details, information on place of residence, religious details, as well as social and scholastic information. The following questions were used for this investigation:

Question 5

What is the job of your father/stepfather/guardian (the man who is at the head of your family)?

- (a) Say clearly what he does, e.g. shunter on the railways, parson, farmer, teacher, clerk, shopowner, etc.
- (b) If your father/stepfather/guardian is a pensioner or if he is unemployed, mention the work he did previously.

Question 9

Mark the standard you are in.

Std 3/Std 4/Std 5/Std 6/Std 7/Std 8/Std 9/Std 10.

Question 11

In what language are you taught at school? English/
Afrikaans/English and Afrikaans (double medium)/Other
language.

Question 13

I am a boy/girl.

Question 14

What language do you speak mostly home? English/
Afrikaans/English and Afrikaans/German/Dutch/Greek/
Italian/Portuguese/Other language.

Question 18

Where do you live during school terms?

On a farm/On a plot near a city or town/In a town/In a
city or suburb.

Question 19

In what *kind of house* do you live during school terms?

In a house/In a flat/In a boarding-house or hotel/In a
hostel/In a children's home (orphanage)/In a caravan/
Other.

Question 41

What was your state of health during the past year?

Good/Fair/Poor.

2.4.4 *Television Questionnaire*

This questionnaire was specially compiled for the project
The effect of television on school-children in order to
collect as much information as possible on the television-
viewing habits of every pupil. This information includes
the number of hours of television viewing, the days on
which television is watched, and the type of programme
looked at. The following questions were used for the pur-
pose of this study:

Question 4

How many television sets are there in your home?

None/One/Two/Three or more.

Question 7

How many hours *per day* do you usually watch television?
(Mondays to Thursdays during school terms.)

Never watch television/Less than one hour/
One hour and more, but less than two hours/
Two hours and more, but less than three hours/
Three hours and more, but less than four hours/
Four hours and more, but less than five hours/
Five hours or more.

Question 8

How many hours per day do you usually watch television
during week-ends? (Fridays to Sundays during school
terms.)

Never watch television/Less than one hour/
One hour and more, but less than two hours/
Two hours and more, but less than three hours/
Three hours and more, but less than four hours/
Four hours and more, but less than five hours/
Five hours and more, but less than six hours/
Six hours and more, but less than seven hours/
Seven hours or more.

Question 17

How long has your family had a television set at home?

Do not have a television set at home/Less than three
months/Three months and more, but less than six months/
Six months and more, but less than nine months/Nine months
and more, but less than twelve months/One year and more,
but less than two years/Two years and more, but less than
three years.

2.4.5 *Information required from the class teacher with regard to every pupil (Form B)*

This questionnaire was compiled to obtain confidential information on the scholastic achievement and intellectual ability of every pupil. The following question was used for this study:

Question 8

What, according to the intelligence test, is the pupil's IQ? (If the pupils has been tested more than once, give the most recent result.)

Non-verbal/Verbal/Total

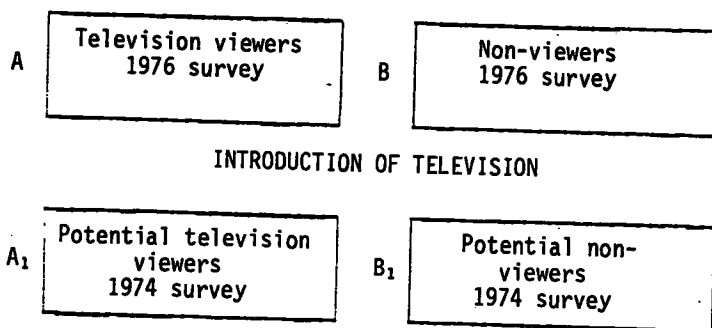
2.5 RESEARCH DESIGN

2.5.1 *Method*

The test-retest method was used to determine the effect of television on the child's personality make-up. Pupils were tested in 1974 (i.e. before the introduction of television) and the same pupils were again tested with the same measuring instruments in 1976 (after the introduction of television). Matched groups were used and two methods were followed which are schematically explained below:

Method I

FIGURE 1



The television viewers (A) were matched with the non-viewers (B) (cf. Figure 1). The same pupils that were tested before the introduction of television were involved in the post-television survey. (A and A₁ thus consist of the same pupils and so also B and B₁.)

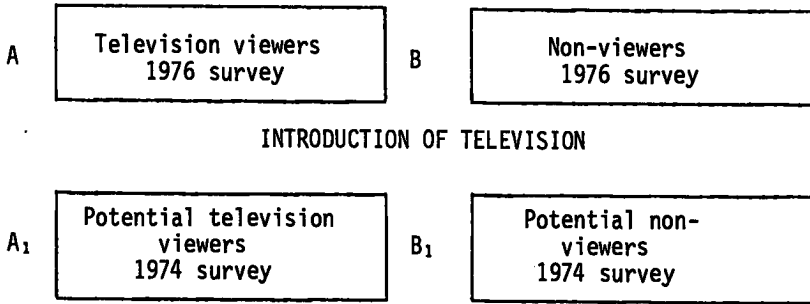
In Method I differences were calculated between the scores of A₁ and B₁ for each field of the HSPQ and the PHSF, and the same was subsequently done for the 1976 survey. It was assumed that if the mean scores of the potential television viewers and those of the potential non-viewers differed significantly after the introduction of television but did not differ significantly before the introduction of television, it would imply a difference that could be ascribed to the effect of television.

Other assumptions were that the television viewers and non-viewers, because they were matched, would undergo the same degree of maturation during the two years, and that before as well as after the introduction of television they would be comparable with regard to personality. It was also assumed that other variables which could affect the groups, such as political changes and the fact that they might remember some of the questions of the measuring instruments, i.e. test transfer effect, played the same role in both groups. These assumptions are partly confirmed by Campbell and Stanley (1963) who believe that the following factors are taken into consideration in this design: test effect, maturation effect and historical effect (cf. pp. 13-15).

As mentioned earlier differences were calculated in Method I before and after the introduction of television. The problem with a method such as Method I is summarized by Campbell and Stanley (1963) as follows: "Often ... the difference would not have been significant (as in the case where the significance values are borderline, with the control group showing a gain almost reaching significance). Windle (1954) and Cantor (1956) have shown how frequent this error is" (p. 23). For this reason an alternative method was also used:

Method II

FIGURE II



As far as surveys and samples are concerned this method is the same as Method I, but the groups were compared in a different manner. The scores at A₁ were subtracted from the scores at A (television viewers) and difference scores (v) were obtained for every pupil. The same was done with the non-viewers: The scores at B₁ were subtracted from B and difference scores (v') obtained. After this the differences between the mean v and v' scores were calculated, and tested for significance by means of t-tests. The design can thus be explained schematically in the following manner:

FIGURE III

TELEVISION VIEWERS			NON-VIEWERS		
YEAR			YEAR		
Matched respondents	1976 score	1974 score	Matched respondents	1976 score	1974 score
X_i	A_i	A_i^-	Y_i	B_i	B_i^-
X_1	A_1	A_1^-	Y_1	B_1	B_1^-
X_2	A_2	A_2^-	Y_2	B_2	B_2^-
.
.
.
.
.
.
X_k	A_k	A_k^-	Y_k	B_k	B_k^-

$v_i = A_i - A_i^-$ where $i = 1$ to k $v_j^- = B_j - B_j^-$ where $j = 1$ to k

$$\bar{v} = \frac{\sum_{i=1}^k v_i}{k}$$

$$\bar{v}^- = \frac{\sum_{j=1}^k v_j^-}{k}$$

t test is carried out to check the significance of $\bar{v} - \bar{v}^-$.

Experimental group: X_1 to X_k

Control group: Y_1 to Y_k

Scores of the k members of the experimental group (1976): A_1 to A_k
 Scores of the k members of the experimental group (1974): A_1 to A_k
 Scores of the k members of the control group (1976): B_1 to B_k
 Scores of the k members of the control group (1974): B_1 to B_k

v_i : Difference between 1974 and 1976 scores of respondent number i in experimental group.

v_j : Difference between 1974 and 1976 scores of respondent number j in control group.

\bar{v} : Mean of the above-mentioned v_i scores.

\bar{v} : Mean of the above-mentioned v_j scores.

Statistical operations

Since matched groups were used the t test for related samples had to be used. The t tests were therefore calculated according to the following formula:

$$t = \frac{\bar{v} - \bar{v}}{S_{\bar{v}} - \bar{v}} \quad \text{where } S_{\bar{v}} - \bar{v} = \sqrt{S_v^2 + S_v^2 - S_{r_{ij}} S_{\bar{v}} S_{\bar{v}}}$$

where $S_{\bar{v}}$ = the standard error of means that are deduced from the v_i scores (i = 1 to k)

$S_{\bar{v}}$ = the standard error of means that are deduced from the v_j scores (j = 1 to k)

r_{ij} = the correlation coefficient between v_i and v_j

\bar{v} = the mean of the v_i scores (i = 1 to k)

\bar{v} = the mean of the v_j scores (j = 1 to k)

(according to Du Toit, 1975, pp. 122-135)

The t test without the correlation correction was used for determining significant differences in the identification of the extraneous variables. In this case the formula for the standard deviation of the difference between means was:

$$S_{\bar{v}} - \bar{v} = \sqrt{S_{\bar{v}}^2 + S_{\bar{v}'}^2}$$

(Du Toit, 1975)

2.5.2 *Matching*

The method of matching was used to render the television viewers and non-viewers comparable. This means that the groups are made equal with regard to certain characteristics (called extraneous variables) of the respondents, so that these characteristics do not play a role in the factor that is measured. According to Conradie (n.d.) this matching can be done in three ways, namely:

- (a) "By deciding before the application of the questionnaire which factors have to be matched, and then to draw the samples in such a way that these variables occur to the same extent in both groups" (p. 11).
- (b) "By matching the groups only after the application of the questionnaire with regard to the chosen factors" (p. 11).
- (c) By empirically selecting the factors that had to be chosen intuitively in the first two methods and determining which factors are relevant to the scores.

The third method which will now be briefly explained, was used.

2.5.3 *Identification of extraneous variables*

In the investigation by Himmelweit, Oppenheim and Vince (1958) sex, age, intelligence and social class were used as variables for matching television viewers and non-viewers. Furu (1962) used school marks, sex, intelligence, level of education, background of the parents and place of residence. As this study deals with the probable effect of television on the personality of the child, extraneous variables specifically related to personality had to be found.

The available literature on the subject indicated which extraneous variables play a role in personality.

An extraneous variable mentioned in the literature is language. Madge (1972) found significant differences in the South African cultural context between Afrikaans-speaking and Jewish pupils, and between English-speaking and Jewish pupils with regard to their scores on the High School Personality Questionnaire (HSPQ). These personality differences are explained in terms of cultural and educational differences in the different language groups.

Another variable, namely sex, is also described in the literature as relevant to personality. Separate norms are provided for boys and girls in the Manual of the HSPQ, and Madge (1972) also draws attention to differences between boys and girls (cf. p. 136).

The literature provided confirmation of only two extraneous variables that had to be taken into consideration, as explained above. Other extraneous variables would thus have to be determined by the researcher himself.

For this purpose use was made of an additional sample of Standard Eight pupils that were tested in 1974 (before the introduction of television) as part of the broad project: The effect of television on school-children. Extraneous variables found in the sample could thus not have been contaminated by television. This sample was stratified according to sex, language of instruction, urban and non-urban situation of the schools attended by the pupils, as well as the province in which the school was situated. The sample is explained in Table 2.1 where it is compared with the expected numbers according to the 1973 census figures of the school population as provided by the education departments of the four provinces. This table shows that the sample does not differ significantly from the population, and it can thus be regarded as representative in respect of the variables according to which it has been stratified.

The first extraneous variable that was tested was state of health. It was checked whether this factor would have an effect on personality, as measured by the HSPQ. The results are shown in Table 2.2. If one significant difference was found on the 5 per cent level of significance, it was assumed that the variable plays a role. Table 2.2 shows that significant differences occurred in eight of the

TABLE 2.1
CLASSIFICATION OF STD EIGHT SAMPLE OF 1974 ACCORDING TO SEX, URBAN/NON-URBAN AREAS, PROVINCE AND LANGUAGE MEDIUM

		BOYS								GIRLS								TOTAL	
		URBAN				NON-URBAN				URBAN				NON-URBAN					
		AFRIKAANS		ENGLISH		AFRIKAANS		ENGLISH		AFRIKAANS		ENGLISH		AFRIKAANS		ENGLISH			
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Transvaal	(a)	140	19,80	99	14,00	106	14,99	18	2,54	137	19,37	78	11,03	113	15,98	16	2,26	707	100
	(b)	146	19,92	95	12,96	119	16,23	18	2,46	137	18,69	89	12,14	112	15,28	17	2,32	733	100
OFS	(a)	17	14,40	4	3,39	36	30,50	3	2,54	15	12,71	3	2,54	37	31,35	3	2,54	118	100
	(b)	16	13,01	4	3,25	39	31,71	3	2,44	16	13,01	3	2,44	39	31,71	3	2,44	123	100
Natal	(a)	10	6,45	45	29,03	14	9,03	12	7,74	9	5,80	39	25,16	12	7,74	14	9,03	155	100
	(b)	10	6,29	45	28,30	13	8,18	15	9,43	9	5,66	41	25,79	12	7,55	14	8,81	159	100
Cape	(a)	36	9,52	55	14,55	86	22,75	17	4,49	39	10,31	47	12,43	80	21,16	18	4,76	378	100
	(b)	38	9,87	54	14,03	85	22,08	16	4,16	38	9,87	53	13,77	85	22,08	16	4,16	385	100
TOTAL	(a)	203	14,94	203	14,94	242	17,82	50	3,68	200	14,72	167	12,29	242	17,82	51	3,75	1 358	100
	(b)	210	15,00	198	14,14	256	18,29	52	3,71	200	14,29	186	13,29	248	17,71	50	3,57	1 400	100

(a) Sample

(b) Expected numbers according to school population census figures

$$\chi^2 = 1,2901 \quad p < 0,05 \quad df = 31$$

TABLE 2.2
DIFFERENCES BETWEEN PUPILS IN GOOD, REASONABLE AND POOR HEALTH IN A SAMPLE OF STANDARD
EIGHT PUPILS IN 1974 WITH REGARD TO HSPQ FACTORS

GOOD HEALTH AS AGAINST REASONABLE HEALTH

HSPQ FACTOR	GROUP	N	\bar{x}	S	t
A	Good	1 029	9,43	3,464	-0,085
	Reasonable	287	9,45	3,673	
B	Good	1 029	7,48	1,621	3,028*
	Reasonable	287	7,15	1,668	
C	Good	1 029	10,13	3,499	1,430
	Reasonable	287	9,80	3,292	
D	Good	1 029	9,64	3,609	-2,905*
	Reasonable	287	10,33	3,357	
E	Good	1 029	8,88	3,275	1,579
	Reasonable	287	8,53	3,468	
F	Good	1 029	10,02	3,380	1,797
	Reasonable	287	9,62	3,158	
G	Good	1 029	11,82	3,218	1,257
	Reasonable	287	11,55	3,206	
H	Good	1 029	8,93	4,024	4,239*
	Reasonable	287	7,80	3,867	
I	Good	1 029	9,95	4,325	1,804
	Reasonable	287	10,47	4,281	
J	Good	1 029	8,15	3,126	-3,020*
	Reasonable	287	8,79	3,331	
O	Good	1 029	10,54	3,560	-2,907*
	Reasonable	287	11,21	3,020	
Q ₂	Good	1 029	9,64	2,780	-1,153
	Reasonable	287	9,86	3,119	
Q ₃	Good	1 029	11,27	2,849	3,706*
	Reasonable	287	10,57	2,749	
Q ₄	Good	1 029	9,69	3,252	-3,664*
	Reasonable	287	10,48	3,136	

TABLE 2.2 (CONTINUED)
GOOD HEALTH AS AGAINST POOR HEALTH

HSPQ FACTOR	GROUP	N	\bar{X}	S	t
A	Good	1 029	7,48	1,621	2,259*
	Poor	16	6,56	1,171	
B	Good	1 029	9,64	3,609	0,705
	Poor	16	9,00	3,082	
C	Good	1 029	11,82	3,218	0,012
	Poor	16	11,81	3,486	
D	Good	1 029	9,64	3,609	0,705
	Poor	16	9,00	3,082	
E	Good	1 029	8,88	3,275	0,921
	Poor	16	8,12	3,018	
F	Good	1 029	10,02	3,380	1,280
	Poor	16	8,93	3,172	
G	Good	1 029	11,82	3,218	0,012
	Poor	16	11,81	3,486	
H	Good	1 029	8,93	4,024	0,425
	Poor	16	8,50	3,221	
i	Good	1 029	9,95	4,325	-1,480
	Poor	16	11,56	3,445	
J	Good	1 029	8,15	3,126	-2,350*
	Poor	16	10,00	2,828	
O	Good	1 029	10,54	3,560	1,161
	Poor	16	9,50	2,894	
Q ₂	Good	1 029	9,64	2,780	1,268
	Poor	16	8,75	2,926	
Q ₃	Good	1 029	11,27	2,849	-0,570
	Poor	16	11,68	3,157	
Q ₄	Good	1 029	9,69	3,252	-2,295*
	Poor	16	10,75	2,795	

*p = < 0,05

fourteen HSPQ factors and that the state of health can be regarded as a extraneous variable in personality.

As far as socio-economic status is concerned, no indications could be found in the literature whether it has a connection with personality. This aspect was therefore also tested and the results are shown in Table 2.3.

Table 2.3 shows that significant differences occurred in five of the 14 fields of the HSPQ and that socio-economic status can be regarded as a extraneous variable in the HSPQ.

The father's occupation was used as criterion for determining high, middle and low socio-economic status. These occupations were divided into nine categories according to the classification of the Department of Statistics. These categories are:

- 1) Professional, technical and related work
- 2) Administrative, executive and managerial work
- 3) Clerical work
- 4) Selling
- 5) Agriculture, forestry, fishery, hunting
- 6) Mining and quarrying
- 7) Transport and communication
- 8) Artisans, production workers and labourers
- 9) Service, sport and recreation workers.

The first two categories were regarded as the high socio-economic status group, the next two the middle group and the last five the low group (cf. Strijdom, 1971). This classification based on Strijdom's (1971) research was considered to be the most suitable and empirically accountable classification.

As shown by Table 2.3, socio-economic status also plays a role in personality and it will thus have to be checked.

The next extraneous variable that was examined was intelligence. Although there are indications in the literature (cf. Roos, 1974) that there is a relationship between intelligence and personality, it was decided to check intelligence as well. The results are shown in Table 2.4.

The classification IQ High, IQ Middle and IQ Low was made according to the normal distribution curve with stanines 1; 2 and 3 (low), 4; 5 and 6 (middle) and 7; 8 and 9 (high). This corresponds to an IQ score of 70-87 (low),

TABLE 2.3
DIFFERENCES BETWEEN PUPILS IN HIGH, MIDDLE AND LOW SOCIO-ECONOMIC STATUS GROUPS IN A
SAMPLE OF STANDARD EIGHT PUPILS IN 1974 WITH REGARD TO HSPQ FACTORS

HIGH SOCIO-ECONOMIC STATUS AS AGAINST MIDDLE SOCIO-ECONOMIC STATUS

HSPQ FACTOR	GROUP	N	\bar{x}	S	t
A	High SES	394	9,54	3,637	0,649
	Middle SES	214	9,34	3,605	
B	High SES	394	7,99	1,402	4,782*
	Middle SES	214	7,41	1,469	
C	High SES	394	10,33	3,650	1,094
	Middle SES	214	10,00	3,349	
D	High SES	394	9,81	3,816	0,932
	Middle SES	214	9,52	3,353	
E	High SES	394	9,17	3,530	-0,201
	Middle SES	214	9,23	3,454	
F	High SES	394	10,11	3,568	1,932
	Middle SES	214	9,61	3,481	
G	High SES	394	12,00	3,315	1,540
	Middle SES	214	11,57	3,224	
H	High SES	394	8,95	4,168	0,751
	Middle SES	214	8,69	3,886	
I	High SES	394	10,37	4,517	1,393
	Middle SES	214	9,84	4,393	
J	High SES	394	8,42	3,299	1,117
	Middle SES	214	8,11	3,198	
O	High SES	394	10,37	3,602	-1,851
	Middle SES	214	10,93	3,475	
Q ₂	High SES	394	9,87	2,962	2,939*
	Middle SES	214	9,13	2,958	
Q ₃	High SES	394	11,39	2,928	2,465*
	Middle SES	214	10,78	2,876	
Q ₄	High SES	394	9,44	3,207	-1,160
	Middle SES	214	9,75	3,021	

TABLE 2.3 (CONTINUED)

HIGH SOCIO-ECONOMIC STATUS AS AGAINST LOW SOCIO-ECONOMIC STATUS

HSPQ FACTOR	GROUP	N	\bar{x}	S	t
A	High SES	394	9,54	3,637	0,681
	Low SES	697	9,39	3,404	
B	High SES	394	7,99	1,402	8,844
	Low SES	697	7,09	1,721	
C	High SES	394	10,33	3,650	1,597
	Low SES	697	9,98	3,369	
D	High SES	394	9,81	3,816	0,00
	Low SES	697	9,81	3,479	
E	High SES	394	9,17	3,530	3,428*
	Low SES	697	8,46	3,135	
F	High SES	394	10,17	3,368	1,395
	Low SES	697	9,88	3,252	
G	High SES	394	12,00	3,315	1,382
	Low SES	697	11,72	3,153	
H	High SES	394	8,95	4,168	1,573
	Low SES	697	8,55	3,952	
I	High SES	394	10,37	4,517	1,397
	Low SES	697	9,99	4,191	
J	High SES	394	8,42	3,299	0,448
	Low SES	697	8,33	3,114	
O	High SES	394	10,37	3,602	-1,795
	Low SES	697	10,76	3,351	
Q ₂	High SES	394	9,87	2,962	0,557
	Low SES	697	9,77	2,781	
Q ₃	High SES	394	11,39	2,928	1,625
	Low SES	697	10,10	2,770	
Q ₄	High SES	394	9,44	3,207	-3,315*
	Low SES	697	10,12	3,276	

*p = < 0,05

TABLE 2.4
DIFFERENCES BETWEEN PUPILS IN HIGH, MIDDLE AND LOW IQ GROUPS IN A SAMPLE OF STANDARD
EIGHT PUPILS WITH REGARD TO HSPQ FACTORS

HIGH IQ AS AGAINST MIDDLE IQ

HSPQ FACTOR	GROUP	N	\bar{x}	S	t
A	High IQ	416	9,65	3,709	1,533
	Middle IQ	754	9,32	3,419	
B	High IQ	416	8,20	1,294	11,873*
	Middle IQ	754	7,11	1,695	
C	High IQ	416	10,10	3,693	0,698
	Middle IQ	754	9,95	3,416	
D	High IQ	416	9,48	3,808	-1,972*
	Middle IQ	754	9,91	3,428	
E	High IQ	416	8,59	3,363	-1,680
	Middle IQ	754	8,93	3,283	
F	High IQ	416	10,20	3,440	1,749
	Middle IQ	754	9,84	3,326	
G	High IQ	416	12,08	3,315	2,341*
	Middle IQ	754	11,62	3,158	
H	High IQ	416	9,05	4,297	2,018*
	Middle IQ	754	8,55	3,911	
I	High IQ	416	10,41	4,486	1,879
	Middle IQ	754	9,91	4,278	
J	High IQ	416	8,29	3,346	0,154
	Middle IQ	754	8,26	3,091	
O	High IQ	416	10,52	3,481	-1,219
	Middle IQ	754	10,78	3,493	
Q ₂	High IQ	416	9,75	2,964	0,853
	Middle IQ	754	9,60	2,827	
Q ₃	High IQ	416	11,07	2,888	-0,459
	Middle IQ	754	11,15	2,831	
Q ₄	High IQ	416	9,58	3,389	-1,955
	Middle IQ	754	9,97	3,192	

TABLE 2.4 (CONTINUED)

HIGH IQ AS AGAINST LOW IQ

HSPQ FACTOR	GROUP	N	\bar{X}	S	t
A	High IQ	416	9,65	3,709	1,719
	Low IQ	93	8,94	3,025	
B	High IQ	416	8,20	1,294	13,796*
	Low IQ	93	6,03	1,662	
C	High IQ	416	10,10	3,693	-1,0624
	Low IQ	93	10,46	2,746	
D	High IQ	416	9,48	3,808	-1,644
	Low IQ	93	10,18	3,203	
E	High IQ	416	8,59	3,363	1,094
	Low IQ	93	8,17	3,245	
F	High IQ	416	10,20	3,440	1,789
	Low IQ	93	9,51	2,950	
G	High IQ	416	12,08	3,315	1,475
	Low IQ	93	11,52	3,255	
H	High IQ	416	9,05	4,297	2,476*
	Low IQ	93	7,86	3,618	
I	High IQ	416	10,41	4,486	0,723
	Low IQ	93	10,05	3,575	
J	High IQ	416	8,29	3,346	-2,253*
	Low IQ	93	9,14	2,979	
O	High IQ	416	10,52	3,481	-0,306
	Low IQ	93	10,64	3,117	
Q ₂	High IQ	416	9,75	2,964	-1,417
	Low IQ	93	10,23	2,871	
Q ₃	High IQ	416	11,07	2,888	-0,211
	Low IQ	93	11,14	2,909	
Q ₄	High IQ	416	9,58	3,389	-0,630
	Low IQ	93	10,20	2,924	

*p = < 0,05

TABLE 2.5
DIFFERENCES BETWEEN PUPILS LIVING IN URBAN AND NON-URBAN AREAS IN A SAMPLE OF STANDARD
EIGHT PUPILS WITH REGARD TO HSPQ FACTORS

HSPQ FACTOR	GROUP	N	\bar{x}	S	t
A	Urban	576	9,64	3,716	1,906
	Non-urban	756	9,27	3,341	
B	Urban	576	7,55	1,566	2,990*
	Non-urban	756	7,28	1,680	
C	Urban	576	9,97	3,502	-0,786
	Non-urban	756	10,12	3,406	
D	Urban	576	9,76	3,561	-0,203
	Non-urban	756	9,80	3,563	
E	Urban	576	9,31	3,284	5,001*
	Non-urban	756	8,40	3,290	
F	Urban	576	10,15	3,403	2,970*
	Non-urban	756	9,75	3,375	
G	Urban	576	11,48	3,267	-2,760*
	Non-urban	756	11,97	3,162	
H	Urban	576	8,96	4,184	2,260*
	Non-urban	756	8,46	3,850	
I	Urban	576	10,11	4,455	0,168
	Non-urban	756	10,07	4,201	
J	Urban	576	8,07	3,147	-2,388*
	Non-urban	756	8,49	3,200	
O	Urban	576	10,65	3,326	-0,262
	Non-urban	756	10,70	3,547	
Q ₂	Urban	576	9,50	2,930	-1,960*
	Non-urban	756	9,81	2,801	
Q ₃	Urban	576	10,98	2,893	-1,526
	Non-urban	756	11,22	2,802	
Q ₄	Urban	576	9,93	3,158	0,558
	Non-urban	756	9,83	3,302	

*p = < 0,05

88-111 (middle) and 112 and higher (high).

Table 2.4 shows that intellectual ability, as expressed in the IQ, plays a role in personality because significant differences occurred in four of the fourteen fields of the HSPQ.

A last extraneous variable that was studied was urbanism as against non-urbanism. In this case urban respondents are those who stated that they lived in a city or suburb. Non-urban respondents are the pupils who indicated that they lived in a town, on a smallholding near a city or town, or on a farm. As mentioned above, Furu (1962) checked these variables as place of residence. The results of the relation between this factor and personality are shown in Table 2.5.

Significant differences were found in seven of the fourteen fields of the HSPQ, and it thus appears from Table 2.5 that urbanism/non-urbanism as a extraneous factor will have to be checked.

Thus the extraneous variables which have an effect on personality and which had to be checked are language, state of health, sex, socio-economic status, intelligence quotient and place of residence. To prevent these variables from playing a role when the effect of television on personality is studied, television viewers and non-viewers had to be matched with regard to the above variables.

2.5.4 *The test groups*

Initially 4 463 Standard Six pupils were involved in the 1974 survey (before the introduction of television). This sample was stratified with regard to sex, language of instruction, urban and non-urban situation of the schools attended by the pupils, as well as the province in which the schools were situated. The same pupils were involved in 1976, after the introduction of television. As a result of school-leaving, absence and other factors, the original number decreased to 3 199. As pupils in Natal did not complete the PHSF questionnaire in its entirety in 1976, data from these pupils are not used in this investigation. The 1976 group was subsequently classified into television viewers and non-viewers. This classification was made with regard to the following criteria:

i) Television viewers

Pupils who indicated (according to the Television Questionnaire) that they had one or more television sets at home; that they had had a set for more than three months; and that they watched television on weekdays as well as during week-ends.

ii) Non-viewers

Pupils who indicated (according to the Television Questionnaire) that they had no television sets at home and that they never watched television on weekdays or during week-ends.

Respondents who did not have a set at home but who watched elsewhere were not included in either of the groups. The combination of criteria would ensure that only television viewers as against non-viewers would be involved.

After this classification the original number of follow-up pupils in 1976 decreased from 3 199 to 1 905 (1 453 television viewers and 452 non-viewers). As language and health have an effect on a child's personality, it was decided to involve only Afrikaans-speaking pupils who indicated that they were in good health during the previous year. Once the Afrikaans-speaking pupils in good health had been selected, the groups were matched according to extraneous variables, sex, socio-economic status, IQ and place of residence (cf. Paragraph 2.5.3). After matching, 196 pairs (80 pairs of boys and 116 pairs of girls) were found in the case of the High School Personality Questionnaire (HSPQ) who satisfied the above requirements while 190 usable pairs (76 pairs of boys and 114 pairs of girls) of respondents were found who qualified for the Personal, Home, Social and Formal Relations Questionnaire (PHSF).

2.6 COLLECTING THE DATA

Although in this investigation use was made of only two of the fourteen measuring instruments involved in the project *The effect of television on school-children*, a survey is nevertheless given of the practical and organizational side of the broad investigation.

2.6.1 *Preliminary investigation*

A preliminary investigation to test the whole test programme (with all the measuring instruments) was undertaken during April 1974 at a primary and a secondary school in Brandfort, OFS. The aim of this preliminary investigation was the practical application of the 14 measuring instruments and the manual in order to eliminate problems that might arise and to ensure that the test programme would proceed smoothly. It could also be determined precisely how long it would take to complete the measuring instruments.

2.6.2 *Arrangements with education departments and the Committee of Heads of Education*

The test programme and all the measuring instruments were submitted to the Committee of Heads of Education and the various education departments for their approval. The whole programme, with certain amendments, was approved. The number of pupils per standard (Standards 3 to 10), classified according to school, sex and medium of instruction, was subsequently requested from the various education departments so that the population from which the sample had to be drawn could be determined. Administrative arrangements were also made with regard to the training of school psychologists who had to train the teacher-testers in the schools.

2.6.3 *Publicizing the project in order to obtain the co-operation of the parents and teachers*

Two newsletters of the HSRC, namely No. 43 of March 1973 and No. 55 of April 1974, were distributed throughout the country and also made available to the press, the SABC, schools and other educational institutions (locally and overseas) and to individuals. These newsletters contained a brief summary of the background of the project.

Schools included in the 1974 sample (i.e. all follow-up schools) were informed by newsletter by the various education departments of their participation. After this the schools and school psychologists received further information on the test programme by letter.

2.6.4 *Method of testing*

To save on costs the test programme was divided into two

phases. In this way the tests and questionnaires that would be used could be almost halved, which meant a considerable saving. According to the initial sample approximately 21 500 pupils would be involved in the survey in 1974. Provision was made to test approximately 11 180 pupils at a time. (Testing was carried out separately in the Transvaal where 52 per cent of the total number of pupils in provincial schools in the RSA are registered.)

2.6.5 Training of testers

On account of the vastness of the project it was not practicable to have the tests administered by trained psychologists only and use had to be made of the services of teachers. The Division for Psychological and Guidance Services of each education department was responsible for training teachers as testers. This ensured that every tester was fully acquainted with the test programme. The organization and conditions in every school would thus be of such a nature that every pupil involved in the test programme would have the opportunity of completing the tests under ideal, or nearly ideal conditions. The three main aspects at issue here were

a. Room and furniture

Every pupil had to have a proper desk and chair in the room or hall where the testing would take place, and provision had to be made for sufficient light and air. Noises or disturbances from outside or from within had to be eliminated as far as possible.

b. Test material

Every pupil had to have the correct test material in front of him at all times, i.e. every item had to be handed out and collected at the right moment. Every pupil was also given a nine-digit identity number which had to be entered on all the measuring instruments and answer sheets. This number provides identifying information with regard to the year in which the tests were completed, the province, the school, urban/non-urban, standard and pupil number.

c. Testers

The testers had to be experienced or thoroughly trained

persons. Pupils had to be properly motivated and had to be given the correct instructions.

The training was provided in accordance with the circumstances in each province and with consideration for the distribution of schools, the time available for training, and the number of staff of the Division for Psychological and Guidance Services.

In some provinces the training was given to testers in groups at a centrally situated place. In other cases staff of the Division went from school to school and gave more individual training. In this way it was ensured that the testers of every school would be familiar with all aspects of the test programme and that the tests would be administered scientifically and efficiently.

2.6.6 The manual

The training of the testers was conducted according to a manual which gives examples of the measuring instruments in use. The preface of the manual outlines the background to the investigation. The manual is divided into four main sections, namely

1. The training of the testers
2. Arrangements that have to be made beforehand
3. General information
4. Instructions for the administering of every test or questionnaire.

Every conceivable aspect of the test programme is dealt with in detail in the manual. Thus, for example, it explains in full how to use machine answer sheets, and instructions are given on how to use the identity numbers and how to draw samples in schools. The test time-table for primary and secondary schools also appears in the manual. The test programme extends over three days in a secondary school.

2.6.7 Preparation and dispatching of test material

After the test material had been received from the printers, it was checked for errors. A control form was used to ensure that the correct amount of test material was sent to every school. The amount of test material that every school was to receive (i.e. the number of pupils that had to be tested plus 10 per cent) was entered on the form and the

material per school was packed in accordance with the numbers on the control form. Packing made great demands on the available staff because in addition to the large volume of test material, it had also to be taken into consideration that different standards followed different test programmes and that there were different language groups. The test material was dispatched by rail to reach the schools at least a week before the test programme was due to start. This ensured that possible shortages could be supplemented in time.

2.6.8 Test procedure

The manual that was supplied to every tester described in full the steps that had to be followed in administering every test or questionnaire. This ensured that the test situation in all the schools would be as uniform as possible. The test procedure can be summarized as follows:

1. The pupils entered the room and sat down.
2. The principal gave a short motivational talk (on the first day of testing) in which he pointed out the uniqueness and importance of the research.
3. A nine-digit identity number was allocated to every pupil and attached to his desk.
4. Before the first questionnaire was handed out, the final general instructions were read to all pupils. These instructions stated, *inter alia*, that pupils had to sit at the same desk every day, that they were not allowed to disfigure the test booklets, and where they were allowed to go during breaks.
5. The first questionnaire, the Biographical Questionnaire, was handed out and it was ascertained whether every pupil had a soft pencil, a rubber and a questionnaire. The test was then begun. Every question in the Biographical Questionnaire and the Time Utilization Questionnaire was read aloud to the pupils, after which they answered the question. This procedure prevented pupils skipping questions and facilitated the solving of problems which arose.
6. In the tests and questionnaires which required the use of answer sheets, it was carefully explained to the

pupils how these answer sheets had to be completed. Pupils had to write their identity number on the answer sheets.

7. The above procedure was followed for every questionnaire and test.
8. Although there was no time limit for most measuring instruments, slow pupils were encouraged to work faster.
9. Stop-watches were used in Tests I and III of the Scholastic Proficiency Battery on which there was a time limit.

The above procedure was followed in all the schools and this meant that the test situation was kept as uniform as possible.

2.6.9 Conditions under which the tests were administered

As explained above, everything possible was done to ensure optimum conditions for the administration of the tests and questionnaires.

Comments by principals and reports from school psychologists indicate that considerable success was achieved in ensuring ideal conditions: The positive attitude of school psychologists and principals is reflected in comments such as the following: "It has been a privilege to take part in a research programme, since we regard it also as a service to the nation" (Principal) "Thank you and all the best for the great task" (Principal) "It has been a pleasure to assist in this research" (Senior School Psychologist) "The principals of the schools concerned co-operated very well and the teachers who were actively involved deserve the highest praise" (School Psychologist).

As a result of organizational arrangements with regard to tests and examinations, some schools conducted the test programme a week before or a week after the appointed time. This arrangement was made with the approval of the HSRC. As far as could be determined, circumstances which could have had an adverse effect on the pupils, such as climatic conditions, language problems and fatigue, did not occur. The programme was launched during the colder months of the year and immigrant children who could experience language problems were not tested. The test programme was also compiled in such a way that fatigue should not have played a role. Generally speaking, pupils' absence did not pose a

serious problem. The absences that did occur can be regarded as normal.

2.6.10 *Return of the test material*

After completion of the test programme the test material was returned to the HSRC by passenger train, normally in a good condition, which indicates that the schools went to some trouble to pack the material carefully. When the test material arrived in Pretoria it was unpacked and the quantities checked. The completed questionnaires were then arranged numerically into the different kinds according to the identity numbers. The answer sheets were classified in the same way.

2.6.11 *Checking and encoding*

To ensure that every pupil's results could be considered correct with the highest degree of certainty, the checking and encoding of data were done accurately and systematically. The completed questionnaires were checked by clerks for questions that were not completed and for any discrepancies. The booklets were subsequently encoded, *inter alia* with regard to the occupations of the father and the mother, and the child's choice of an occupation. A manual was compiled for this purpose so that the checking and encoding would be uniform.

More than half of the measuring instruments (including the HSPQ and the PHSF) were answered on answer sheets so that it was possible to use a optical mark reader for scoring them. The following procedures were used to prepare these answer sheets for the optic reader:

1. The identity number on every answer sheet was checked with regard to correct encoding.
2. Every answer sheet was also checked for completeness and the correct way of answering. Particular attention was paid to double responses on answer sheets where this was not allowed.
3. Incorrect, unclear and carelessly completed answer sheets were rewritten, so that there would be the minimum amount of delay in the optic reading.

2.6.12 *Punching and editing of data*

The next step in the editing process was the transfer of data to magnetic tape. With some of the results an intermediary step was required, namely the transfer of data to punched cards. This concerned mainly the scoring of the answer sheets with the optical mark reader. The punched cards then became the medium through which the data were transferred to the magnetic tape. Other data were "written" by hand by the punching machine operators directly on to the magnetic tape. In both methods a high degree of correctness was ensured by systematic editing and verifying of the data.

2.7 SUMMARY

The experimental design that was used in the investigation has been outlined in this chapter. As part of the broad project of the Human Sciences Research Council on the effect of television on school-children, use was made in this study of data that were collected on a national basis before and after the introduction of television.

The background and origin of the project have been discussed as has the position of this specific research in the total research into the effect of television on the child.

The measuring of personality was identified as a problem area. It was shown that the objective, quantitative method, as described by Cattell (1965), Janis *et al.* (1969) and others, is an acceptable approach to the study of personality. Reasons were given why use was made throughout of questionnaires.

The various measuring instruments that were used were briefly discussed. The High School Personality Questionnaire, the Personal, Home, Social and Formal Relations Questionnaire, a Biographical Questionnaire, a Television Questionnaire and a questionnaire that had to be completed by the class teachers, were used.

The various samples that were involved, as well as a detailed explanation of the research designs that were used, were discussed in Chapter 1. The decrease in the number of respondents from an initial 3 199 in 1976 to 196 pairs is an indication of the great loss that occurred in respondents as a result of the strict matching procedures. Two

methods of significance testing in determining the effect of television, were discussed.

Lastly, the way in which the data were collected was discussed in respect of the practical organizational problems that were experienced.

CHAPTER 3 FINDINGS

3.1 INTRODUCTION

The findings of the investigation are discussed in this chapter. Three steps were followed in analyzing the data:

Step 1:

As discussed in Chapter 2, the 1976 group of pupils was first divided into television viewers and non-viewers. The mean scores of these two groups on the HSPQ, and the PHSF were compared by means of t tests for significant differences.*

Step 2: *Method I* (cf. Chapter 2)

The matched television viewers and non-viewers (1976) were subsequently compared for significant differences with regard to the mean scores obtained on the HSPQ and the PHSF. The 1974 data of these same pupils were then obtained and compared for significant differences as potential television viewers and potential non-viewers.

Step 3: *Method II* (cf. Chapter 2)

Lastly, the data were processed according to Method II in an attempt to isolate the effect of television in respect of the changes that had taken place.

3.2 COMPARISON OF THE 1976 TELEVISION VIEWERS WITH THE NON-VIEWERS PRIOR TO MATCHING

To get an idea of the differences between viewers and non-viewers (before matching), a comparison was made between their scores on all components/factors of the measuring instruments. Tables 3.1 and 3.2 clearly show that significant differences were found in the HSPQ (Factors A, E, F, G, H, J, Q₂ and Q₃) as well as in the PHSF (Components 1; 2; 6; 8; 9 and 10).

*A difference that is statistically significant at the 5 per cent level was accepted as an actual difference.

TABLE 3.1
DIFFERENCES WITH REGARD TO HSPQ FACTORS IN TELEVISION VIEWERS AND NON-VIEWERS IN A GROUP
OF STANDARD EIGHT PUPILS IN 1976

HSPQ FACTOR	GROUP	N	\bar{X}	S	t
A	TV-viewers	1 453	10,098	3,632	4,641*
	Non-viewers	452	9,197	3,491	
B	TV-viewers	1 453	7,628	1,654	0,233
	Non-viewers	452	7,604	1,386	
C	TV-viewers	1 453	10,744	3,561	1,819
	Non-viewers	452	10,394	3,601	
D	TV-viewers	1 453	9,818	3,606	-1,802
	Non-viewers	452	10,166	3,601	
E	TV-viewers	1 453	9,319	3,321	8,810*
	Non-viewers	452	7,777	2,892	
F	TV-viewers	1 453	10,358	3,497	5,927*
	Non-viewers	452	9,259	3,268	
G	TV-viewers	1 453	11,657	3,362	-4,048*
	Non-viewers	452	12,378	3,096	
H	TV-viewers	1 453	8,927	4,259	3,408*
	Non-viewers	452	8,150	3,972	
I	TV-viewers	1 453	9,893	4,436	-1,773
	Non-viewers	452	10,310	4,269	
J	TV-viewers	1 453	8,164	3,262	-4,178*
	Non-viewers	452	8,896	3,180	
O	TV-viewers	1 453	10,474	3,597	0,841
	Non-viewers	452	10,314	3,312	
Q ₂	TV-viewers	1 453	9,360	3,128	-4,539*
	Non-viewers	452	10,139	3,211	
Q ₃	TV-viewers	1 453	10,761	3,076	-3,046*
	Non-viewers	452	11,270	3,207	
Q ₄	TV-viewers	1 453	9,829	3,323	-0,896
	Non-viewers	452	9,982	3,290	

*p < 0,05

TABLE 3.2
DIFFERENCES WITH REGARD TO PHSF COMPONENTS IN TELEVISION VIEWERS AND NON-VIEWERS IN A
GROUP OF STANDARD EIGHT PUPILS IN 1976

PHSF COMPONENT	GROUP	N	\bar{x}	S	t
1	TV-viewers	1 452	26,851	5,393	3,076*
	Non-viewers	450	25,960	5,251	
2	TV-viewers	1 452	22,210	5,417	3,491*
	Non-viewers	450	21,207	5,173	
3	TV-viewers	1 452	25,487	5,213	-1,657
	Non-viewers	450	25,940	4,910	
4	TV-viewers	1 452	24,158	5,926	0,063
	Non-viewers	450	24,138	5,861	
5	TV-viewers	1 452	30,709	6,611	1,489
	Non-viewers	450	30,173	6,547	
6	TV-viewers	1 285	27,793	7,330	-2,872*
	Non-viewers	413	28,998	7,548	
7	TV-viewers	1 285	29,917	7,669	1,100
	Non-viewers	413	29,443	7,167	
8	TV-viewers	1 452	24,729	7,011	4,624*
	Non-viewers	450	22,984	6,842	
9	TV-viewers	1 285	28,098	10,163	5,597*
	Non-viewers	413	24,852	10,427	
10	TV-viewers	1 285	28,902	6,325	-6,341*
	Non-viewers	413	31,131	5,854	
11	TV-viewers	1 285	25,791	5,824	-0,929
	Non-viewers	413	26,097	5,324	
12	TV-viewers	1 285	18,062	4,816	1,806
	Non-viewers	413	17,579	4,729	

*p < 0,05

3.3 COMPARISON OF THE DATA ACCORDING TO METHOD I (cf. Chapter 1)

The 1976 data were used as a basis and the same pupils' HSPQ and PHSF scores of 1974 (when they were in Standard Six) were obtained. The results of the t tests between the viewers and non-viewers are shown in Tables 3.3 to 3.8. The 1976 data as well as the 1974 data are shown.

Table 3.3 shows that significant differences were found between the viewers and non-viewers in Factors A and J of the High School Personality Questionnaire in 1976 (after the introduction of television), whereas no significant differences occurred in the same factors in the same children before the introduction of television. However, in Factors E, Q₂ and Q₃ differences did in fact occur before and after the introduction of television. As far as the boys are concerned (Table 3.4), significant differences were found only in 1976 in Factors A, J and F. With regard to the girls (Table 3.5), in Factors J and Q₂ significant differences were found after the introduction of television (in the 1976 survey), but not in 1974.

As far as the PHSF is concerned (see Table 3.6), a significant difference was found between television viewers and non-viewers after the introduction of television. Other differences that occurred are in Components 3 and 12 (before the introduction of television) as well as in Component 10 (1974 and 1976). Table 3.7 reveals that a significant difference occurred in the case of the boys only in Component 10, both before and after the introduction of television. As far as the girls are concerned (cf. Table 3.8), a significant difference was found in Component 9 between viewers and non-viewers after the introduction of television.

3.4 COMPARISON OF THE DATA ACCORDING TO METHOD II (cf. Chapter 2)

In view of Campbell and Stanley's (1963) objection to the procedure followed in Method I (cf. Chapter 2), the data were processed according to an alternative method (Method II) as well. According to this method the differences between television viewers and non-viewers were examined on the basis of the changes that occurred in the scores on the measuring instruments from 1974 to 1976. If the two sets of change scores differ significantly, it will be shown. As in the preceding tables, the data regarding a measuring instrument are first shown for the total matched groups and then for the boys and girls separately (see Tables 3.9 to 3.14).

TABLE 3.3
 COMPARISON OF THE HSPQ RESULTS OF MATCHED TELEVISION VIEWERS AND NON-VIEWERS WITH REGARD
 TO SURVEYS MADE BEFORE (1974) AND AFTER (1976) THE INTRODUCTION OF TELEVISION

HSPQ FACTOR		1974				1976			
		N	\bar{X}	S	t	N	\bar{X}	s	t
A	TV-viewers	196	8,95	3,094	0,473	196	10,25	3,950	3,143*
	Non-viewers	196	8,80	3,169		196	9,06	3,515	
B	TV-viewers	196	6,76	1,817	-1,392	196	7,67	1,540	-0,207
	Non-viewers	196	7,01	1,729		196	7,70	1,311	
C	TV-viewers	196	10,24	2,912	-0,032	196	11,04	3,734	1,165
	Non-viewers	196	10,25	3,282		196	10,61	3,555	
D	TV-viewers	196	10,48	3,303	-0,534	196	9,04	3,889	-1,813
	Non-viewers	196	10,66	3,352		196	9,73	3,624	
E	TV-viewers	196	7,55	2,832	2,929*	196	8,40	3,388	3,142*
	Non-viewers	196	6,73	2,696		196	7,39	2,944	
F	TV-viewers	196	9,52	3,093	1,365	196	9,93	3,659	1,757
	Non-viewers	196	9,08	3,272		196	9,31	3,300	
G	TV-viewers	196	11,78	3,304	-1,708	196	12,27	3,428	-1,752
	Non-viewers	196	12,33	3,052		196	12,85	3,103	
H	TV-viewers	196	8,52	3,719	1,582	196	8,81	4,531	1,264
	Non-viewers	196	7,90	4,014		196	8,27	3,879	
I	TV-viewers	196	11,35	3,741	1,206	196	10,71	4,416	1,448
	Non-viewers	196	10,88	3,950		196	10,07	4,131	
J	TV-viewers	196	8,56	3,096	-0,558	196	7,57	3,428	-4,582*
	Non-viewers	196	8,74	3,270		196	9,18	3,511	
O	TV-viewers	196	10,08	3,307	-0,904	196	10,15	3,893	0,136
	Non-viewers	196	10,38	3,250		196	10,20	3,318	
Q ₂	TV-viewers	196	9,08	2,912	-2,294*	196	9,05	3,201	-3,933*
	Non-viewers	196	9,77	3,027		196	10,32	3,176	
Q ₃	TV-viewers	196	11,08	3,006	-2,128*	196	10,71	3,178	-2,691*
	Non-viewers	196	11,71	2,837		196	11,57	3,133	
Q ₄	TV-viewers	196	9,82	3,264	0,331	196	9,50	3,457	-0,579
	Non-viewers	196	9,71	3,306		196	9,70	3,362	

*p < 0,05

TABLE 3.4

COMPARISON OF THE HSPQ RESULTS OF MATCHED TELEVISION VIEWERS AND NON-VIEWERS (BOYS) WITH REGARD TO SURVEYS MADE BEFORE (1974) AND AFTER (1976) THE INTRODUCTION OF TELEVISION

HSPQ FACTOR		1974				1976			
		N	\bar{x}	S	t	N	\bar{x}	S	t
A	TV-viewers	80	8,05	3,217	-0,686	80	9,70	4,057	2,835*
	Non-viewers	80	8,40	3,196		80	8,12	2,843	
B	TV-viewers	80	6,35	2,038	-2,291*	80	7,32	1,723	-1,831
	Non-viewers	80	7,05	1,795		80	7,78	1,420	
C	TV-viewers	80	11,00	2,820	-0,143	80	12,00	4,053	0,644
	Non-viewers	80	11,07	3,320		80	11,60	3,744	
D	TV-viewers	80	10,03	3,348	-1,531	80	8,50	3,742	-1,380
	Non-viewers	80	10,80	2,964		80	9,28	3,351	
E	TV-viewers	80	8,51	2,797	2,276*	80	9,93	3,370	3,577*
	Non-viewers	80	7,52	2,669		80	8,18	2,748	
F	TV-viewers	80	10,17	2,999	1,553	80	10,55	3,475	2,263*
	Non-viewers	80	9,41	3,149		80	9,83	3,006	
G	TV-viewers	80	11,58	3,375	-2,466	80	12,23	3,392	-1,846
	Non-viewers	80	12,83	2,985		80	13,17	2,995	
H	TV-viewers	80	9,76	3,399	1,794	80	10,07	4,086	1,151
	Non-viewers	80	8,70	4,004		80	9,83	3,422	
I	TV-viewers	80	8,56	2,936	-0,286	80	7,26	2,953	0,644
	Non-viewers	80	8,71	3,624		80	6,96	2,900	
J	TV-viewers	80	8,86	3,216	-0,386	80	8,06	3,582	-3,298*
	Non-viewers	80	9,06	3,295		80	9,92	3,506	
O	TV-viewers	80	9,45	3,033	-0,975	80	8,77	3,486	-0,842
	Non-viewers	80	9,93	3,152		80	9,20	2,909	
Q ₂	TV-viewers	80	9,42	3,007	-2,399*	80	9,81	3,214	-3,614*
	Non-viewers	80	10,53	2,806		80	11,58	2,936	
Q ₃	TV-viewers	80	11,45	2,966	-0,843	80	11,26	2,974	-1,440
	Non-viewers	80	11,85	3,000		80	11,95	3,049	
Q ₄	TV-viewers	80	8,90	3,200	-1,089	80	8,82	3,510	0,272
	Non-viewers	80	9,46	3,263		80	8,67	3,420	

*p < 0,05

TABLE 3.5

COMPARISON OF THE HSPQ RESULTS OF MATCHED TELEVISION VIEWERS AND NON-VIEWERS (GIRLS) WITH REGARD TO SURVEYS MADE BEFORE (1974) AND AFTER (1976) THE INTRODUCTION OF TELEVISION

HSPQ FACTOR		N	1974			t	1976			t
			\bar{X}	S			N	\bar{X}	S	
A	TV-viewers	115	9,54	2,838	1,167	116	10,62	3,829	1,814	
	Non-viewers	116	9,08	3,120		116	9,71	3,778		
B	TV-viewers	115	7,05	1,593	0,323	116	7,91	1,349	1,588	
	Non-viewers	116	6,98	1,681		116	7,64	1,227		
C	TV-viewers	115	9,73	2,872	0,126	116	10,38	3,342	1,035	
	Non-viewers	116	9,68	3,131		116	9,93	3,248		
D	TV-viewers	115	10,79	3,250	0,508	116	9,41	3,944	-1,238	
	Non-viewers	116	10,56	3,592		116	10,04	3,770		
E	TV-viewers	115	6,87	2,671	1,961*	116	7,34	2,969	1,255	
	Non-viewers	116	6,19	2,576		116	6,85	2,951		
F	TV-viewers	115	9,00	3,020	0,357	116	9,50	3,722	0,505	
	Non-viewers	116	8,85	3,335		116	9,26	3,487		
G	TV-viewers	115	11,93	3,250	-0,144	116	12,29	3,452	-0,757	
	Non-viewers	116	11,99	3,050		116	12,62	3,156		
H	TV-viewers	115	7,65	3,702	0,575	116	7,94	4,617	0,774	
	Non-viewers	116	7,36	3,929		116	7,50	3,986		
I	TV-viewers	115	13,32	2,918	2,253*	116	13,09	3,613	1,783	
	Non-viewers	116	12,37	3,438		116	12,22	3,785		
J	TV-viewers	115	8,33	2,995	-0,437	116	7,24	3,276	-3,259*	
	Non-viewers	116	8,51	3,234		116	8,68	3,423		
O	TV-viewers	115	10,53	3,430	-0,361	116	11,11	3,872	0,458	
	Non-viewers	116	10,69	3,281		116	10,89	3,405		
Q ₂	TV-viewers	115	8,87	2,820	-0,977	116	8,53	3,086	-2,253*	
	Non-viewers	116	9,25	3,062		116	9,44	3,038		
Q ₃	TV-viewers	115	10,82	3,020	-2,108*	116	10,33	3,259	-2,314*	
	Non-viewers	116	11,62	2,715		116	11,31	3,163		
Q ₄	TV-viewers	115	10,48	3,158	1,400	116	9,97	3,341	-1,031	
	Non-viewers	116	9,88	3,324		116	10,41	3,130		

*p < 0,05

TABLE 3.6

COMPARISON OF THE PHSF RESULTS OF MATCHED TELEVISION VIEWERS AND NON-VIEWERS WITH REGARD TO SURVEYS MADE BEFORE (1974) AND AFTER (1976) THE INTRODUCTION OF TELEVISION

PHSF COMPONENT		1974				1976			
		N	\bar{X}	S	t	N	\bar{X}	S	t
1	TV-viewers	190	25,79	4,469	0,457	190	27,32	5,567	0,910
	Non-viewers	190	25,58	4,470		190	26,81	5,323	
2	TV-viewers	190	22,18	4,516	0,680	190	22,17	5,503	1,499
	Non-viewers	190	21,84	5,177		190	21,34	5,258	
3	TV-viewers	190	25,62	4,703	-2,404*	190	26,18	5,309	-0,996
	Non-viewers	190	26,81	4,920		190	26,71	5,032	
4	TV-viewers	190	24,19	5,778	0,147	190	24,48	6,114	0,284
	Non-viewers	190	24,10	6,094		190	24,31	5,499	
5	TV-viewers	190	30,33	5,451	1,368	190	32,48	5,900	1,387
	Non-viewers	190	29,51	6,184		190	31,63	6,018	
6	TV-viewers	190	31,17	6,575	-1,018	190	29,35	7,320	-0,219
	Non-viewers	190	31,87	6,787		190	29,52	7,769	
7	TV-viewers	190	27,50	6,146	-1,128	190	30,17	7,559	0,197
	Non-viewers	190	28,23	6,431		190	30,02	7,208	
8	TV-viewers	190	23,52	6,338	-0,519	190	24,81	7,667	1,970*
	Non-viewers	190	23,87	6,758		190	23,31	7,123	
9	TV-viewers	190	19,50	10,573	0,589	190	25,12	10,993	1,927
	Non-viewers	190	18,85	10,865		190	22,98	10,598	
10	TV-viewers	190	31,06	5,316	-2,642*	190	30,44	5,696	-2,950*
	Non-viewers	190	32,48	5,131		190	32,11	5,304	
11	TV-viewers	190	26,96	4,764	-1,323	190	27,12	5,311	1,111
	Non-viewers	190	27,64	5,218		190	26,50	5,540	
12	TV-viewers	190	17,55	4,768	2,443*	190	17,41	4,406	1,052
	Non-viewers	190	16,37	4,623		190	16,92	4,649	

*p < 0,05

TABLE 3.7

COMPARISON OF THE PHSF RESULTS OF MATCHED TELEVISION VIEWERS AND NON-VIEWERS (BOYS) WITH REGARD TO SURVEYS MADE BEFORE (1974) AND AFTER (1976) THE INTRODUCTION OF TELEVISION.

PHSF FACTOR		N	\bar{X}	1974		t	N	\bar{X}	1976		t
				S					S		
1	TV-viewers	76	26,64	4,681	-0,070		76	27,94	5,482	0,0	
	Non-viewers	76	26,69	4,098			76	27,94	5,132		
2	TV-viewers	76	23,53	3,942	0,120		76	23,43	4,932	0,588	
	Non-viewers	76	23,44	5,141			76	22,97	4,648		
3	TV-viewers	76	26,13	4,464	-1,290		76	27,32	5,555	-0,585	
	Non-viewers	76	27,07	4,463			76	27,81	4,656		
4	TV-viewers	76	24,56	5,946	0,129		76	25,35	6,782	-0,220	
	Non-viewers	76	24,44	5,473			76	25,56	4,711		
5	TV-viewers	76	31,00	5,234	1,369		76	33,19	5,758	1,026	
	Non-viewers	76	29,86	4,964			76	32,22	5,819		
6	TV-viewers	76	30,97	6,265	-0,824		76	29,82	6,830	-0,060	
	Non-viewers	76	31,84	6,655			76	29,98	7,415		
7	TV-viewers	76	27,05	6,139	-1,202		76	30,44	7,431	0,441	
	Non-viewers	76	28,27	6,290			76	29,93	6,699		
8	TV-viewers	76	24,17	6,045	-0,133		76	24,39	7,683	1,326	
	Non-viewers	76	24,30	5,949			76	22,81	6,884		
9	TV-viewers	76	20,44	11,329	-0,502		76	25,59	11,967	0,329	
	Non-viewers	76	21,36	11,127			76	24,97	11,073		
10	TV-viewers	76	29,51	5,406	-2,986*		76	28,96	5,782	-2,646*	
	Non-viewers	76	32,17	5,505			76	31,26	4,819		
11	TV-viewers	76	27,01	4,555	-0,578		76	26,80	5,712	0,872	
	Non-viewers	76	27,51	5,955			76	26,01	5,381		
12	TV-viewers	76	17,55	4,423	1,644		76	17,24	4,684	1,035	
	Non-viewers	76	16,38	4,292			76	16,44	4,786		

*p < 0,05

TABLE 3.8

COMPARISON OF THE PHSF RESULTS OF MATCHED TELEVISION VIEWERS AND NON-VIEWERS (GIRLS) WITH REGARD TO SURVEYS MADE BEFORE (1974) AND AFTER (1976) THE INTRODUCTION OF TELEVISION

PHSF FACTOR		N	1974			1976			
			\bar{X}	S	t	N	\bar{X}	S	t
1	TV-viewers	113	25,26	4,228	0,700	114	26,90	5,583	1,159
	Non-viewers	114	24,85	4,554		114	26,06	5,313	
2	TV-viewers	113	21,23	4,626	0,707	114	21,33	5,700	1,454
	Non-viewers	114	20,78	4,920		114	20,26	5,361	
3	TV-viewers	113	25,27	4,845	-2,030*	114	25,43	4,997	-0,787
	Non-viewers	114	26,63	5,195		114	25,97	5,313	
4	TV-viewers	113	24,01	5,625	0,186	114	23,90	5,549	0,569
	Non-viewers	114	23,86	6,464		114	23,47	5,818	
5	TV-viewers	113	30,04	5,336	0,926	114	32,01	5,946	0,959
	Non-viewers	114	29,28	6,868		114	31,24	6,117	
6	TV-viewers	113	31,45	6,624	-0,489	114	29,04	7,614	-0,222
	Non-viewers	114	31,89	6,873		114	29,27	7,986	
7	TV-viewers	113	27,77	6,147	-0,521	114	30,00	7,638	-0,069
	Non-viewers	114	28,21	6,523		114	30,07	7,528	
8	TV-viewers	113	23,04	6,496	-0,600	114	25,08	7,644	1,452
	Non-viewers	114	23,59	7,233		114	23,64	7,260	
9	TV-viewers	113	18,73	9,916	1,154	114	24,81	10,280	2,329*
	Non-viewers	114	17,17	10,352		114	21,66	10,054	
10	TV-viewers	113	32,15	4,992	-0,823	114	31,43	5,416	-1,703
	Non-viewers	114	32,69	4,854		114	32,67	5,532	
11	TV-viewers	113	27,00	4,947	-1,136	114	27,33	5,013	0,706
	Non-viewers	114	27,72	4,661		114	26,83	5,619	
12	TV-viewers	113	17,54	5,006	1,799	114	17,20	4,197	-0,052
	Non-viewers	114	16,36	4,831		114	17,23	4,527	

*p < 0,05

TABLE 3.9

DIFFERENCES BETWEEN TELEVISION VIEWERS (EXPERIMENTAL GROUP) AND NON-VIEWERS (CONTROL GROUP) ACCORDING TO CHANGE FROM 1974 TO 1976 WITH REGARD TO HSPQ SCORE FOR THE TOTAL GROUP

HSPQ FACTOR		N	$\bar{X}(1976) - \bar{X}(1974) \times 100$	S	r	t
A	TV-viewers	196	101,29	3,792	0,0750	2,808*
	Non-viewers	196	100,26	3,739		
B	TV-viewers	196	100,90	1,805	0,0970	1,293
	Non-viewers	196	100,69	1,561		
C	TV-viewers	196	100,80	3,636	0,0370	1,196
	Non-viewers	196	100,36	3,766		
D	TV-viewers	196	98,55	3,849	0,0170	-1,342
	Non-viewers	196	99,07	3,867		
E	TV-viewers	196	100,85	3,393	0,0610	0,581
	Non-viewers	196	100,66	3,267		
F	TV-viewers	196	100,41	3,699	0,0350	0,490
	Non-viewers	196	100,23	3,686		
G	TV-viewers	196	100,49	3,628	0,0090	-0,054
	Non-viewers	196	100,51	3,682		
H	TV-viewers	196	100,29	4,287	0,0250	-0,164
	Non-viewers	196	100,36	4,252		
I	TV-viewers	196	99,35	3,407	0,0220	0,465
	Non-viewers	196	99,19	3,464		
J	TV-viewers	196	99,01	3,828	0,0790	-3,969*
	Non-viewers	196	100,44	3,583		
O	TV-viewers	196	100,07	3,879	0,0870	0,670
	Non-viewers	196	99,82	3,830		
Q ₂	TV-viewers	196	99,96	3,445	0,0410	-1,768
	Non-viewers	196	100,54	3,163		
Q ₃	TV-viewers	196	99,62	3,411	0,0140	-0,643
	Non-viewers	196	99,85	3,735		
Q ₄	TV-viewers	196	99,67	3,462	0,0220	-0,890
	Non-viewers	196	99,99	3,714		

*p < 0,05

TABLE 3.10

DIFFERENCES BETWEEN TELEVISION VIEWERS (EXPERIMENTAL GROUP) AND NON-VIEWERS (CONTROL GROUP) ACCORDING TO CHANGE FROM 1974 (BEFORE THE INTRODUCTION OF TELEVISION) TO 1976 (AFTER THE INTRODUCTION OF TELEVISION) WITH REGARD TO HSPQ SCORES (BOYS)

HSPQ FACTOR		N	$\bar{X}(1976) - \bar{X}(1974) \times 100$	S	r	t
A	TV-viewers	80	101,65	3,585	0,0126	3,455*
	Non-viewers	80	99,68	3,628		
B	TV-viewers	80	100,97	2,001	0,0014	0,659
	Non-viewers	80	100,78	1,603		
C	TV-viewers	80	101,00	3,471	0,0037	0,850
	Non-viewers	80	100,55	3,194		
D	TV-viewers	80	98,46	3,507	0,0098	0,018
	Non-viewers	80	98,45	3,339		
E	TV-viewers	80	101,42	3,464	0,0177	1,488
	Non-viewers	80	100,62	3,355		
F	TV-viewers	80	100,37	4,096	0,0024	0,645
	Non-viewers	80	99,98	3,484		
G	TV-viewers	80	100,65	3,403	0,0090	0,589
	Non-viewers	80	100,31	3,874		
H	TV-viewers	80	100,31	3,929	0,0120	-0,630
	Non-viewers	80	100,72	4,293		
I	TV-viewers	80	98,70	3,419	0,0139	1,017
	Non-viewers	80	98,16	3,300		
J	TV-viewers	80	99,20	4,118	0,0076	-2,699*
	Non-viewers	80	100,86	3,626		
O	TV-viewers	80	99,32	3,464	0,0168	0,037
	Non-viewers	80	99,30	3,356		
Q ₂	TV-viewers	80	100,38	3,519	0,0168	-1,297
	Non-viewers	80	101,07	3,217		
Q ₃	TV-viewers	80	99,81	3,066	0,0016	-0,628
	Non-viewers	80	100,15	3,712		
Q ₄	TV-viewers	80	99,92	3,354	0,0252	1,284
	Non-viewers	80	99,21	3,680		

*p < 0,05

TABLE 3.11

DIFFERENCES BETWEEN TELEVISION VIEWERS (EXPERIMENTAL GROUP) AND NON-VIEWERS (CONTROL GROUP) ACCORDING TO CHANGE FROM 1974 (BEFORE THE INTRODUCTION OF TELEVISION) TO 1976 (AFTER THE INTRODUCTION OF TELEVISION) WITH REGARD TO HSPQ SCORES (GIRLS)

HSPQ FACTOR		N	$\bar{X}(1976) - \bar{X}(1974) \times 100$	S	r	t
A	TV-viewers	116	101,05	3,911	0,0029	0,792
	Non-viewers	116	100,65	3,762		
B	TV-viewers	116	100,86	1,656	0,0197	1,153
	Non-viewers	116	100,62	1,530		
C	TV-viewers	116	100,66	3,740	0,0033	0,831
	Non-viewers	116	100,23	4,109		
D	TV-viewers	116	98,62	4,068	0,0025	1,628
	Non-viewers	116	99,50	4,139		
E	TV-viewers	116	100,45	3,286	0,0023	-0,561
	Non-viewers	116	100,69	3,205		
F	TV-viewers	116	100,44	3,397	0,0046	0,084
	Non-viewers	116	100,40	3,810		
G	TV-viewers	116	100,37	3,771	0,0043	-0,582
	Non-viewers	116	100,65	3,536		
H	TV-viewers	116	100,27	4,516	0,0033	0,278
	Non-viewers	116	100,11	4,206		
I	TV-viewers	116	99,81	3,324	0,0013	-0,203
	Non-viewers	116	99,90	3,394		
J	TV-viewers	116	98,87	3,609	0,0076	-2,752*
	Non-viewers	116	100,16	3,526		
O	TV-viewers	116	100,58	4,063	0,0024	0,745
	Non-viewers	116	100,18	4,086		
Q ₂	TV-viewers	116	99,68	3,362	0,0078	-1,182
	Non-viewers	116	100,18	3,073		
Q ₃	TV-viewers	116	99,50	3,623	0,0032	-0,310
	Non-viewers	116	99,65	3,737		
Q ₄	TV-viewers	116	99,50	3,525	0,0112	-2,170*
	Non-viewers	116	100,52	3,643		

*p < 0,05

TABLE 3.12

DIFFERENCES BETWEEN TELEVISION VIEWERS (EXPERIMENTAL GROUP) AND NON-VIEWERS (CONTROL GROUP) ACCORDING TO CHANGE FROM 1974 TO 1976 WITH REGARD TO PHSF SCORES FOR THE TOTAL GROUP

PHSF COMPONENT		N	$\bar{X}(1976) - \bar{X}(1974) \times 100$	S	r	t
1	TV-viewers	190	101,52	5,757	0,0145	0,544
	Non-viewers	190	101,22	5,018		
2	TV-viewers	190	99,98	5,157	0,0069	0,864
	Non-viewers	190	99,50	5,660		
3	TV-viewers	190	100,56	5,051	0,0025	1,341
	Non-viewers	190	99,90	4,517		
4	TV-viewers	190	100,28	5,683	0,0087	0,122
	Non-viewers	190	100,21	5,529		
5	TV-viewers	190	102,15	5,554	0,0020	0,051
	Non-viewers	190	102,12	5,872		
6	TV-viewers	190	98,17	6,570	0,0029	0,746
	Non-viewers	190	97,64	7,242		
7	TV-viewers	190	102,67	6,866	0,0044	1,327
	Non-viewers	190	101,78	6,188		
8	TV-viewers	190	101,28	7,451	0,0032	2,529*
	Non-viewers	190	99,43	6,777		
9	TV-viewers	190	105,62	10,327	0,0108	1,481
	Non-viewers	190	104,13	9,317		
10	TV-viewers	190	99,37	5,779	0,0026	-0,416
	Non-viewers	190	99,62	5,926		
11	TV-viewers	190	100,15	5,257	0,0087	2,416*
	Non-viewers	190	98,86	5,171		
12	TV-viewers	190	99,85	4,932	0,0007	-1,393
	Non-viewers	190	100,54	4,701		

*p < 0,05

TABLE 3.13

DIFFERENCES BETWEEN TELEVISION VIEWERS (EXPERIMENTAL GROUP) AND NON-VIEWERS (CONTROL GROUP) ACCORDING TO CHANGE FROM 1974 TO 1976 WITH REGARD TO PHSF SCORES (BOYS)

PHSF COMPO- NENT		N	$\bar{X}(1976) - \bar{X}(1974) \times 100$	S	r	t
1	TV-viewers	76	101,30	5,267	0,0072	0,0
	Non-viewers	76	101,30	4,470		
2	TV-viewers	76	99,89	4,847	0,0184	0,381
	Non-viewers	76	99,56	5,814		
3	TV-viewers	76	101,19	4,979	0,0017	0,497
	Non-viewers	76	100,80	4,643		
4	TV-viewers	76	100,78	5,764	0,0071	-0,351
	Non-viewers	76	101,10	5,421		
5	TV-viewers	76	102,19	6,040	0,0132	-0,239
	Non-viewers	76	102,42	5,825		
6	TV-viewers	76	98,84	6,604	0,0104	0,686
	Non-viewers	76	98,09	6,852		
7	TV-viewers	76	103,39	6,339	0,0036	1,781
	Non-viewers	76	101,67	5,478		
8	TV-viewers	76	100,22	7,299	0,0149	1,601
	Non-viewers	76	98,43	6,474		
9	TV-viewers	76	105,14	9,822	0,0047	0,985
	Non-viewers	76	103,55	9,985		
10	TV-viewers	76	99,44	5,812	0,0024	0,322
	Non-viewers	76	99,15	5,219		
11	TV-viewers	76	99,78	5,642	0,0182	1,417
	Non-viewers	76	98,52	5,347		
12	TV-viewers	76	100,17	5,172	0,0036	0,035
	Non-viewers	76	100,14	5,333		

TABLE 3.14

DIFFERENCES BETWEEN TELEVISION VIEWERS (EXPERIMENTAL GROUP) AND NON-VIEWERS (CONTROL GROUP) ACCORDING TO CHANGE FROM 1974 TO 1976 WITH REGARD TO PHSF SCORES (GIRLS)

PHSF COMPO- NENT		N	$\bar{X}(1976) - \bar{X}(1974) \times 100$	S	r	t
1	TV-viewers	114	101,67	6,058	0,0180	0,664
	Non-viewers	114	101,17	5,351		
2	TV-viewers	114	100,04	5,354	0,0004	0,812
	Non-viewers	114	99,45	5,565		
3	TV-viewers	114	100,14	5,054	0,0085	1,364
	Non-viewers	114	99,29	4,329		
4	TV-viewers	114	99,95	5,603	0,0116	0,462
	Non-viewers	114	99,61	5,519		
5	TV-viewers	114	102,12	5,205	0,0137	0,272
	Non-viewers	114	101,92	5,894		
6	TV-viewers	114	97,73	6,510	0,0011	0,408
	Non-viewers	114	97,35	7,475		
7	TV-viewers	114	102,19	7,155	0,0046	0,361
	Non-viewers	114	101,86	6,619		
8	TV-viewers	114	101,99	7,468	0,0062	1,994*
	Non-viewers	114	100,09	6,891		
9	TV-viewers	114	105,93	10,640	0,0148	1,092
	Non-viewers	114	104,52	8,823		
10	TV-viewers	114	99,33	5,756	0,0054	-0,747
	Non-viewers	114	99,93	6,335		
11	TV-viewers	114	100,40	4,696	0,0016	1,985*
	Non-viewers	114	99,08	5,038		
12	TV-viewers	114	99,64	4,754	0,0040	-1,963*
	Non-viewers	114	100,81	4,207		

*p < 0,05

Table 3.9 reveals that in Factors A and J of the High School Personality Questionnaire significant differences were found for the total group. Significant differences were found with regard to the boys (cf. Table 3.10) in the same factors, whereas in the case of the girls significant differences were found in Factors J and Q₂.

Significant differences were found for the total group in Components 8 and 11 of the Personal, Home, Social and Formal Relations Questionnaire (cf. Table 3.12), whereas no significant differences were found for the boys alone (Table 3.13). However, the girls (Table 3.14) showed significant differences in Components 8; 11 and 12.

CHAPTER 4

DISCUSSION OF THE FINDINGS

4.1 INTRODUCTION

In this chapter some of the methodological problems are put in perspective before the findings, as reflected by the measuring instruments, are discussed. Reference is made first to the High School Personality Questionnaire after which the Personal, Home, Social and Formal Relations Questionnaire will be discussed. After a detailed discussion, a general picture will be given and some theoretical consequences elucidated.

4.2 METHODOLOGY

As mentioned in Chapter 2, two methods were used in this investigation to try to isolate the effect of television. Method I was based on the assumption that the mean raw scores of the matched potential television viewers would not differ significantly from the mean raw scores of the potential non-viewers before the introduction of television, but that there would be a significant difference after the introduction of television (if television had an effect). Method II indicates the degree of change that the experimental group (the television viewers) had undergone from before to after the introduction of television as against the degree of change that the control group (the non-viewers) had undergone during the same period. Both these methods depend to a large extent on matching to render viewers and non-viewers comparable with regard to extraneous variables. Table 4.1 gives a survey of the significant differences that were obtained between the 1976 television viewers and non-viewers with regard to the HSPQ and the PHSF before and after matching. Matching thus had an effect, since in the HSPQ as well as the PHSF it considerably decreased the number of factors with regard to which viewers and non-viewers differed.

A methodological problem that occurs in Method I and which has already been discussed in Chapter 2, is that the difference between the potential television viewers and the potential non-viewers may fall just below the level of significance before the introduction of television and just above it after the introduction, and that this may give the impression of significant change, whereas in fact only

a small random change has occurred. Factor F of the HSPQ in the case of the boys (Table 3.4) gives an indication of this happening: before the introduction of television the t value is 1,553 and after the introduction it is 2,263 (the limit of the level of significance is 1,96). Such "differences" will thus have to be interpreted very carefully.

4.3 FINDINGS

In the statement of the problem it was mentioned that only a general working hypothesis is given, namely that television has an effect on certain personality variables as measured by the HSPQ and the PHSF in a group of Standard Eight pupils. According to Tables 3.3 to 3.14 this hypothesis has been confirmed and it can be stated that there are indications that television has had an effect in the short term on certain personality variables as measured by the HSPQ and the PHSF. In five of the fourteen factors of the HSPQ and in four of the eleven fields of adjustment of the PHSF statistically significant differences were found between viewers and non-viewers. These variables, and the effect that television may have had on them will subsequently be discussed.

4.3.1 *The High School Personality Questionnaire (HSPQ)*

According to Tables 3.3, 3.4 and 3.5 (Method I), and Tables 3.9, 3.10 and 3.11 (Method II), significant differences were found at the 5 per cent level of significance in the following factors of the HSPQ:

Factor A (Reserved - Genial)	Total group, boys, Methods I and II
Factor F (Sober - Enthusiastic)	Boys, Method I.
Factor J (Vivacious - Cautiously individualistic)	Total group, Boys/Girls, Methods I and II
Factor Q ₂ (Socially group dependent - Self-sufficient)	Girls, Method I
Factor Q ₄ (Relaxed - Tense)	Girls, Method II

a. *Factor A - Reserve (Sizothymia) as against Genial (Affectothymia)*

Tables 3.3 and 3.9 show that the pupils who watched television in 1976 had a significantly greater tendency

towards a higher score than the pupils who did not watch television. According to Table 3.3, the television group in 1976, when they were in Standard Six, obtained a mean raw score of 8,95, whereas the non-television group had a mean raw score of 8,8 (not a significant difference). After the introduction of television (in Standard Eight) the two groups obtained mean raw scores of 10,25 for the television group and 9,06 for the non-television group (a significant difference).

This means that the pupils who were exposed to television were significantly more inclined towards the genial side of this bipolar scale of the HSPQ than the non-viewers. The positive (Affectothymia) side of the scale is described in the following terms: good-natured, carefree, willing to co-operate, likes to participate, pays attention to people, soft-hearted, casual, trusting, adaptable, co-operative, warm-hearted and laughs readily (Madge and Du Toit, 1974, p. 9). Thus there is a general tendency towards emotional warmth and spontaneity, as against the Sizothymia side of the scale which tends towards emotional flatness: "... a dimension ranging from warm and responsive emotion (showing ample affect) to an emotional flatness" (Cattell, 1973, p. 58). The greater tendency towards A+ (the positive side) by the television group can also be interpreted as a tendency towards improved social adaptation: "The A+ persons more readily form active groups. They are more impulsively generous in their personal relations, are not so easily upset by criticism and are more able to remember people's names" (Madge and Du Toit, 1974, p. 9). The higher mean scores that both groups (television and non-television) obtained after the introduction of television correspond to Cattell's description of the general tendency of this factor which "decreases until about age 10; then there is a steady and relatively rapid increase to age 30, where it levels off" (1973, p. 158). Thus throughout adolescence there is a general tendency towards A+. The results seem to indicate that television accelerates this tendency. Presumably television could have had a socializing effect on this group of pupils, and this has been suspected in the literature as well: "Communications media are potential agencies of socialization because they too, like the family, school and peers, direct information towards the child and present him with examples of behaviour" (Brown, 1976, p. 20).

An interesting phenomenon that becomes apparent in this factor is that significant differences occur with regard to

the boys, but not with regard to the girls (cf. Tables 3.4 and 3.5 in respect of Method I; and Tables 3.10 and 3.11 in respect of Method II). As far as this factor is concerned it can be inferred that boys are more susceptible to the effect of television than girls. This difference may be a function of the girls' emotional maturity and development.

However, the above inference should be seen in the light of the fact that there can only be talk of the direction of change that may be brought about by television. Naturally the shifts in the mean raw scores are very small, and according to the norm scales they would deviate very little from a stanine of 5, which indicates a normal score. However, this does not detract from the significance of the changes.

b. *Factor F - Desurgency as against Surgency*

As stated in Paragraph 2, the bipolar scale should be very carefully interpreted in this factor, as it is only through Method I that a significant difference occurs in the mean scores. According to Table 3.4, boys who watched television were more inclined than the non-viewers to move towards the enthusiastic side of the scale. No further interpretations are made.

c. *Factor J - Vivacious (Zeppia) as against Cautiously Individualistic (Coasthenia)*

As far as Factor J is concerned, significant differences were obtained according to both methods for the total group, the boys and the girls. In the total group the television viewers showed a decline in mean raw scores (cf. Table 3.3) (8,56 in 1974 as against 7,57 in 1976; $t = 5,107$; $p < 0,05$), whereas the non-viewers showed a rise in mean raw scores (8,74 in 1974 as against 9,18 in 1976; $t = -2,1$; $p < 0,05$). This interesting tendency also occurred among the boys as well as the girls. The mean raw score of the boys who watched television dropped from 8,86 in 1974 to 8,06 in 1976 ($t = 2,484$; $p < 0,05$), whereas the mean raw score of their matched non-viewing counterparts rose from 9,06 in 1974 to 9,92 in 1976 ($t = 2,62$; $p < 0,05$) (cf. Table 3.4). The mean raw score of girls who watched television dropped from 8,33 in 1974 to 7,24 in 1976 ($t = 4,701$; $p < 0,05$), whereas their counterparts who did not watch television showed a slight increase in raw scores from 8,51 in 1974 to 8,68 in 1976 (not significant: $t = -0,694$; $p > 0,05$) (Table 3.5). Thus television may have

had a hampering effect on the mean raw scores of the television viewers.

Thus the normal tendency (as reflected by the non-viewers) as the adolescent grows older is towards the cautiously individualistic side of the bipolar scale. This means that he becomes more reflective, inwardly controlled, prudent, introverted, fastidious and meddlesome, neurasthenically fatigued, and tends to assess unfeelingly. In some of the control group of Standard Eight pupils there was thus a tendency to become more reserved. This tendency is apparently converted by television into a tendency to become more vivacious, to like group activities, to like attention, to become absorbed in group undertakings, to be vital and to accept general standards (cf. Madge and Du Toit, 1974, p. 1). Other characteristics that are revealed to a greater extent by the television viewers are that they have self-confidence, are quick to grasp a point, show initiative, influence others and are accepted as leaders, are diligent and mentally alert (Madge and Du Toit, 1975, p. 33). The opposite extreme of the person with these qualities is the mentally lazy person: "From clinical descriptions of high J (coasthenic) children the factor seems to enter all three asthenia syndromes (hence coasthenia) - psychasthenia, neurasthenia and obsessional schizoid asthenia" (Cattell, 1973, p. 178). As in Factor A, it should also be clearly stated here that there is no talk of abnormalities or abnormal changes, but only of the *direction* of the changes.

Thus it appears from the above that for some reason or other television made the pupils (boys as well as girls separately) incline towards greater vivacity and improved co-operation with their group. Zestful co-operativeness, which is abbreviated to Zeppia, is a good description of this tendency. This corresponds to a large extent to the description of Factor A. In fact, J- and A+ form part of the second-order factor *exvia* or *extraversion*.

d. *Factor Q₂ - Socially group dependent as against self-sufficient*

According to Method I a significant difference was found with regard to this factor after the introduction of television, which may indicate that television viewers are more inclined than non-viewers to be socially group dependent and good followers (cf. Table 3.5). With regard to the boys as well as the total group there were significant

differences in 1974, i.e. before the introduction of television, and as far as Method I is concerned, no deductions can be made in respect of these two groups. No statistically significant differences were obtained according to Method II. Thus, for example, the t value in respect of the difference in the total group is 1,768 (cf. Table 3.9). In other words, the changes in the viewers and non-viewers are not significant.

e. *Factor Q₄ - Relaxed (low ergic tension) as against Tense (high ergic tension)*

Table 3.11 shows that a significant difference occurs in Factor Q₄ according to Method II, but only as far as the girls are concerned. Thus, although no significant differences occurred according to Method I, inspection of Table 3.5 reveals that pupils who watched television in 1976 obtained significantly lower mean raw scores in 1976 than in 1974 (9,97 in 1976 as against 10,48 in 1974; $t = 2,324$; $p < 0,05$). On the other hand, the group who did not watch television obtained a slightly higher mean raw score in 1976 than in 1974 (9,88 in 1974 as against 10,41 in 1976; $t = 2,435$; $p < 0,05$). Television thus apparently reversed the normal tendency.

A lower raw score implies lower ergic tension where the individual can be described as restful, unfrustrated, lax and calm. The other side of the bipolar scale, tenseness, implies high ergic tension where the individual is driven, frustrated, overwrought and irritable (Madge and Du Toit, 1974, p. 19). Where television caused a lower mean raw score among the girls in the group, it is significant that Wright and O'Halloran found that ... "Factor +Q₄ distinguished pupils who did poorly at school from those (with the same intelligence) who did well" (in Madge and Du Toit, 1975, p. 47).

f. *Summary*

The preceding paragraphs clearly show that television apparently influenced the pupils to be more jovial, more prepared to co-operate, more adaptable and vital than those who did not watch television. They were fonder of group activities and to a larger extent accepted general standards. Among the boys as well as the girls there was a tendency to be more group dependent, and among the girls there was a tendency to experience less tension. It appears that television has a socializing function among Standard

Eight pupils who find themselves in the middle of adolescence with all its problems.

4.3.2 *The Personal, Home, Social and Formal Relations Questionnaire (PHSF)*

According to Tables 3.6, 3.7, 3.8 (Method I) and Tables 3.12, 3.13 and 3.14 (Method II), significant differences were found at the 5 per cent level of significance with regard to the following components of the PHSF:

- . Component 8 Sociability - G . Total group, Method I and II, Girls, Method II
- . Component 9 Sociability - S . Girls, Method I
- . Component 11 Formal Relations . Total group, Girls Method II
- . Component 12 Desirability Scale . Girls, Method II

This means that with regard to the Personal Relations aspect of the test, namely the components which measure the intrapersonal relations, and which the Manual (Fouché and Grobbelaar, 1971, p. 6) describes as "... of primary importance in adaptation", television had no effect on the respondents. The same observation applies to the Home Relations aspect of the test. However, the social and formal relations of the television viewers, as measured by this questionnaire, were apparently altered by television.

a. *Social Relations*

"These are the relations through which an individual integrates harmoniously and informally in the social environment" (Fouché and Grobbelaar, 1971, p. 6).

1. *Component 8: Sociability - G*

In this component pupils who watched television (total group, see Table 3.6) obtained a slightly higher mean raw score in 1976 (after the introduction of television) than in 1974 (before the introduction of television) (23,52 in 1974, and 24,81 in 1976; $t = 3,943$; $p < 0,05$). On the other hand, no significant differences were found in the mean raw scores of the group of pupils who did not watch television (23,87 in 1974 as against 23,31

in 1976; $t = 1,794$; $p > 0,05$). This means that the television viewers tended more towards having a need and wanting to participate spontaneously in social group intercourse. The girls also revealed (in Method II) a significant difference with regard to this factor: The raw scores of the television group: 23,04 in 1974 and 25,08 in 1976; $t = 5,082$; $p < 0,05$. The raw scores of the non-viewers: 23,59 in 1974 and 23,64 in 1976; $t = 0,126$; $p > 0,05$ (cf. Table 3.8). The general tendency towards sociability that was found with regard to the HSPQ is thus continued in these pupils as far as this component is concerned. However, with regard to Method I and Method II the boys showed no significant differences in their mean raw scores (Tables 3.7 and 3.13).

2. *Component 9: Sociability - S*

According to Table 3.8 only the girls (in Method I) showed significant differences in mean scores on this component. This would appear to indicate that television probably intensified the need of girls to associate with a specific person of the opposite sex (Fouché and Grobbelaar, 1971, p. 6). Unfortunately this effect is neither confirmed nor disproved by Method II, as the particular t value (1,092) is not significant. As far as this component is concerned the tendency towards socialization, as found above, is confirmed in the case of girls (Method I). Van Zyl (1978) also conducted an investigation into the effect of television on the Personal, Home, Social and Formal Relations of Standard Eight pupils. His investigation also shows that television had an effect on the social relations of pupils as far as Components 9 (Sociability - S) and 10 (Moral Sense) are concerned. However, in his test group Van Zyl included English-speaking as well as Afrikaans-speaking pupils.

b. *Component 11: Formal Relations (F)*

In this component significant differences were found only with regard to Method II. In Method II the significance of the difference between the non-viewers and the viewers was calculated according to the change in the mean raw scores of 1974 to 1976. Differences occurred in the total group and the girls, but not with

regard to the boys (cf. Tables 3.12, 3.13, and 3.14). However, the change cannot be clearly perceived from the mean raw scores in Tables 3.6 and 3.8 because in some cases the differences are not significant. For example, the television group (total group) showed a non-significant difference in mean raw scores of 26,96 in 1974 and 27,12 in 1976 ($t = -0,559$; $p > 0,05$), whereas in the case of the non-viewers there was a significant drop of 27,64 in 1974 to 26,50 in 1976 ($t = 3,752$; $p < 0,05$). The same phenomenon can be seen with regard to the girls (Table 3.8). Pupils who watched television showed non-significant differences in mean raw scores of 27,0 in 1974 to 27,33 in 1976 ($t = -0,923$; $p > 0,05$). On the other hand, the non-viewers showed a significant tendency towards a lower raw score: from 27,72 in 1974 to 26,83 in 1976 ($t = 2,357$; $p < 0,05$).

This means that the normal tendency (as inferred with the non-viewers) to show a lower mean score on this component from Standard Six (1974) to Standard Eight (1976), and thus a slightly poorer adaptation in respect of their formal relations, was checked by television in the experimental groups.

c. *Component 12: Desirability Scale*

This scale indicates the degree of honesty with which the questionnaire was answered. The only significant difference was found according to Method II among the girls (Table 3.14). If the mean raw scores indicated in Table 3.8 are studied, it will be seen that the mean raw score of the girls who watched television rose from 16,36 in 1974 to 17,23 in 1976 ($t = -2,633$; $p < 0,05$), whereas the raw scores of the television viewers did not differ significantly (17,54 in 1974 to 17,20 in 1976; $t = 1,022$; $p > 0,05$). Generally speaking, however, the questionnaire was answered with a satisfactory degree of honesty (cf. Tables 3.6, 3.7 and 3.8).

d. *Summary*

It is noticeable that the results of the PHSF indicate the same general tendency towards improved socialization as the HSPQ. The components that were affected by television are all concerned with interpersonal

relations: the Social Relations, in which Sociability - G (total group and girls) and Sociability - S (girls) were affected and the Formal Relations (total group and girls). It is also interesting that the television viewers obtained higher scores than the non-viewers in the particular components and in the particular cases, which indicates that in some way or other television viewing resulted in improved adaptation. In order to place these interesting results in perspective some possible explanations will now be offered.

4.4 GENERAL PICTURE

As mentioned above, there are indications that television had an effect on certain personality dimensions of the group of Standard Eight pupils, as measured by the HSPQ and the PHSF. Although there can be no generalization in respect of the population, on account of sample limitations and the matching of the groups of pupils, the implications of this research are important because as far as it is known, there is no empirical proof in the literature that the personality of an adolescent can be affected by a mass medium like television. The direction of this influence can be reasonably strongly associated with improved socialization. The following picture of the Afrikaans-speaking Standard Eight pupils who watched television in 1976 emerges when they are compared with pupils who did not watch television.

In comparison with the non-viewers, the television viewers were more inclined after the introduction of television to be jovial in their interpersonal relations; to like social participation, to be a "warm" kind of person who is fonder of group activities and who is more vital. They were also more successful in their formal relations and were more in need of social group intercourse.

Thus apparently there was a tendency among television viewers to "free" themselves emotionally, which could result in their having richer emotional experiences than their friends who did not watch television.

As stated in Chapter 1, an unusual or epogenic event can cause a change in personality traits, although this has not yet been reliably documented (Cattell, 1973, p. 149). If the introduction of television is regarded as an epogenic event, the findings of this study can make a signifi-

cant contribution to such documentation since clear indications were found of personality changes after the introduction of television. What must be determined now is why television caused these changes. In this regard McQuail (1976) points out that "... In the long run, it is more useful to know *why* effects occur than to know *what* effects occurred ..." (as in Brown, 1976, p. 346).

As stated earlier, the data indicate that in some way or other television has a socializing effect on Afrikaans-speaking pupils. After exposure the television viewers were better adjusted socially than the non-viewers. Von Feilitzen (1976) mentions in this regard that research into the social function of television has been neglected up to now: "We should look in the other direction and focus on what has so far attracted relatively little attention in research and debate, namely the many-faceted social functions which television has for children" (In Brown, 1976, p. 103).

When "function" is mentioned with regard to the effect of television, reference is made directly to the so-called "functions and gratifications approach" that was dealt with in Chapter 1. The assumption is that television viewing satisfies some need. As mentioned in the literature survey, it is difficult to measure the needs of a child, as there is no suitable standardized test or scale. For an explanation of the findings of this investigation it will nevertheless be useful to look once more at the gratification approach.

Various sets of needs are identified in the literature on the subject (these "needs" should rather be called "functions"). Schramm, Lyle and Parker (1961), for example, distinguish phantasy escapism, information, and social usefulness. Brown (1976) refers to Blumler *et al.* (1970) and to McQuail *et al.* (1972) who give the following classification of functions:

"1. Diversion

- a. Escape from the constraints of routine
- b. Escape from the burdens of problems
- c. Emotional release

2. Personal Relationships

- a. Companionship
- b. Social utility

3. Personal Identity

- a. Personal reference
- b. Reality exploration
- c. Value reinforcement" (Brown, 1976, *In* Brown, 1976, p. 120).

Von Feilitzen (1976) distinguishes the following functions: Informative or Cognitive Functions; Social Functions; Non-Social or Escapism Functions; and Mode of Consumption or Medium Level Functions. According to Von Feilitzen (1976) the Social Functions, which probably tie in with the findings of this investigation, come under two categories: "First it seems as if television viewing can mean a social relationship *per se* (cf., for example, the findings that television permits identification, contact with television personalities, distraction from loneliness, and security). Secondly, children consider television as a source of information on the social environment, or of information that they can use in their social environment (cf. that television means topics of conversation and social commitment, that viewing signifies status and performance)" (in Brown, 1976, p. 103).

Particularly this last comment by Von Feilitzen may partially explain the findings of this investigation. In 1976 television was still a novelty, and programmes gave television viewers the opportunity to communicate socially; there was something to discuss with their friends and peer group. If it is remembered that the Standard Eight pupils (approximately 16 years of age) are in middle adolescence, and that social skills play an important role in their lives, that the social roles that are shown on television also offer an opportunity of identifying, which may have a catharsis as well as an imitation effect, it means that television may have a reinforcing effect on the socialization processes already in progress (McQuail, 1976).

Naturally approaches other than the functional can also be used to explain the effect of television on children. McQuail distinguishes three further approaches:

a. *Communication as information-processing*

According to this approach the effect is regarded as a rational, directed interaction between recipient and sender.

b. *Communication as conditioning*

In this approach the focus is on the sender or the message and the process of conditioning is considered to be one of response or reaction to the message.

c. *The relational model of communication influence*

In this approach it is assumed that communicative contact is subordinate to the social relationship between the sender and the recipient, and that it determines the general character of the orientation between the one and the other. According to this approach the quality of the relationship determines the influence of the medium (cf. McQuail, as in Brown, 1976, p. 349). However, it is very difficult to explain all effects using a single construct or theory, and it would probably be wiser to take note of the specific type of effect, before explaining it in terms of the "why" question: Mere shifts in time utilization, such as shifting the time of dinner, cannot be explained in the same way as relationship and personality changes.

With the above reservations in mind, the following three approaches are suggested as possible explanations of the effect of television on personality dimensions, as found in this investigation:

1. *The catharsis-therapeutic explanation*

This explanation is based on the assumption that the pupils who watched television could identify with certain characters in some television programmes, and through this identification they experienced an emotional release effect. The arguments of Feshbach and Singer (1971) that the violence content had a cathartic effect on their respondents could also be used to explain the tendency towards the emotional "release" of the television viewers in this investigation, especially with regard to the HSPQ where there was a tendency towards Vivacity and Heartiness (Factors A and J).

The tendency among girls towards lower ergic tension (Factor Q₄) confirms this conjecture. The identification with the different heroes in television programmes contributes to a changed vision of the self, and, as Noble (1975) believes, it helps to resolve the identity crisis the pupils are experiencing. The recognition of social and emotional problems in certain television stories has therapeutic value for the adolescent in the sense that he recognizes and experiences certain aspects of his own problems, and also because he can now use these stories as a means of discussing his problems with his friends and/or parents.

2. *The social modelling explanation*

A real problem experienced by adolescents is the learning and mastering of social customs and techniques. The uncertainty of social situations and social relations (especially heterosexual) for the adolescent, together with the above-mentioned identity crisis, may lead many adolescents to regard the depictions of such situations on television as a model on which they can base their own behaviour: "It might be observed that there are plenty of instances in which the clothes and mannerisms of an admired media personality are adopted ..." (Howitt and Cumberbatch, 1976, in Brown, 1976, p. 171).

The result of such imitation of social customs may have been that the pupils in the investigation found it easier to mix with their friends and to socialize, as indicated by the results of the HSPQ. It could also have led to the improved social adjustment indicated by the higher PHSF scores.

3. *The social cohesion explanation*

This explanation is based on the assumption that greater social contact between adolescents leads to improved socialization, a tendency towards extrovert interpersonal relations and improved general adjustment.

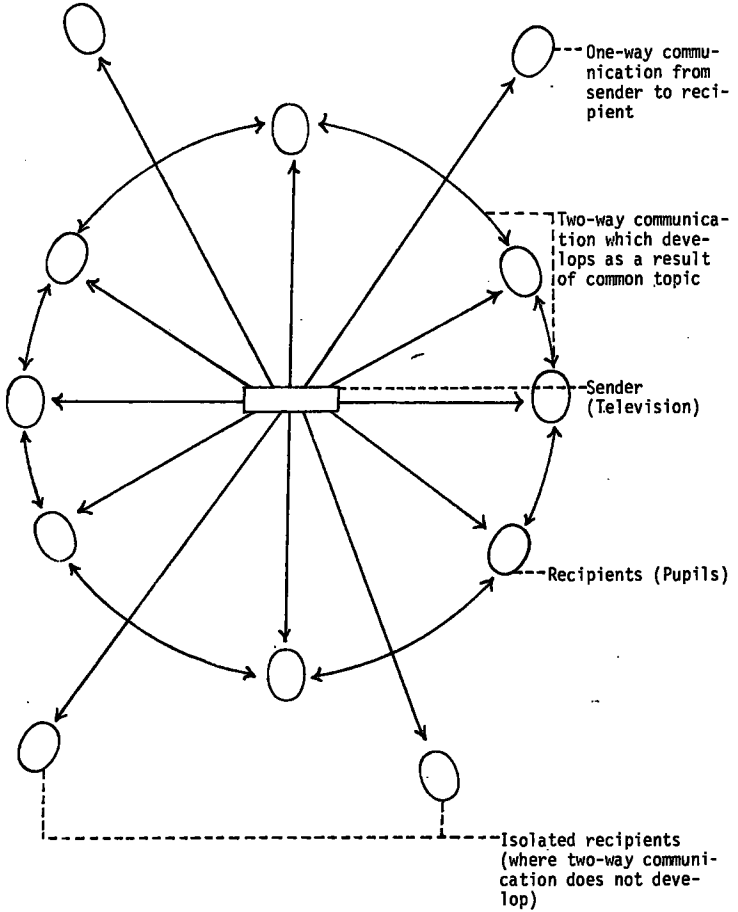
Rather than supporting the assumption that television viewing makes adolescents less sociable, the results of this investigation show that the respondents became more sociable, possibly because as Von Feilitzen puts it ... "Television means topics of conversation and

social commitment, that viewing signifies status and performance" (as in Brown, 1976, p. 103). These common topics of conversation could have caused, as a by-product, the changes in the scores on the measuring instruments. Thus from one-way communication, from the television set to the viewer, developed two-way communication (among the viewers themselves). This in turn brought about conversational ties which led to closer social cohesion. When one remembers the strong social ties that exist between stamp collectors, racing pigeon enthusiasts, rugby players, *et al.*, it is possible that a common topic such as the previous night's television programme could have resulted in improved social ties among the television viewers. The novelty of television in 1976 could have reinforced this tendency.

The social cohesion explanation may also be meaningful in the community as a whole, including the adults, and it could be speculated that television could lead to a greater degree of social cohesion in the community.

Schematically this explanation can be shown as follows:

FIGURE 4.2



In conclusion another explanation that can be related to the findings of this investigation is that of Noble (1975). He uses McLuhan's (1964) concept of "global village" and believes that through television certain elements of the village community can be returned to the industrialized community. "... the thesis presented here is that television, by exposing disparate individuals to the same familiar content, which is remarkably repetitive, does in part restore a village type of community" (p. 11).

According to Noble (1975) the village community had great advantages for the developing child, especially in terms of a wide spectrum of experiences. The modern industrial community, on the other hand, has a whole series of disadvantages with regard to social organization and also with regard to the consequences for the individual. In a comparison of the village community of two centuries ago with the industrialized community of today Noble mentions the following differences:

<i>Village</i>	<i>Industrial city</i>
- little specialization	- much specialization
- every man is an artist or craftsman	- crafts and skills the privilege of a few
- almost no privacy is possible	- high privacy
- the total social organization is visible and can be learnt	- the total social organization cannot be seen or easily learnt
- part of a visible community, interdependence clearly perceivable	- interdependence not clearly perceptible
- children learn by observing and doing. Development stages demarcated by ritual. Clearly defined mutual relations	- the school teaches children skills demarcated by abstract stages, educational achievement leads to reward: Children mainly learn subordinate roles and then suddenly have to be mature
- self-concept is fixed and stable in relation to the same group in the same place	- self-concept is not fixed and stable as the child is a member of various groups in different places
- optimal use of resources, including the self	- far from optimal use of resources - also the self

(cf. Noble, 1975, pp. 10 and 18.)

Like Von Feilitzen, Noble believes that television has a socializing effect and as a result conveys the advantages of the village community to the child: "Just as the child in the village becomes familiar with the whole range of relationships likely to be encountered in the outside world because they are represented in the extended kin, so too the child viewer becomes familiar with the range of relationships in the wider society by means of interaction with screen characters he has seen regularly, many of whom in these days of mobility are not likely to be represented in his extended kin grouping" (1975, p. 47).

This interaction between the child and the television group is called parasocial interaction because in many television programmes simulated personal interaction is broadcast which creates the illusion of personal contact. The personalities and characters who appear regularly on television constitute something of a protective community, which is in interaction with the viewers "... much in the same way that in the village the individual interacted ... with the extended kin group" (Noble, 1975, p. 37).

Noble's explanations for the popularity of television as a medium among children may even be applied speculatively to adults, especially in view of the popularity of programmes such as "Rich Man, Poor Man" and "The Villagers" in the RSA. Although the data and findings of this investigation cannot be generalized to such an extent, there are certain elements that confirm Noble's arguments.

The idea of personal interaction between viewer and television programme was put forward by Horton and Wohl in 1956 (cf. Noble, 1975, p. 36), but elements of such interaction were found as long ago as the forties by the Herzog studies of popular radio programmes (Herzog, 1942).

However, it was not until the seventies that television was again "discovered" as a medium of socialization, especially by the publications of Noble (1975) and Brown (1976).

Thus it is significant that this investigation possibly confirms some of the suppositions of the above investigators.

4.5 SUMMARY

The findings of the investigation have been discussed in this chapter. Firstly, some comment was made on the methodological problems that were experienced and the role of matching in the final results was pointed out.

The findings were discussed according to the data of the respondents on the High School Personality Questionnaire (HSPQ) where five factors were found to be affected by television, and on the Personal, Home, Social and Formal Relations Questionnaire (PHSF) where four components were affected by television. It was found with regard to the HSPQ that television apparently influenced the pupils to be more genial, prepared to co-operate, more adaptable and energetic. They were also fonder of group activities and were inclined to be more group dependent. This socializing, emotionally releasing effect of television was also apparent from the results of the PHSF. The components that were affected by television were all concerned with interpersonal relations, and there are indications that television viewing led to improved social adjustment. In comparison with the non-viewers, the viewers were more inclined after the introduction of television to be hearty in their interpersonal relations and to be "warm" persons.

In an attempt to answer the question as to why these changes occurred in the group of Standard Eight pupils, the findings and theories of other researchers were discussed. The needs and gratifications approach, as explained by Von Feilitzen (1976) and others, in which television is accorded a socializing function, was mentioned. Other possible approaches were also mentioned.

Three explanations were offered for the findings of this investigation, namely the cathartic therapeutic explanation which is based on the release of tension, the social modelling explanation which is based on the social learning process, and the social cohesion explanation which regards the findings of this investigation as a by-product of a unique communication process.

The last theory to be discussed was the socialization theory of Noble (1975) who believes that television introduces elements of a village community in the industrialized community and consequently has a positive effect on children. The possible application of this interesting theory to the findings of this investigation was also discussed.

CHAPTER 5

IMPLICATIONS OF THE INVESTIGATION

5.1 INTRODUCTION

The implications of the findings of this investigation are restricted by the methodological framework of the investigation. Because matched groups were used there can be no generalization with regard to the population. It should also be remembered that the personality changes were found only among Afrikaans-speaking Standard Eight pupils, and that pupils in other phases of development may not reveal the same personality changes after exposure to television. Television may not have the same effect on English-speaking pupils as on Afrikaans-speaking pupils.

However, the above reservations do not detract from the significance of the findings, but indicate that further research should be undertaken to verify these findings.

Before recommendations resulting from this investigation are made, the implications of the investigation will be discussed under the following headings:

- Implications with regard to television research
- Implications for the television producer and programme planner
- General social implications
- Implications for personality theories

5.2 IMPLICATIONS WITH REGARD TO TELEVISION RESEARCH

As mentioned in the previous chapter, the findings of this investigation largely correspond to the latest views on the function of television as a medium of mass communication. Noble (1975) and Brown (1976) deal with the socializing function of the medium and the underlying reasons why people watch television. Apparently the findings of this investigation indicate empirically that, at least as far as adolescents are concerned, television acts as a socializing agent. As Schramm stated in 1964, it was, and still is very difficult to find clear answers regarding the effect of television on the not so easily measurable aspects of the child, such as personality.

However, this study suggests that research into the middle

and long-term effect of television is also likely to show positive results in terms of socializing.

One would also have to study the psychological effect of mass communication media such as the radio and the press to determine the function of each of these media in the life of modern man. The chain reaction replacement effect suggested by Brown, Cramond and Wilde (1974) (cf. Chapter 1) may be empirically confirmed by such an investigation.

In future television research in South Africa, where the opportunity has already been taken to overcome, or at least to decrease methodological problems encountered overseas, it would be important to examine the underlying or less easily measurable aspects of a child's personality in greater detail. It should be mentioned, however, that not all methodological problems (especially with regard to control groups) have been resolved. It will become increasingly difficult to find pupils who have not been exposed to television, so that the genuine non-viewers that were used in this investigation will have to be replaced by pupils who rarely watch television - these pupils will then be compared with pupils who often watch television. An aspect that should be studied, is the effect of television on the interest pattern of pupils, on their needs structure, and on their attitudes and values.

5.3 IMPLICATIONS FOR THE TELEVISION PRODUCER AND THE PROGRAMME PLANNER

Although the findings of this investigation refer to a small group of Standard Eight pupils, they will give an indication to the programme planner and producer of his important and responsible role in the communication process. As the one who formulates and sends the message, he decides what the content will be. Noble's (1975) concept of the village community and its advantages for the child should give the producer an indication of the kind of programmes that should be offered. Indirectly the findings of this investigation point to the producer as an educator who may have a clearly measurable positive effect on the child.

5.4 GENERAL SOCIAL IMPLICATIONS

Obviously it is not possible to indicate specific social consequences of television merely on the basis of the

findings of this investigation. However, indications can be given of the possible effect of television on society in general. The social cohesion explanation (cf. Chapter 4) in which the socializing effect of television is explained in terms of a one-way communication which leads to a two-way communication between people, gives an indication of a possible effect of this nature. Socially people move closer together because television programmes provide a common topic of conversation. Noble's (1975) idea that television brings back elements of the village community also offers a stimulating and interesting interpretation of the effect of television on society. Television may even have a broad positive mental health effect on the community.

5.5 IMPLICATIONS FOR PERSONALITY THEORIES

As stated in Chapter I, in this investigation use was made of Cattell's interpretation of personality, namely: "Personality is that which permits a prediction of what a person will do in a given situation" (as in Hall and Lindsey, 1970, p. 386).

Moreover, it was clearly stated that Cattell makes provision for changes in the environment which may have an effect on the personality structure or the structure of traits. These changes he calls epogenic events.

The uniqueness of the findings of this study is that as far as could be determined, this is the first time that television could be identified as an epogenic factor or event. As outlined in the previous chapters, five of the factors of the HSPQ were affected by television, namely Factors A and J with regard to the total group, boys and girls; Factors Q₂ and Q₄ with regard to the girls, and Factor F with regard to the boys. From a theoretical point of view it is particularly interesting that Factor A: Reserved - Genial (Sizothymia - Affectothymia) was affected as overseas research has shown that this factor has a relatively high hereditary component (approximately 0,50) (cf. Cattell, 1973, p. 158). Cattell says: "No statistically significant results have demonstrated that this factor is influenced by changes in one's life" (1973, p. 159).

It can be inferred from this that television did, in fact, affect Factor A among Afrikaans-speaking Standard Eight

pupils. The change that occurred indicates that television played an important role in the natural development of this factor, as it apparently accelerated the normal increase (i.e. higher scores) (cf. Cattell, 1973, p. 158).

With regard to Factor J: Vivacious - Cautiously Individualistic (Zeppia - Coasthenia), there are few indications in the literature of the hereditary component of this factor, but it apparently plays an important role with regard to socialization in adolescents (cf. Madge and Du Toit, 1975, p. 32; and Cattell, 1973, p. 178).

As the other factors: F, Q₂ and Q₄ only showed significant differences with subgroups, and Factors F and Q₂ only with regard to Method I, it would be hazardous to attempt further speculation. What is significant, however, is the finding that apparently factors such as Factor C: Influenced by emotions - Emotionally stable (Weak ego - Strong ego); Factor G: Opportunistic - Conscientious (Low super-ego strength - High super-ego strength) and Factor Q₃: Uncontrolled - Controlled (Low self-sentiment - integration-strong self-sentiment) are not affected by television in the short term. This indicates that aspects such as self-confidence, the conscience, and the acceptance of ethic standards, as measured by the HSPQ, are not affected by television.

Changes in personality dimensions have been clearly indicated in the literature on the subject (cf. Cattell and Dreger, 1977, p. 424). In Chapter I these changes were classified into changes brought about by factors within the individual (internal factors) and factors outside the individual (external factors). One of the most generally accepted external factors for changing personality is psychotherapy. This study shows that as far as changes in the environment are concerned, television is also a factor that may cause certain personality changes in adolescents.

5.6 RECOMMENDATIONS

The findings of this investigation refer to the short-term effect of television on a number of personality dimensions of a group of children. The cumulative and long-term effect of television has still to be considered and it is essential that this effect be determined in further research.

Verification of the findings of this investigation would be a further important step in the scientific process of trying to determine the effect of television on the personality. It is particularly important that other language and age groups should also be examined, so that a probable pattern of influencing may be discovered.

5.7 CONCLUSION

Some implications and recommendations resulting from the investigation were discussed in this chapter. With the above findings one is strongly tempted to draw sensational conclusions. This has been avoided, partly because the study has methodological limitations and partly because the results have to be verified. It is hoped, however, that this investigation will make a contribution to the complex study field of the effect of television on the child.

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