MOTIVATIONAL AND ATTITUDINAL ASPECTS OF ETHNIC SUPPLEMENTARY SCHOOL ATTENDANCE. APPLICATION OF LISREL AND FISHBEIN~~'S MODEL~~ TO A STUDY OF ~~THE~~ GREEK SUPPLEMENTARY SCHOOLS IN LONDON.

by

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ABSTRACT

An examination of the motivational and attitudinal aspects of Greek supplementary school attendance in London provided data for a test of the Fishbein/Ajzen model of reasoned action.

The study had two basic aims. First, to obtain urgently needed empirical data on the motivational and attitudinal aspects of supplementary school attendance and, second, to probe into the utility of the theory of reasoned action in explaining the attitudes and behaviour of pupils attending these schools.

In achieving the first aim a questionnaire was administered to pupils attending Greek supplementary schools which provided information on the basis of which three issues were examined: The relevance of and pupils' preference for the activities provided by the school; the role and application of the integrative and instrumental orientations in determining pupils' attitudes and behaviour in learning their mother tongue; the implication of the contrasting conceptions of Greek School teachers and mainstream English school teachers for motivation and attainment.

In achieving the second aim a series of observations provided essential indices of attitudes toward the Greek School and the Greek School teachers all leading to a quantification of a general Attitude to Greek School Attendance. Scales were also devised to determine subjective norms from ethnic identification, acculturation,

and integrative motivation. The resulting LISREL analysis supported the fit of the model to the data and demonstrated the powerful predictive value of social norms in determining positive behaviour to these schools.

The study is set against the background of current issues in attitudinal and motivational studies as well as issues related with multicultural education, which provide the framework for interpretation of the findings.

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CHAPTER I

ISSUES RELATED WITH ETHNIC SUPPLEMENTARY EDUCATION IN GREAT BRITAIN

Separate educational provision to cater for the needs of ethnic minorities in Britain has been growing in recent years in terms of number of schools and students attending (GB.P. H of C, 1985). Ethnic supplementary education has a long history in Great Britain. The first ethnic supplementary schools started in the nineteenth century by Irish parents, who felt an urgent need to preserve the Irish language among their offsprings. Their example was followed by Jewish, East European (mainly Polish), Greek and Italian parents. In the 1930s the first part time schools for children of Chinese origin were set up, followed by similar initiatives in the early 1960s after the influx of Caribbean, Pakistani and Indian immigrants in Great Britain. The most recent group reported (Tomlinson, 1984) to set up supplementary and private schools is the Japanese, who in this way tried to satisfy the demand for Japanese education for children of Japanese businessmen who stay temporarily in Great Britain.

One can identify two main reasons that lead to the establishment of supplementary schools. The most common motive behind the establishment of such schools is the desire on the part of ethnic groups to retain their cultural identity and language and transmit them to the younger generations of their offsprings. This applies mainly to ethnic part time schools set up by the Irish,

Jewish, East European, Italian, Greek, Chinese, Indian, Turkish, and Pakistani people settled in Great Britain.

A second powerful motive, specifically connected with the establishment of a number of West Indian supplementary schools in this country, is related to the issue of equality of opportunity (Tomlinson, 1984). As the lower achievement of children of West Indian origin in mainstream schools (as well as their low passing rates in state examinations) is a well documented fact, and as these learning difficulties are thought to be mostly created in and by the ordinary schools (Bradney, 1987), there was a growing desire among West Indian parents that their children get extra-curricular help in part time schools in the main subjects of the mainstream curriculum or the syllabi of the main examination papers.

Tomlinson (1984) points out that the majority of black parents still look to additional and supplementary schooling to enhance their children's life chances, as they consider the state educational system designed to serve the needs of white children and thus incapable and mostly unwilling to cater for the needs of their children.

A similar motive can be traced in the establishment of Indian supplementary schools, i.e. to provide children with extra-curricular help in main subjects of the mainstream school curriculum (mathematics, English), but here the motive relates to the desire for academic excellence, the Indian group being highly achievement oriented.

Different reasons lie behind the establishment of

Japanese part time or private schools. These schools, which are attended mainly by children of families of Japanese businessmen temporarily resident in Great Britain, aim mainly at preparing them for easy transferral to schools in their country as well as the Japanese examinations which are very competitive.

The discussion that follows focuses on the reactions toward the establishment of ethnic supplementary schools in Great Britain and the arguments put forward both for or against this type of educational provision.

Teachers of the mainstream schools as well as teachers' organizations (McLean, 1985) have reacted in a relatively negative way toward ethnic supplementary schools. The fact that these schools impose an additional burden on children has traditionally been seen as a factor affecting adversely their progress in the mainstream school. Furthermore, the curriculum of these ethnic schools both as general aims pursued and content taught has been seen as remote from the interests of children as well as encouraging feelings of ethnic separateness among children which state school teachers are trying to reduce.

On this last point McLean (1985) comments that, although there is official recognition and support for private supplementary schools, the state school is aiming at cultivating cultural uniformity and is consciously working for achieving this goal.

Certain cultural values (e.g. Christian ethos and values) are central aims of the state school. For this reason the state educational system and teachers oppose certain supplementary schools on the grounds that the content of their curricula and the values contained are incompatible with the generally accepted and dominant aims of education.

Another point that raises suspicions among state school teachers and feeds accusations against supplementary schools concerns the teaching methods used in these schools, which are considered undesirable and incompatible with those used in the mainstream schools and by being so neglect the educational development of pupils and undermine the enlightened work of state schools (McLean, 1985). These accusations are mainly targeted against teachers employed in ethnic supplementary schools questioning their teaching efficiency and qualifications.

Furthermore, state school teachers question the capability of supplementary school teachers to provide for a proper educational environment for children attending these schools. As it is a common practice for the country of origin to provide teachers to aid in ethnic supplementary schools, McLean (1985) anticipates cultural clashes between British born and educated children and foreign teachers, born and trained in a different country. In this respect, according to McLean (1985) "imported teachers", as he calls them, frequently lack a knowledge of the British society in which the children live and of the

activities of the state schools which they attend during week-days.

Advocates of ethnic supplementary education put forward a lot of arguments in favour of them stressing the gains that could potentially accrue from them and which would benefit not only the ethnic minorities alone, but the whole nation.

In a pluralistic society mother tongue schools have an important role to play by cultivating and developing gifts possessed by ethnic minority children. These gifts are, according to Fishman (1980) as valuable as musical, athletic, artistic or dramatic talents of children. Their role in preserving and expanding language resources should be appreciated as these resources are

> "*national treasures every bit as much as are mineral, water, and unpolluted air resources*"
>
> (Fishman, 1980).

By developing these resources, ethnic mother tongue schools benefit not only the respective communities (from which they have sprung) to retain their character and identity, but also the whole nation by contributing to its commercial, diplomatic, and academic prowess.

Ethnic supplementary schools transmit and instill a sense of pride in one's mother tongue and ethnic culture and contribute to the ethnic minority children's better self-image and public dignity. Tomlinson (1984) and Cronin (1984) suggest that the experience gained by students in

these schools would promote, apart from a positive self-image, academic confidence and would lead to an improved academic performance in state schools.
Cultivating a positive identity in ethnic minority children will enable them not only to develop

> *"respect for their history, culture, language and religion, but also to understand the identity that their cultural heritage confers upon them, as they seek to establish themselves as citizens in a multicultural and multiracial Britain"*
>
> (Cronin, 1984)

This enhanced self-image and dignity has, according to Fishman (1980), important consequences for the whole community's compactness by working against the very causes (sense of alienation and lower self-esteem) that feed ethnic divisiveness and keep ethnic communities apart.

This last contribution of ethnic supplementary schools relates directly to the concept of "empowerment" of ethnic minority students. This term was coined by Cummins (1986), who has studied extensively the phenomenon of ethnic minority students underachievement in mainstream schools. He points out that costly programs in the USA and Canada have failed to ameliorate this undesirable situation, because they didn't hit hard and straight to the heart of the problem. According to Cummins (1986;1989) ethnic minority students' underachievement is rooted in their mental and cultural disabling that takes place in state school classrooms. This disabling comes about as power

relations between the dominant and dominated groups in the wider society are reproduced in the day to day interaction of these students with their educators. Educators communicate to students (and their parents as well) in a variety of ways the extent to which their language and culture are valued within the context of the school.

Cummins suggests that a redefinition of the roles of both individual and collective educators take place so that they become advocates for the promotion of students' linguistic talents, actively encouraging community participation in developing students' academic and cultural resources. This will lead to the empowerment of ethnic minority students and in the long run it will solve the problem of their underachievement. Although Cummins refers specifically to educators in the state school system, it is obvious that any effort toward the empowerment of ethnic minority students would be welcomed in a pluralistic society. In this respect, the contribution of ethnic supplementary schools towards achieving this aim should not be undervalued. Tomlinson (1984) commenting on black supplementary schools, which are staffed with black teachers and follow a curriculum specially designed to take account of the children's needs, maintains that they constitute a powerful force in enhancing a sense of worth and a "cultural identity".

Attempts at putting the previous theoretical standpoints to scientific scrutiny are extremely rare. Research on the reactions of students to their ethnic supplementary

schooling or their gains or losses as a result of attending such schools is nearly non-existent. Nearly all that exists is the result of evaluation of individual or groups of schools by HMIs or other evaluations of mother tongue projects. An evaluation of mother tongue teaching in schools by HMIs in four LEAs in 1984 although it has mostly negative comments on the teaching approaches used in community schools it concludes that

> " *a striking feature of the community classes was that pupils of all ages in all but one of the classes seen (classes in 14 schools) responded readily to their teachers and worked hard, with evident enthusiasm ...*"
>
> (D.E.S., 1984)

This runs contrary to the belief commonly held that pupils attending such schools are forced to do so by their parents and for this reason they have no interest or positive attitudes toward attending.

Tomlinson (1984), however, hypothesized that ethnic supplementary schools since they are not compulsory, a high degree of voluntarism, willingness and self-motivation would characterize the attitudes of students.

Cronin (1984) reports that students in two black supplementary schools expressed positive feelings toward these schools. They liked them because, as they reported, they were given more individual attention by the teachers than in state schools, they were treated equally by them

and were more understanding. Furthermore, they seemed happier than their counterparts in state schools.

Nagra (1982) reports on the rapid development of Asian supplementary schools in Coventry. Their success is due, according to Nagra, largely to the interest shown by the children themselves, something that came as a surprise.

> *"I had expected that the children would not be interested in learning their parents' languages, but the large number of them attending supplementary schools showed the opposite".*
>
> (Nagra, 1982)

Tomlinson (1984) mentions that parents of children attending a Saturday school (Datchwayng Saturday School in Peckham) have consistently reported an improvement in their children's school work, attitudes to learning, ability to master new skills and concepts, self-confidence and social emotional behaviour as a result of their attendance.

These improvements come about as a result of the beneficial influence of their teachers who, according to a teacher quoted by Tomlinson (1984),

> *"identify with the children, they don't label their stages of development as a "problem". White teachers, no matter how sympathetic, are unable to do this".*

Beneficial effects of ethnic supplementary schools or mother tongue classes on children attending them were reported in evaluations included in mother tongue teaching

projects. Verma (1987) referring to MOTET (Mother Tongue and English Teaching, a project which was jointly funded by the DES and the Bradford Education Authority and lasted from 1978 to 1980) reports that the experience gained from the project showed how a bilingual programme in the early years of school life could give confidence to the minority children and aid their overall development. Similar experiences were gained from the Schools Council Mother Tongue Project (funded by the EEC) which begun in May 1981 and run until August 1985. The project evaluator reported that

> *"mother tongue teaching does not hinder progress in English; in fact, progress in both English and the mother tongue seems to develop at the same pace with additional benefits of increased self-confidence and motivation ".*
>
> (Quoted in Verma, 1987, p.143)

Summing up, existing research suggests that students attending supplementary schools react in a more or less positive way toward these schools and their attendance is connected with increases in self-confidence. Furthermore, existing research suggests that teachers of ethnic supplementary schools exert a positive influence on their students and are liked by them.

Such an important contributor to the education and development of these children deserves more detailed

research than it currently receives. The present study intends to fill a gap in existing knowledge of Greek supplementary schools and provide information useful both on theoretical and practical grounds. However, before defining the parameters of the research, it is necessary to obtain a current description of the Greek Cypriot community in London tracing its historical development and describing its main characteristics. This is basic to our understanding of the GS schools (Greek Supplementary schools) as important community institutions and of the children attending them.

CHAPTER II

THE GREEK CYPRIOT COMMUNITY IN GREAT BRITAIN

2.1 SIZE OF THE COMMUNITY

The population of interest in the present study is the Greek Cypriot community in Great Britain. It comprises Greek people born in Cyprus and their descendants, who may have their birthplace either in Cyprus or in Britain.

Given the presently available information it is impossible to get to a precise figure reflecting the actual size of this community. Figures suggested by various sources range from 110,000 (from an estimated total of 140,000 including Turkish Cypriots who are thought to constitute 1/5 of it - see G.B. P. H of C, 1985) to 200,000 (Anthias, 1983; Tansley, 1986). A number in-between the two extremes, i.e. 160,000 - 170,000, would be a more accurate estimation.

The size of the Greek Cypriot community in Britain, in absolute numbers is very small compared to the English, the West Indian and the Asian populations. It constitutes only a fraction of 1 percent (0.14 according to Littlewood and Lipsedge, 1982) of the total population of Great Britain based on the 1971 census. This fact, however, does not diminish the importance of this community as a subject of systematic research. To the contrary, the size of this community seen in relation to the population of the metropolis, i.e. Cyprus, is substantial. Some sources suggest that one Cypriot in six resides in Britain

(Constantinides, 1977; G.B. P. H. of C, 1985; Taylor, 1988), others put the proportion higher to one in three (Krokou, 1985). Given this and the fact that this community is highly concentrated in certain areas of London, the Greek Cypriot community has been aptly characterised as the 7th district of Cyprus, differing from the rest by being in diaspora.

2.2 EMIGRATION TO GREAT BRITAIN

The emigration of Greek Cypriots to Britain which led to the establishment of the Greek Cypriot Community as it exists today has followed a different pattern and phases and occurred at different points in time from the emigration of Greek mainlanders to Britain. This in a way is the main cause, apart from differences in the language spoken (the Greek Cypriot dialect as distinguished from the Greek "kathomiloumeni" - demotic language spoken in Greece by the middle class) as well as class distinctions, that kept the two communities both physically and psychologically apart.

This Greek Community, which numbers in the region of 35,000 to 40,000 (Taylor, 1988) preceded the Greek Cypriot Community and has indirectly affected its development. As will be analyzed in more detail later on an important aspect of the first wave of immigration from mainland Greece was the establishment of institutions such as churches and Greek supplementary schools, that played an important role in the maintenance of the Greek identity of the immigrants.

The emigration of Greek Cypriots to Britain can be divided into three main phases: a) pre-1939, b) post-war (1945-1974) and c) post-1974. There follows a brief description of these phases that aspires to throw light on the forces that caused the movement of Greek Cypriots to Britain and influenced the establishment of the Greek Cypriot community as it exists today.

2.2.1 Pre-1939 Emigration:

The Census of England and Wales first mentions the existence of a very limited number (208) of Cypriot immigrants in 1911. These were mainly young males of Greek Cypriot origin with little formal education who emigrated to Britain seeking employment. They settled near the West End of London and worked in the restaurants and hotels operating there, under conditions of great hardship, working long hours but with insufficient earnings. Subsequent censuses showed a slightly but steadily increasing number of Cypriots coming as immigrants to Britain. Thus in 1921 the number of Cypriots increased to 334, and in 1931 to 1,059. To this a significant number was added after a new wave of emigration in the early 1930s caused mainly by the political unrest in Cyprus during that time.

The situation of these first immigrants, especially the poor conditions under which they lived (especially poor housing conditions and lack of any form of social life) urged the Colonial Government of Cyprus to initiate as from 1937 controls on the emigration of Cypriots to Britain.

Their purpose was, as Oakley (1979) suggests, not so much to curb migration from Cyprus to Britain but to insure that Cypriots do not put themselves or their families into undue hardship by emigrating to Britain. These controls made it necessary for Cypriots intending to emigrate to Britain to satisfy the Cyprus Government that

a)they had an adequate knowledge of English;

b)they put a deposit of £30 and

c)they had insured a job in Britain.

Furthermore, it was required that a person already established in Britain offered to support the prospective migrant by providing financial help, employment, or housing accommodation to him if necessary. A Liaison Officer of the Government of Cyprus stationed in London was commissioned to investigate these offers of support and issue 'affidavits of support' when satisfied.

George and Millerson (1967) suggest that the 'affidavit' system restricted drastically the wave of emigration from Cyprus in subsequent years. As will be seen later, however, these officially imposed controls did accentuate the importance of family and kinship in the process of migration from Cyprus to Britain. In the long run this virtually "selective" migration process brought about a more compact and concentrated Cypriot community, significantly distinct from the other ethnic minorities in Great Britain. It contributed in a way to the high concentration of Greek Cypriots in certain areas of London and to a tighter community as the new immigrants were

mainly dependent and closely related with those already settled in Britain who supported their entry.

By the end of 1939, and before the outbreak of the Second World War, the number of Cypriots settled in Britain and in full employment was 8,000 (Taylor,1988). They formed the nucleus around which subsequent groups of immigrants from Cyprus were drawn, and in a way pre-established the character and quality of the Cypriot Community as it exists and functions today.

2.2.2 Post-War Emigration:

The post-war period witnessed the highest rate of emigration from Cyprus to Britain which, due to the existence of various favourable conditions, grew and peaked after the island gained its political independence.

During the Second World War there arose an opportunity to Greek Cypriots to get a firm footing in the service area of catering, in which, thus far, they have been involved mainly as workers, with the Italians managing the majority of the existing businesses. Due to the internment of the Italians, because of Italy's involvement in the war against the Allies, Greek Cypriots were presented the opportunity to become owners and managers of restaurants and other catering businesses. Whereas in 1939 there had been 29 Greek restaurants in London, there were 200 by 1945 (George, 1960; Taylor, 1988).

Thus, a substantial number of post-war immigrants came to the United Kingdom through the affidavit system to join relatives and friends who were already established in

catering.

Craftsmen (builders, carpenters, plumbers etc.) constituted a second numerically substantial group of immigrants who were driven to Britain after the war as there was a scarcity of such craftsmen needed to take part in the process of reconstruction from the ruins caused during the war (Christodoulides, 1967; Loizidou-Papaphotis, 1984).

Later, in the 1950s, administrative as well as political and economic reasons drove large numbers of immigrants from Cyprus to the U.K. Among the main reasons the lifting of the more strict requirements of the affidavit system (e.g. knowledge of English) should be mentioned as well as the political instability that accompanied the struggle of Greek Cypriots for independence with all the concomitant hardships.

With the advent of independence of Cyprus in 1959 there happened a short period of relaxation in the migratory wave from Cyprus to Britain, to be followed, however, by the highest rate of emigration so far witnessed. During 1960 and 1961 alone about 25,000 Cypriots emigrated to Britain. This phenomenon was due to the abolition of the affidavit system by the Cypriot Government in 1960, which opened the way to those Cypriots wishing to emigrate to Britain to do it freely like the citizens of other Commonwealth countries and, further, according to George and Millerson (1967), to the fact that Cypriots realised that liberty was not necessarily related with economic prosperity.

The Commonwealth Immigration Act passed in 1962 coupled with a real drop in employment opportunities in Britain brought a drastic curb in emigration from Cyprus.

By 1971 it was nearly brought to a halt, although some sources suggest that a substantial number of Cypriots managed to bypass the legislation by entering as students or visitors and subsequently settling in Britain.

2.2.3 Post-1974 emigration:

As already mentioned the emigration from Cyprus to Britain was virtually closed in the early 1970s. In 1974, however, due to the Turkish invasion of Cyprus which resulted in the occupation of 40% of the island and the displacement of 200,000 of Greek Cypriots from their land, there followed a new wave of emigration to Britain.

Between September 1974 and June 1975 some 12,000 Greek Cypriots came to the United Kingdom as refugees (Loizidou-Papaphotis, 1984). The majority of these wanted to stay and build a new life in Britain as there were no visible prospects for a solution to the Cyprus problem that would permit them to return to their homeland. The majority of them, however, were not recognised as refugees and were subsequently forced to return to Cyprus. Only 2,000-3,000 refugees were allowed to stay and settle in Britain (Taylor, 1988).

With this last substantial group being added to the Greek community the emigration from Cyprus to Britain virtually came to an end. Settlement of Cypriots in Britain in subsequent years to date has been very low restricted to

those obtaining permission to stay and settle in Britain by reasons of marriage to a British citizen.

The previous analysis was an attempt at concentrating on the major historical phases of the migration process from Cyprus to Britain, as it unfolded from the start of this century culminating in the establishment of a cohesive, affluent and well-organised community. Oakley (1979) in a comprehensive analysis identifies two basic processes that operated jointly during the formative years of the development of the Greek Cypriot community in Britain. The one was a social process (which is nearly common to all emigration movements) whereby migration was regulated by family, kinship, and patronage ties.

The other was an administratively instituted process (the affidavit system of support) regulating emigration from Cyprus and accentuating (enforcing) the first process.

The joint operation of these two processes did affect the whole configuration of the Greek Cypriot ethnic community. Such defining characteristics of this community as the high concentration in a certain area of London, the employment patterns prevalent among its members, their relative affluence, and the high degree of maintenance of the traditional culture and language are worth considering in more detail, as their study is indispensable for an understanding of the Greek Cypriot community and any aspect of its life.

2.3 DISTINCTIVE CHARACTERISTICS OF THE GREEK CYPRIOT COMMUNITY IN LONDON

There follows a brief description of these elements that contribute to the definition and distinctiveness of this community.

2.3.1 High Concentration and mobility:

As shown in Table 2.1 the Greek Cypriot community has been throughout its development highly concentrated in certain areas of London.

1931 %	1951 %	1961 %	1971 %	1981 %
70	66	80-83	70-75	70

Table 2.1
Percentage of Greek Cypriot immigrants living in Greater London from 1931 to 1981
(Sources:George and Millerson, 1967; G.B. P. H of C, 1985; Krokou, 1985; Taylor, 1988).

George and Millerson (1967) regard the estimated 83 percent concentration of Greek Cypriots in the Greater London area in 1961 as the highest among all immigrant groups. Furthermore, Oakley (1970) considers this concentration in a single urban area as " *the highest for any ethnic minority in a modern industrial society* ".

Apart from this concentration in the capital, there is a sub-concentration in certain areas of London, which is of importance for the community itself, making it more visible and more compact.

This concentration, however, is not the result of an

absence of mobility on the part of Greek Cypriots. To the contrary, Greek Cypriots have shown a substantial outward movement (from the centre of London). This movement has established successive places of high concentration.

Thus during the first emigration in the early decades of this century Greek Cypriots were concentrated in the area in and around the West End of London.

They lived mainly in lodging-houses sharing rooms with other immigrants near the restaurants and hotels where they were employed. Gradually, and as more families were reunited and immigrants brought their wives and children in Britain, there arose the need for better accommodation and more family privacy.

This brought about a movement northwards to the Camden area, where more suitable, cheaper and close to the place of their employment housing accommodation could be found. George and Millerson (1967) estimate that in 1931 around 34.5 percent of Greek Cypriots lived in the Camden area (out of an estimated total of 78.1 percent living in London) and 17 percent in Holborn and 11.7 percent in Westminster.

By 1951 the high concentration of Greek Cypriots in Camden remains, but with a lower estimated 31 percent. During this period the area of Islington, which is situated northwards immediately after Camden shows a significant concentration (14.8 percent).

By 1961, with the highest influx of immigrants starting to pour into Britain, Islington takes over Camden as the

area of the highest Greek Cypriot concentration (34.7 percent), Camden with 15.6 percent, and a limited number of Cypriots in the West End area (George and Millerson, 1967). The 1971 Census figures show that the movement of Cypriots to the northern areas of London carried on. The borough of Haringey became the area with the highest concentration (about 16.3 percent) with Islington 10 percent, Enfield 5.5 percent, and Camden 3.9 percent.

The latest 1981 Census showed a further outward movement of Cypriots. Haringey continued to hold the greater proportion of the Cypriot community, but to a lower degree (13.8 percent), with Enfield rising to 11 percent, and Camden once considered the heart of the Cypriot community now hosting just about 2.2 percent of the total number of Cyprus-born population living in England.

Today it is estimated that Enfield has taken over Haringey as the borough with the highest concentration of Greek Cypriots.

Although official figures are not available, areas such as Palmers Green have substantially high concentrations of Greek Cypriots as it is at least revealed by the numbers of pupils attending Greek evening classes.

The outward movement of Greek Cypriots continues and the areas of Southgate, East Barnet and further ahead Potters Bar and other northern outskirts of London attract a large number of Greek Cypriots.

In general, it can be said that the Greek Cypriot community has shown a pattern of successive concentration

in areas laid northwards from the centre of London. A pattern of "collective" movement, whereby the community moving as a whole (GB. P. H of C., 1985) recreated its previous concentration to a new area. This outward movement has been taken as evidence of the prosperity and affluence of the community, as houses in the new areas are more expensive to buy. The quest for better education for their children and a social force to keep abreast of the other fellow immigrants have been suggested as further reasons urging the Greek Cypriots to move.

2.3.2 A prosperous and self-sufficient community:

The involvement of Greek Cypriots in the service sector of the economy (catering, hairdressing etc.) and more recently in the dress-manufacturing industry and to a limited extent in the housing business has brought prosperity to the community. Oakley (1970) characterises these economic activities by which Cypriots offer goods and services outside their community meeting the needs of an wider public as the "external economy". He distinguishes it from the "internal economy" that subsumes all economic activities that have been developed in order to meet and cater for the needs of the community itself. A wide array of jobs specifically addressing the needs of the Greek Cypriot community have appeared. Mechanics, electricians, builders, plumbers, bakers and confectioners, butchers, booksellers, travel agents, accountants, solicitors,

doctors, estate agents, photographers and many others are employed in sectors that cater for the needs of the community for goods and services. The width of the services provided makes it possible for many Cypriots to meet their needs without leaving the bounds of their community (Oakley, 1970).

A great number of Greek Cypriots have created thriving businesses in this respect. Their viability is insured by the operation of a variety of factors such as the high concentration of the community, the preference of Greek Cypriots for Greek products and food (many green groceries and other shops have been opened in the areas of high concentration, the majority of them importing Cypriot fruits and vegetables, traditional dairy products, wine and other products), their insistence to continue observing traditional ways and customs in diaspora, and their strong feelings and preference for co-operating and transacting with members of their own ethnic community.

2.3.3 A tight and well-organized community:

The characteristics of the Greek Cypriot community described so far and especially its high concentration in conjunction with the operation of other factors have contributed towards rendering the community tight, compact and well-organised.

As has already been mentioned, a great number of Greek Cypriots are employed in areas oriented towards meeting the various needs of their community. Their employment brings

them to a high degree of contact and interaction with fellow countrymen and to a limited interaction with members of the other ethnic communities as well as the host community.

A pronounced example is provided by Greek Cypriot women who are employed in the dress-manufacturing industry (95.1 percent in 1952 and 85.2 percent in 1958). Although a substantial number of them do piecework at home, a great number are working in the dress-making factories. Working in these factories are in continuous interaction with other Greek Cypriots. They learn about and discuss the news of the community and the metropolis; they listen to the Greek community radio, which broadcasts news, entertainment programs and Greek music. Contrasted with this "static" everyday interaction (static in the sense that it involves nearly always the same individuals) is the interaction that takes place in the ethnic shops, butcheries, bakeries, where a more varied sample of Greek Cypriots is involved.

The type of interaction so far described which is more a concomitant of the internal economic system that runs through the community, is supplemented and strengthened by other types of contacts initiated through institutions of cultural, religious, educational, and other nature.

2.3.3a The Greek Orthodox Church

The Greek Orthodox Church in Great Britain is a thriving and wealthy institution that has influenced the development of the Greek Cypriot community in many ways. A substantial

number of churches cater for the religious needs of the community. The role of the Church as an important agent in the maintenance of Othodox Christian faith and Greek identity is widely recognized and well documented. In this respect mention should be made of the high esteem that the Greek people have for their Church. This esteem has been nurtured through a long process, and as the Church has played the major role in the maintenance of Greek identity during the four centuries of turkish occupation (15th to 19th century A.D.).

A related and equally important contribution of the Church in diaspora is in facilitating contact and interaction among the members of the Greek Cypriot community.

From every Sunday worship to the major Greek Orthodox religious celebrations, from christenings to marriages, from funerals to commemoration services, the role of the Church in faciliting contact and interaction among Greek Cypriots and, further, in maintaining the compactness of the community is enormous.

2.3.3b The Greek Supplementary School

Ethnic schools, the community institutions that are the central focus of the present study and which are described in detail in subsequent chapters, play a large part in facilitating contact among members of the Greek Cypriot community. They are places of regular contact not only of the younger generations of Greeks but also of their

parents. This social aspect of the contribution of the Greek school to the community may, in certain cases, overshadow the educational aspect.

Parents meet not only during the hours of the operation of the school, but also during the functions organised by the school committees (such as dinner and dances, discos, excursions, cheese and wine parties) and the staff and the pupils of the schools (religious, national and other celebrations, football matches, parents-teacher meetings etc.).

They can also get more involved by serving in the Committee that runs the school and having regular meetings with other parents in order to promote the causes of the school or solve problems that frequently arise.

2.3.3c Village associations

The great majority of Greek Cypriots are members of associations that cluster together people (and their descendants) who come from the same village or district of Cyprus. The aims of these associations is mainly to bring together people from a given village who emigrated to Britain, and renew the ties of friendship and solidarity that existed there. They organise annual dinner and dances, group trips and outings as well as other forms of meetings; they also contribute to monetary funds to help the village, from where they come, for example to repair the church or the school, help poor fellow-villagers etc.

Of particular importance are associations that bring

together people coming from village, towns or districts of Cyprus occupied by the Turkish troops after the invasion of Cyprus in July, 1974.

An emotional tendency is discerned in the effort recreate the ties of friendship, solidarity and sense of belongingness that existed in the village before the turkish invasion in the new land that accepted them with hospitality.

2.3.3d Political associations

George and Millerson (1967) mention that the political life and organisation of Greek Cypriots in Britain does reflect that of the metropolis. The political parties of Cyprus were being recreated in Britain and there is the same clash of opinion distinguishing the extreme left from the right. Political leaders of Cyprus make frequent visits to London and deliver speeches explaining their policies and their stance as to procedures, tactics and principles for solving the Cyprus problem, for which the Greek Cypriot community in Britain in its totality has a strong interest.

Political parties are considered as branches of the parties operating in Cyprus, have registered members and organise regular dinner and dances, lectures and other functions. Nearly all of them are represented in the Cypriot Brotherhood, a federation encompassing the majority of organizations and associations existing in the Greek Cypriot Community.

2.3.4 A community with a high degree of ethnic identity and language maintenance

The characteristics of the Greek Cypriot community described so far i.e. high concentration, prosperity, self-sufficiency and organisation coupled with strong positive attitudes on the part of Greek Cypriots towards their ethnic origins and language have resulted in the maintenance of the ethnic language and identity.

The whole configuration of the Greek Cypriot community, keeps in a way its members less exposed to the forces of assimilation (Loizidou-Papahotis, 1984) and more exposed to those forces facilitating the preservation of identity and language. In this respect the significant role of the family should be mentioned.

The Greek family is the basal institution that to a considerable degree affects the effectiveness of the institutions described thus far. Inside the Greek family there exist strong ties among its members. These ties are preserved even after a member of the family forms a new family.

The father is considered the leader of the family and is responsible of carrying out the external affairs of the family and the main earner of the money necessary for its maintenance. The mother's role has traditionally been to look after the household and the children.

Parents aim and consciously work towards instilling to their children traditional values such as respect, morality, good citizenship etc., expecting a high degree of

loyalty from them.

Children are expected to show loyalty and observe the rules set out in the family. Good behaviour and high educational achievement are the two main characteristics that are rooted in successful upbringing and family influence.

Summarizing, the present chapter has traced the development of the Greek Cypriot community in London and described the factors that make up its distinctiveness and uniqueness.

Having drawn a psychological profile of the community it is now necessary to focus on the history and role of the Greek ethnic schools themselves. Basic information necessary to the understanding of this role is also included, e.g. learning activities, teaching materials used, administration, accommodation, and information on teachers teaching in these schools.

CHAPTER III

THE GREEK SUPPLEMENTARY SCHOOL IN GREAT BRITAIN

3.1 HISTORICAL PERSPECTIVE

According to sources referred to by Christodoulides (1967) the establishment of Greek Supplementary schools (from now on referred to as GS schools) can be traced back as early as 1869 in Manchester. The first GS school established there was run by two teachers from mainland Greece, who came to Britain specifically for this purpose, i.e. to teach the Greek language and culture to children of Greek immigrants who had settled there. The number of pupils attending this school remained low throughout its whole life which lasted for only seven years until 1877, when it was eventually closed.

After its closure, the Orthodox church of Manchester, which was established in 1847, assumed the task of preserving the Greek language and transmitting the Greek culture with the priests taking up the role of teachers.

The church has been traditionally linked with the establishment of GS schools. It is under its auspices that the first pre-war school were operating. Nowadays nearly each Orthodox church has its own school (Greek Orthodox Archdiocese of Thyateira and Great Britain, 1990; Taylor, 1988).

Outside London nearly all mother-tongue classes are run by the community church. The role of the Orthodox Church in providing for the maintenance of the Greek language and culture in Great Britain was always a pioneering one. In

this respect it reminds one of the years of Ottoman occupation of Greece (which lasted from the second half of the 15th century A.D. to 1830 A.D, when Greece gained its independence), when the Orthodox Church and its priests assumed the task of educating the youth of Greece. During the long period of occupation schools were not permitted to operate and the Greek youth attended the so called "secret schools", which were functioning inside the churches under the cover of the night. There, the teacher-priest offered them training in elementary reading and writing and helped them preserve their ethnic and religious identity through nearly four centuries of Turkish occupation. In diaspora the church has undertaken a similar role, but now fighting against the forces of assimilation to preserve the language and identity of the children of Greek immigrants.

In London the first Greek classes started in 1922 as the product of the initiative of the Archimandrite Hilarion Vasdekas, who was then serving as priest in the Cathedral of St. Sophia in Moscow road, in Bayswater, which is considered as the heartland of the small but affluent Greek community in London. The basement of this Cathedral hosted the Greek school for 18 years, since 1940, when it was moved to the premises of the Cypriot Brotherhood, to be moved again to the new Orthodox Church of All Saints in Kentish Town in 1949, where it continued its operation ever since.

The first GS school to be established out of the initiative of sources not related to the Orthodox Church

was the Greek School of London. It was established in 1952 by a group led by a Greek Cypriot poet and teacher, Tefkros Anthias, in Camden Town, which was at the time the heartland of the Greek Cypriot community in London. It drew its pupils from the surrounding areas and a school bus was used to get students from remote areas. The Greek School of London was subsequently reorganised and renamed to Greek Parents Association (GPA), which nowadays is one of the major and best-organized educational authorities that provide for mother-tongue teaching to children of Greek Cypriots immigrants.

Christodoulides (1967) draws attention to the phenomenon of increased national feelings among the Greek immigrants which accompanied major ethnic and political developments in the metropolis (either Greece or Cyprus) and which led to increased interest in ethnic supplementary schools (and awareness of their importance) and the stirring up of new initiatives towards their expansion. Thus in 1924 following an unsuccessful Greek expedition in Asia Minor in 1922 which resulted in the death and uprooting of millions of Greeks from their homeland in Turkey (which is regarded by Greeks as one of the worst ethnic tragedies in the history of Greece) an association was formed in London under the name "Ellinikos Philekpedeftikos Syllogos en Anglia" (Greek Phileducational Association in England) with the aim of establishing a complete Greek School in London. The whole effort was, however, unfruitful because it didn't receive the backing of those Greek immigrants that were well off

and capable of supporting it. A similar attempt in 1946-1947, resulting from heightened ethnic feelings following the liberation of Greece from Germans, had the same luck.

The establishment of more GS schools did come about in the 1950s, a period of high national sentiments witnessing the struggle for the independence of Cyprus from the British empire.

The intercommunal conflict which followed the independence of Cyprus in 1959 aroused a new surge of establishing Greek classes, a phenomenon which peaked after 1974, the year of the invasion of Cyprus by Turkey, the occupation of nearly 40 per cent of its land and the displacement of 1/3 of the Greek population of the island, a substantial proportion of which came and settled in Great Britain.

YEAR	NUMBER OF SCHOOLS
1954	2
1959	8
1963	12
1965	23
1966	33
1970	45
1977	55
1978	59
1981	67
1984	72
1988	70
1989	70
1990	70

Table 3.1[1]
Number of Greek Schools functioning in the London area

Tables 3.1 and 3.2 present information on the number of GS schools operating in the London area from 1954 onwards

and pupils attending them. As can be seen the number of these schools peaked in 1984, whereas the number of pupils continues to increase substantially each year.

YEAR	NUMBER OF PUPILS
1967	1047
1970	1056
1977	854
1978	1867
1979-80	2463
1980-81	2662
1981-82	2756
1982-83	2867
1983-84	not available
1984-85	2915
1985-86	2983
1986-87	3011
1987-88	3220
1988-89	3256 (3611)
1989-90	3395 (3206)
1990-91	3734 (3229)

Table 3.2[1]
Number of pupils attending GS schools functioning in London
(in parentheses the numbers are for schools under the control of K.E.S.)

3.2 THE CURRICULUM OF THE GS SCHOOL

3.2.1 The Role of the GS School (As envisaged by the planners and organizers of the institution)

At the more general level of conceptualisation the role of the GS School is to help, in conjunction with other community institutions, in the survival of the Greek Cypriot community. The preservation of the ethnic language, identity and culture is not so much at threat as far as the first generation of immigrants is concerned, as they are more likely to resist succumbing to the forces of

assimilation. What is at stake is the continuation and preservation of the community and its distinctive character in the second and subsequent generations of immigrants.

Aristodemou (1982) and Christodoulides (1967;1970) point to the centrality of the GS school as the institution that has the potential of achieving this aim.

The first, acting as the Head of the Cyprus Educational Mission which was dispatched in London by the Government of Cyprus and was delegated with the task of organising the Community schools that functioned independently of church, does reveal that it was this superordinate aim of the GS school which was the basis on which K.E.A. (Cyprus Educational Mission) built its programme of action in the first years of its functioning (Aristodemou, 1981).

Aristodemou (1982) considers as the quintessence of the role of GS School not the teaching of the mother tongue and of elements of Greek culture but the involvement and activation of as many members of the community as possible. This activation will come about as a response towards meeting the commonly felt need for preserving and passing on to the Greek language and Greek cultural values to the new generations.

The involvement of parents and other interested members of the community both in the establishment and the functioning of the GS Schools will convert them into

" *living centres of contact, communication and problem*

sharing of the members of the Greek Community "

(Aristodemou, 1980).

This co-operation in working towards a meaningful and personally relevant end will strengthen the ties between the members of the Greek community and foster a sense of belongingness.

According to Ioannides (1985) the GS School is "*the nucleus around which the Greek community is concentrated, asserts its uniqueness, organised, renewed and developed into a living part of the Greek nation* ".

This superordinate aim of the GS School does accentuate the social aspect of its role and imposes changes in its curricular priorities. Thus school activities that promote and effect the involvement of parents and other members of the community are given special priority, such as the organisation of Christmas, Easter and national celebrations, school excursions, school visits, football matches, athletic and other activities, etc..

It is this conception of the role of the GS School that, according to Aristodemou (1981), was the basis on which the Cyprus Educational Mission built its programme of action in the first years of its functioning.

In conjunction with its social role thus far described, the GS School has the following aims addressed towards the younger generation of Greek Cypriots. In this respect, it aims:

a) To teach the Greek language or, better, to

cultivate and expand the mother tongue skills that the children have acquired at home or through contact with relatives, friends and other Greek speaking people

b) To bring children into contact with the basic elements of Greek tradition, culture and Greek Orthodox religion, instilling in them pride for their Greek descent, maintaining and strengthening their Greek identity

c) To bring children into closer acquaintance with the metropolis with the systematic teaching of basic elements of the history and geography of Cyprus and Greece.

There is a consensus of agreement on these aims by all groups which are involved in the Greek supplementary education, i.e. K.E.S., O.E.S.E.K.A. and the Independent Parents' Association as well as the governments of Cyprus and Greece, which show a keen interest in the promotion of Greek education in Great Britain.

There are, however, some differences in the degree to which certain aims are given priority over others. For example, the church and its educational authority (K.E.S.) overemphasise that part of the second aim which relates to the religious education of the younger generation. Notwithstanding these differences, all educational authorities are in agreement as to the quality of the final product of Greek supplementary education.

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Thus, it is expected that the younger generation of immigrants (and the most susceptible to succumb to the forces of assimilation in the dominant culture) when exposed to the influence of the GS School (as well as that of other identity supporting institutions of the Greek community) should:

- have a knowledge of the Greek language sufficient enough to enable them communicate with their parents, friends, relatives and other members of the community and generally to function efficiently in a Greek-speaking environment

- have a sufficient knowledge (and positive acceptance) and take pride in their culture, ethnic roots and religious affiliation

- acquire a sentimental attachment with and keen interest coupled with adequate knowledge of the history and geography of the country of their origin.

Care, however, should be exercised so that the GS School in its effort to stress the ethnic roots of the younger generation of Greek Cypriot immigrants not to be construed as separatist and chauvinistic in its pursuits.

Taking into account the social milieu in which the target pupils are going to function in the future, i.e. the English society, the Greek school should help the younger generation of Greek Cypriots

" to keep the most valuable elements of their cultural identity and at the same time to integrate into the

wider environment and become lawful and useful citizens " (Loizidou-Papahotis, 1984).

Christodoulides (1967) in a thorough report on the problem of the Greek Community of Great Britain prepared for the Government of Cyprus suggests that the GS School cultivate systematically the following way of thinking in its pupils:

" *I am a Greek immigrant (or the descendant of Greek immigrants), happy and satisfied for my descent and I would like to maintain my ties with the ethnic-religious group of my parents, but I am settled in another country, which offers me accommodation, education and recreation and whose laws I respect and whose basic values (at least those that do not oppose my basic beliefs as an intelligent, moral and religious being) I accept* ".

3.2.2 Learning Activities

Although there is no common curriculum adhered to by all schools, in general terms there is a consensus as to the main priorities that should guide the work of each individual school.

According to the draft plan of the Curriculum of the GS School prepared by K.E.A. (1986) although the major focus is on teaching the language, an important aim of the GS School is to bring children into contact and living experience with elements of Greek culture through singing,

dancing, learning about the history and geography of the country of their origin and involvement of children in the various school activities organised throughout the school year.

In this respect the time devoted to these activities reflects these priorities. Thus about 40 percent of the time of the GS School is devoted to the teaching of the Greek language, 20 percent to social studies (history, geography of Cyprus and Greece, elements of the Christian Orthodox religion) and the remaining 40 percent to music, dance and other educational activities.

Teaching about the religion concentrates mainly on the major aspects of the Christian Orthodox religion, religious festivals and traditions and is given more priority in church schools.

3.2.3 Grades

Children attending GS School progress through a series of grades. Aristodemou (1979) distinguishes among 5^2 such grades. A through C are grades that take 6 years of normal GS School attendance (usually about 36 lessons per year when the school is functioning once a week or about 72 lessons when it functions twice a week) to progress through. Students can stay further in the GS school in order to start preparing for the G.C.S.E. examination (formerly G.C.E. O'level) in Modern Greek, which is normally a two-year course of study and, further, for the G.C.E. A'level examination in Modern Greek, which requires

a minimum of two years of study. A'level students come to contact with representative pieces of Greek literature, poetry or prose. A high proportion of students who sit the London and East Anglian Group examinations in Modern Greek O'and A'level, though registering through their secondary schools or colleges, are in fact taught and prepared through Greek supplementary schools (Taylor, 1989; Loizidou-Papaphotis, 1984).

3.2.4 Teaching Materials

One of the major problems that GS schools are facing is the lack of suitable textbooks and other teaching materials.

As a response to the need for appropriate textbooks, teachers have resorted to the following solutions:

a) Use of textbooks published by O.E.D.B. (Organisation for Publishing Educational Books), the agency appointed by the Greek government with the task of preparing books for use in the schools of Greece. These books (we are referring specifically to reading books) are addressing specifically the language needs of Greek schoolchildren living in mainland Greece. They take into account their life, interests, vocabulary, knowledge and everyday experiences. Besides Greece, these books are supplied to Cyprus for use in Greek elementary schools in the island. According to the Council of Greek Cypriot Inspectors of Elementary Schools, the new series of books

(published in 1985) are saturated by the new spirit of treating the language as an organised whole by addressing and promoting all language abilities in an integrated manner. The Greek Government dispatches these books to all interested educational authorities in Great Britain free of charge.

GS schools under the control of the church, where the majority of the teachers of the Greek Mission are employed, are relying on these books, using them in a consistent manner (as is the case in schools in mainland Greece).

There is a pressing need, however, for making alterations in the texts of these books (vocabulary, complex and difficult sentences) in order to render them suitable for and usable by Greek School pupils. Members of K.E.A., using specific criteria and their experience in teaching in these schools, have examined systematically these books with the purpose of identifying the texts included in these books that can be used in GS schools. They have produced lists of such texts which were later circulated to interested teachers. They have also made alterations to certain texts and included them in the reading books they have prepared for the six grades of the GS School. These books have been sent to the Ministry of Education in Cyprus awaiting approval and publication.

b)Use of the books " Matheno ti glossa mou " (I learn my language) produced by members of K.E.A. specifically for the GS schools functioning in Great Britain. There are

three such books, corresponding to the three levels of language competence represented by grades A to C of the Greek School (Aristodemou, 1979). Though these books have certain advantages (use of more simple vocabulary, text content that takes into account the environment and interests of children of Greek/Greek Cypriot immigrants) they have some drawbacks (overemphasis on simplicity bringing about uninteresting and unnatural texts, monotonous texts etc.). Despite their drawbacks they find a lot of use, especially the first book of the series that teaches first reading.

c)Use of additional reading material prepared by teachers-members K.E.A. and other teachers. This material has been produced in order to satisfy the need for teaching elements of the Greek culture and Orthodox religion, especially material relating to national celebrations of Greece and Cyprus (28th of October, 25th of March, 1st of April) or to religious celebrations (Christmas, Epiphany, Easter).

Mention should be made also of the reading books (and other reading material) that have been produced by the Greek Development Group consisting of 12 teachers as part of the Mother Tongue Project. These, however, were not used extensively in GS schools.

3.3 ADMINISTRATION OF GS SCHOOLS

The usual practice is for each GS school to have its own Parents Committee. This Committee among its main duties

has the responsibility of collecting fees, providing assistance to teachers in organising school festivals, recruiting new pupils and organising school excursions and dinner and dances (usually on an annual basis) for financial support of the school.

Each GS school carries its weekly operation as an independent institution. Administratively, however, groups of GS schools function as parts of a network of schools which is organised by an educational authority.

There exist three different educational authorities in the Greek community. K.E.S. is the authority organising the schools attached to the church, O.E.S.E.K.A. and the Independent Parents' Association.

The formation of these educational agencies that function over and beyond the parents' committees which administer individual schools has played an important role in the spreading of GS schools throughout London and in the major towns of Great Britain. In their statutes (K.E.S., 1967; O.E.S.E.K.A., 1978) these authorities make provisions for the establishment of new GS schools in areas where a need for such provision is identified. The establishment of such schools would be nearly impossible, should it rested solely on the initiative of parents feeling the need of such provision. More information on these authorities is provided below.

3.3.1 K.E.S.

The Central Educational Council (K.E.S = Kentrikon

Ekpedeftikon Symboulion) was established in 1964 with the following aims:

a) The promotion and protection of Greek Education in Great Britain

b) The preparation of a common curriculum which will help the teachers and the co-ordination of the activities of all GS schools

c) The establishment of a Greek Orthodox day secondary school

d) The training of teaching staff to undertake the task of teaching in the evening classes

e) The supervision and systematic overseeing of the work performed by the Greek evening classes and the provision of books (and other educational materials) to cover their needs.

According to the statute of its establishment K.E.S. is presided over by the Archbishop of Thyateira and Great Britain and the majority of its members are elected by the individual school committees. This second provision, however, was changed in the 2nd Educational Convention of K.E.S. in 1966 so that all members of K.E.S. are appointed by the Archbishop of Thyateira.

K.E.S. is based in the premises of Archdiocese of Thyateira and Great Britain in 5, Craven Hill Road in Paddington. It controls all church schools, which draw the majority of students. In 1990-91 it administered 21 schools in London with a total of 3329 pupils and 35 schools in other towns in Great Britain with a total of 1556 pupils

(Greek Orthodox Archdiocese of Thyateira and Great Britain, 1991).

3.3.2 O.E.S.E.K.A.

O.E.S.E.K.A. (Omospondia Ekpedeftikon Syllogon Ellinon Kyprion Anglias) is the Federation of Educational Associations of Greek Cypriots in Great Britain. It was established in 1971 to act as a co-ordinating body of all Parents associations that are not under the control of K.E.S (not affiliated to church). In 1981 in O.E.S.E.K.A. there were 23 Parents' associations represented with a total of 46 GS schools with 3,150 pupils (Papaphotis-Loizidou, 1984).

The nucleus of O.E.S.E.K.A. is the Greek Parents Association, which was established in 1952 . This association has its premises in 22, Stuart Crescent in Wood Green and 3 full-time employees, the one acting as Co-Ordinator. In 1981 the G.P.A. controlled 21 Greek schools and 9 youth clubs with a total of 1,300 pupils. By 1986 its schools increased to 27 and the number of pupils to 1,500.

Another major association represented in O.E.S.E.K.A. is the North London Cypriots Association. This association in 1986 had under its control 9 GS schools and 1 youth club with a total of 600 students.

3.3.3 Independent Parents' Association

This Association was formed in 1981 by a group of

parents who broke away from the Greek Parents Association. In 1986 this association controlled 4 schools and a youth club with a total of 500 pupils.

Papaphotis-Loizidou (1984) using Parson's model for analyzing the organisation of the whole system of the Greek community education in Great Britain places the functioning of the authorities already described at the public interest level (mainly formulating the educational policies of the schools under their control) the remaining two levels, i.e. the managerial and the technical being exercised by the headmasters and teachers of the GS schools.

In describing, however, the system two other bodies should be given due attention as being directly involved in all three levels of the organisation of GS schools.
These bodies are the Greek educational group (consisting of qualified teachers from Greece who are appointed by the Greek government to work in GS schools in Great Britain) and the K.E.A. (Cyprus Educational Mission) consisting of qualified teachers from Cyprus who are appointed by the government of Cyprus for the same purpose.

The members of the educational group from Greece are fully employed in church schools and in schools functioning under the control of the Independent Parents' Association. Members of K.E.A are employed mainly in schools functioning under the control of O.E.S.E.K.A. and the Independents (although in 1988-89 2 of its members out of a total of 30 were employed in church schools).

3.3.4 The Cyprus Educational Mission (K.E.A.)

K.E.A, ever since its formation in 1969, has conceptualised its role not simply as one of adding a certain number of qualified teachers from Cyprus to the existing teaching force already employed in GS schools. Over and beyond this role, it aimed at influencing both the structure and content of Greek supplementary education in Great Britain. This superordinate role does correspond to that envisaged for K.E.A by the government of Cyprus and the Ministry of Education of Cyprus, which maintain a keen interest on Greek education in Great Britain. The formation and dispatch of K.E.A. in England was the result of both pressures from organised educational groups in Great Britain coupled with the findings of research organised by the government of Cyprus itself (Christodoulides, 1967; Papaxenophontos, 1968). K.E.A. is, thus, the actualization of that interest and desire to assist the existent provision and help raise its quality. It is through the Inspector-Head of K.E.A. and the teachers members of K.E.A. who administer the overwhelming majority of the schools under the control of O.E.S.E.K.A. and the Independents that the Cypriot government tries to put into practice its educational policies.

In this respect K.E.A. as a group is directly under the control of the Ministry of Education of Cyprus, from which it receives the general guidelines of its work. K.E.A. has its own offices in 55, Hereward Gardens, in Palmers Green in London. All the expenses (rent, electricity, heating,

maintenance and equipment) of this Centre are covered by the government of Cyprus. Its existence and functioning are fully geared to the purposes of the Greek Community education. In its premises teachers-members of K.E.A. are frequently gathered in order to discuss various issues related with the Greek supplementary Education, to produce educational materials for use in the GS schools, to evaluate the work done and plan for the future. It is in the credit of K.E.A. that, working as a group, has worked out a preliminary curriculum and a complete series of reading books for children of GS schools.

In the Centre of K.E.A. there exist a department of lending of teaching and other materials (videocassettes, ~~slights~~ slides, maps, pictures etc.), a small library, and facilities of polygraph and photocopying for use by teachers.

As from 1985 an Inspector of Elementary Schools has been appointed as Head of K.E.A. His role is one of co-ordinating the GS schools in which members of K.E.A. are employed (i.e. schools under the control of O.E.S.E.K.A. and the Independents), evaluate the work done, give guidance and help to teachers and generally promote the cause of the Greek Education in Great Britain. For this purpose he pays regular visits to GS schools and offers his help and guidance to the teaching staff and to parents. Furthermore, he organises educational seminars specifically geared to the needs of the unqualified personnel of the Greek Schools in order to improve the quality of the

education they offer.

The potential of K.E.A. as well as the group of teachers appointed by the Greek Ministry of Education for influencing the Greek Community Education in substantial ways are enormous. Their advantage over the other groups so far described (K.E.S, O.E.S.E.K.A and the Independents) as well as the Organisation of Greek Teachers in England (O.E.D.A), who work as part-timers in the GS schools, lies in the fact that these two professional bodies have been appointed solely for the purpose of promoting Greek Community Education. Their professional time is devoted to this purpose and they are accountable to their respective Ministries, their work being regularly evaluated by their inspectors.

Aristodemou (1982), commenting on the 5th anniversary of K.E.A., summed up the elements of the beneficial influence of this group on Greek community education as follows:

K.E.A. helped in broadening the aims of the existent provision which was oriented towards teaching the Greek language to children of Greek origin. It promoted the conception that the GS School is the main agent that could potentially insure the survival and continuation of the Greek community in Great Britain by involving as many members of the community (parents, friends of the GS school etc.) working together towards a common aim.

Furthermore, according to Aristodemou (1982), K.E.A. enriched the curriculum of the GS School by introducing

Greek music and dance teaching, which had a beneficial effect on children's motivation. The same beneficial effects were achieved through the organisation of the mother tongue into levels of studies leading to O'and A' Level (Modern Greek) examinations. This saturated the study of the Greek language with meaning, at least for those aspiring for higher education, to whom obtaining an O'or A' level in Modern Greek would be a useful qualification.

3.4 ACCOMMODATION OF GREEK SCHOOLS

The majority of church schools are accommodated in auxiliary rooms attached to the church building. Some church buildings are used as classrooms (Christodoulides, 1967).

A few church schools and all the schools under the control of O.E.S.E.K.A. and the Independents' Association are accommodated in classes of mainstream English schools. Theses classes are either rented or given for use freely by the local educational authorities. Teachers, headteachers, and sometimes caretakers of the mainstream schools impose severe restrictions on the use that GS school teachers could make of these classes. The usual case is for pupils to be allowed only to use the desks and chairs and the GS School teacher to use the blackboard for writing (There have been complaints, however, that even this elementary facility, i.e. use of the blackboard, which is absolutely essential for the carrying out of the lesson, is in certain

cases prohibited).

These are a far outcry from the ideal conditions that should prevail and which would facilitate the promotion of the aims of the GS School:

The whole area of the classroom should be at the disposal of teachers and pupils. On the noticeboards and walls they should have the freedom to exhibit their creative and other work.

Teachers and pupils should be able to use decoration which will contribute towards the achievement of the long and short-term aims and purposes of the GS School.

Christodoulides (1967) identifies some problems relating to the use of the church building to accommodate classrooms of the GS School. He points out that what is going on inside these classrooms runs contrary to the basic aims of the GS School, that is the reinforcement of the religious feeling of pupils and the respect for the church as a sacred place. Children in the context of the classroom shout, run, laugh, sing and generally do things that are incompatible with the sacredness of the church.

Christodoulides (1967) describes succinctly the conditions prevalent in GS Schools in the late 1960s, conditions which have not changed a lot since.

> *"There (in the GS School), under conditions more or less unfavourable than in the mainstream school (unsuitable, badly ventilated and heated classrooms, unsuitable chairs, lack of teaching materials, sometimes even of the blackboard itself) and with*

'teachers' less capable (with only a very few exceptions), the child is compelled to try for 1 1/2 - 2 hours to learn to read and write the language of his parents, or as is more the case, to wait impatiently for the time to pass to return home ".

All interested parties agree that the ultimate solution to these problems would be the accommodation of GS schools in their own buildings, or at least the buying of suitable buildings in certain localities to host different neighbouring GS schools functioning at different times. These buildings, besides being used to accommodate GS schools could also be used as day nurseries for children of Greek origin, or day Greek schools, and cultural centres of the Greek community (Christodoulides,1967; 1970; Ioannides, 1985; 1987).

The fact, however, that the area of London has been recently witnessing a steep increase in property prices has rendered this solution a remote dream, as the economic burden of buying a school building totalling millions of pounds, is in reality outside the possibilities of the educational authorities of the Greek community.

3.5 TIMES AND DAYS OF OPERATION

GS schools function once or twice a week. The majority of them function on Saturdays from 10 a.m. to 1 p.m. or from 2 p.m. to 5 or 5.30 p.m.. The rest function during the week from Monday to Friday usually from 6 p.m. to 8.30 or 9 p.m..

The above hours and days of functioning are chosen as a matter of convenience as children of Greek origin (and prospective pupils of the GS schools) attend their mainstream English schools during weekday mornings and afternoons.

The fact that pupils attend GS School after a long and tiring day in their mainstream English school (for those attending on weekdays) sacrificing valuable time that could be devoted either to activities related to their hobbies and interests, or to the completion of their English homework does add to the adverse conditions that negatively affect their motivation.

The following table (Table 3.3) compares the number of pupils attending schools functioning on weekday evenings and those functioning on Saturdays. It clearly shows that there is a growing preference for Saturday (evidenced by the increasing number of pupils attending GS School on that day).

YEAR	SATURDAY		WEEKDAY	
	Number/Percentage		Number/Percentage	
1979/80	1234	50.08	1230	49.92
1980/81	1363	51.02	1299	48.98
1981/82	1480	53.70	1276	46.30
1982/83	1515	54	1292	46
1984/85	1648	55.25	1267	44.75
1985/86	1739	58.30	1244	41.70
1986/87	1749	58.09	1262	41.91
1987/88	1976	61.37	1244	38.63
1988/89	2069	63.54	1187	36.46

Table 3.3
Percentage of pupils attending GS School on Saturday as compared to those attending on weekday evenings
(School under the control of K.E.S are not included)

3.6 TEACHERS OF THE GS SCHOOL

Teachers employed in the GS schools can be categorised as follows:

a.Qualified teachers appointed by the government of Greece and Cyprus for a 5-year period to teach in the GS schools. These teachers are specifically trained for and have adequate experience in Elementary (and a very few in Secondary) schools in Cyprus or Greece. They usually have a good command of the English language, although they have no training specifically geared to the teaching in GS schools.

b.Qualified teachers having their residence in Great Britain and usually employed in mainstream English schools.

c.Semi-qualified teachers who teach in colleges and other higher institutions in Great Britain. Although they are qualified in teaching certain subjects at these institutions, they lack qualifications related to teaching the Greek language and the other subjects of the GS School curriculum.

d. Unqualified undergraduate students, university graduates, or graduates of Greek secondary schools in Cyprus or Greece, without any prior teacher training or teaching experience. The majority of priests that teach in church schools belong to this category.

In the first stages of the development of the community mother-tongue provision the teaching force consisted mainly

from priests assisted by qualified teachers settled in Britain (George and Millerson, 1967). Community schools outside the control of the church were also staffed by qualified Greek teachers living in Britain. As the provision was, however, spreading and the number of schools and pupils were increasing there arose a need for more teachers. In order to satisfy this pressing need enough unqualified teachers were recruited and at the same time the educational authorities of the community requested assistance from the governments of Greece and Cyprus.

In 1969 a group of four teachers and an inspector of elementary schools were dispatched in London. In 1977 a second group consisting of six teachers and an inspector arrived in London.

This group was increased in 1978 to 14 and in 1985 to 24 with an inspector acting as Head and Co-ordinator of the group. By 1988 K.E.A. (Cyprus Educational Mission) totalled 30 teachers.

According to Christodoulides, in 1967 the number of qualified teachers employed in the GS schools in Great Britain was 37 (representing 39 percent of the total) and in 1970 48 (40 percent of the total). The corresponding number of unqualified teachers serving in the GS schools was in 1967 57 (60 percent of the total) and in 1970 72 (60 percent of the total). As there is, however, difference in the amount of time these two categories of teachers are employed in the schools (more preference given to qualified teachers, the unqualified ones being hired when the

committee of the school cannot ensure the services of qualified teachers), the following table (Table 3.4) is more revealing giving a better picture of the dimensions

YEAR	QUALIFIED TEACHERS		UNQUALIFIED TEACHERS		TOTAL
	Hours	%	Hours	%	Hours
1979-80	289	70	124	30	413
1980-81	386.5	65.45	204	34.55	590.5
1982-83	444	65	246	35	690
1986-87	577	62.07	352.5	37.93	929.5
1987-88	614.5	62.04	376	37.96	990.5
1988-89	814.5	65.23	434	34.76	1248.5

Table 3.4

Weekly teaching time offered by qualified and unqualified teachers serving in the GS schools
(Figures refer to all Greek schools excluding those under the control of K.E.S)

of the problem, by comparing the amount of teaching time offered by qualified and unqualified teachers. It can be seen that the teaching time delivered by qualified teachers is twice that delivered by their unqualified counterparts.

The fact that a substantial percentage of teachers teaching in GS schools are unqualified does create a set of specific problems. Such problems are their inability to deal in an efficient way to problems of discipline that usually arise in Greek classes, lack of training and experience in transforming goals into classroom tasks and generally ability of managing and promoting the aims of the curriculum of the GS School.

As the above problems do affect seriously the long term aims of the GS School, a series of measures have been

proposed (Christodoulides, 1967, 1970; Papaxenophontos, 1978; Ioannides, 1988) such as setting objective criteria of selecting the teaching staff and a programme aiming at their gradual training and preparation.

Summarizing, chapter III traced the historical development of the GS School, the role it assumed throughout its existence, and the aims and ambitions of its planners. Further, it described the actual practices and administration of these schools and the qualities of teachers employed there. The chapter provides vital background information for understanding the nature of the schools and at the same time underlines the need for a psychological analysis of how they work in contributing to the community and the individual child. There is also a need for more detailed information on the motivational and attitudinal forces which help, among other agents, maintain these schools in existence. Finally there is need for information about the likely future pattern of existence of the GS schools.

Notes

[1] Information included in this Table was obtained from the Offices of the Cyprus Educational Mission and the Official Yearbooks of the Greek Orthodox Archdiocese of Thyateira and Great Britain (1989; 1990; 1991).

[2] K.E.A. more recently (1986) has adopted, at least for the schools that are under its influence, a different classification of the grades. Thus, the first three stages were extended to six (A through to F) to correspond to the six years of school attendance.

CHAPTER IV

THE FUTURE OF THE GREEK SUPPLEMENTARY SCHOOL

4.1 INTRODUCTION

The maintenance and expansion of Greek supplementary education in Great Britain has always been the concern of Greek parents, the Greek Orthodox Church of Great Britain, the governments of Greece and Cyprus, community leaders and other interested organizations.

An examination of their supportive function, which is described in more detail in earlier chapters, points to the great efforts and pains they are getting into for the purpose of achieving their aim which they consider as a holy mission. GS schools have been looked upon as the main agents that could bring about the continuity of the Greek Cypriot community in Great Britain over and beyond the first generation of immigrants. These schools, by transmitting the parental culture, religion, and language, are seen as the main impediments counteracting the forces of assimilation by helping the younger generations to retain and ascertain their Greek identity. In this respect they contribute towards keeping alive in the younger generation a consciousness of belonging to a Greek-speaking ethnic group (Constantinides, 1977) and bridge the increasing linguistic and cultural gap between the first and second generation of Greek Cypriot immigrants (George & Millerson, 1967).

The above mentioned agencies, however, constitute the

periphery, the external forces that keep the provision running. Right at the centre are its target "customers" i.e. children of Greek origin. Although they are the nucleus of the whole ethnic educational provision, doubts have been raised concerning its meaningfulness to them. This is acutely presented by George and Millerson (1967) when they describe a national celebration by a GS school in London. Although the adult audience (first generation immigrants) lived and enjoyed every minute of this show, it was very doubtful whether the children understood the real significance of what they themselves were presenting in the show.

A similar point is raised by Chazan (1978), when reviewing Jewish education in Great Britain. He points to a disparity between institutional and parental aims and those of students attending Jewish schools.

> *" The Jewish youth club preaches Jewish survivalism to an audience quite unaware of the issue in question, and the Jewish supplementary school teaches Jewish religion while the students have no sense of why they should learn it "*
>
> (Chazan, 1978).

He goes on saying that for second and third generation ethnics, especially in open, pluralistic societies a blind survivalist ethnicity is a doubtful commodity. What is needed, according to Chazan (1978) is a concern for meaning, i.e. the quest for relevance of the aims of this provision to the real needs of the pupils.

So far there has not been a systematic examination of the psychological reactions of GS School pupils toward their ethnic supplementary school attendance. Such an examination, however, is of the utmost priority.

In the case of the Greek supplementary education as the system has in a way been imposed on students, it is crucially important to examine their psychological reactions to it.

In this respect, knowledge concerning the motivational and attitudinal reactions to their ethnic supplementary schooling will be of much importance to anyone interested in the future prospects of such provision and generally the future of the Greek community itself.

As the younger generation takes over from the first generation of immigrants, significant changes are taking place to the core characteristics of the Greek community. Oakley (1970) reflects on the phenomenon of the lack of commitment shown by the new generation of Greek Cypriots to the traditional community institutions, which provided comfort and satisfied real needs of their parents outside their homeland. This forces Oakley (1970) to make the prediction that

> "*it is highly likely that their social and cultural differentiation will last only so long as the first generation of settlers.*"

In a similar vein, Edwards (1977; 1988), reflecting on the future of ethnic institutions such as ethnic schools, church, ethnic press, and national societies, believes that

it is not at all optimistic. Drawing on the American experience relating to the fate of minority languages and a long history of unsuccessful efforts at reviving the Irish language, he maintains that the needs that supported these institutions would tend to diminish, because of increasing language shift (from the community language to the majority one) and acculturation into the majority community's culture on the part of newer generations succeeding the first generation of immigrants. Edwards believes that over time ethnic minority language, which is considered the main marker of ethnicity, loses its communicative function, though it can retain its symbolic function (as a symbol of ethnic tradition, heritage, and ethnicity). This is supported by Fishman (1966) who claims that functional bilingualism beyond the first generation is rare. Gans (1979) makes a parallel statement concerning the ethnic allegiance of second and subsequent generations of immigrants. He maintains that ethnicity is undergoing a change retaining more of a symbolic than substantive nature.

Edwards (1988), nevertheless, is more optimistic regarding the fate of identity:

> *" However, if language shift is the negative side of the coin, the positive is that minority group identity can be, and commonly is, maintained through and beyond the transitional times made inevitable by social evolution. Groupness, it would seem, is a tenacious*

quantity and is capable of surviving changes in any objective marker, including language ".

The present study, by focusing on a specific Greek community institution which actively supports and has a pioneering role in promoting language, identity, and cultural maintenance, addresses directly and indirectly a set of issues.

What factors and to what extent do they affect children's intentions to support the GS School in the future?

What role are the children's attitudes, stemming out of their experiences during their GS School attendance with GS School teachers, expected to play in influencing these intentions and subsequent behaviour?

Furthermore, what is the role of the children's ethnic identification and active commitment into their ethnic community in shaping these intentions?

Although the GS School receives vital support from external agencies (e.g. the governments of Cyprus and Greece and the Church), its survival and progress rests greatly on the commitment and initiatives of parents who through parents associations constitute its basic underpinnings and play a decisive role in its progress. Based on this fact is the question whether pupils attending GS School would as future parents encourage their children to learn the Greek language and provide for them to attend this institution.

These questions come to the fore as pupils attending GS schools are second or third generation members of the Greek community and are expected to possess lesser degrees of adherence and loyalty to the Greek community due to the different conditions which operate on them, i.e. effects of English education, English culture, and more economic stability and security. Gans (1979) terms this type of ethnic adherence symbolic ethnicity denoting a loose ethnic loyalty by sticking to superficial indicators of ethnic culture.

As the basic issue is one of predicting future behaviour on the basis of current attitudes the literature pertaining to the attitude-behaviour relationship is of immediate relevance to the purposes of the present study. In this respect a brief review of related literature follows.

4.2 PREDICTING FUTURE BEHAVIOUR - THE FISHBEIN/AJZEN MODEL

Social psychologists have always maintained a keen interest in identifying the factors that lead to accurate prediction of future behaviour. Especially the attitude-behaviour consistency has been a central issue ever since the well known research by LaPiere in the United States (1934), which documented, contrary to current belief, a vast inconsistency between attitudes and behaviour.

In the late 1960s and early 1970s the attitude - behaviour relationship was the subject of a significant amount of research directed mainly toward explaining this

inconsistency and identifying the factors that render the attitude-behaviour relationship strong or weak (Andrews & Kandel, 1979). This plethora of research culminated in a number of attitude - behaviour models (Acock & De Fleur, 1972 ; Ajzen & Fishbein, 1977 ; Triandis, 1977). Of these models the one proposed by Fishbein and Ajzen (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1977; 1980), has been the most influential, as evidenced by the number of studies that followed examining its application and potential usefulness in predicting behaviour in a variety of situations.

Fishbein & Ajzen's model stems directly from their theory of " reasoned action ", which, as the name implies, assumes that an individual's behaviour is associated with his/her logical nature and comes about as an outcome of his beliefs and evaluations, which are the products of reasoning and logical processing.

A key assumption of the Fishbein & Ajzen model states that behavioural intentions are the best and most accurate predictors of behaviour. Triandis (1977), similarly, maintains that intentions mediate between attitude and behaviour. Bagozzi (1981) reasons that the rationale behind this assumption is that intentions are at an intermediate level of abstraction between abstract attitudes and concrete behaviours and their role is to guide goal-directed behaviour. This assumption has been tested in a number of studies, specifically oriented towards examining the behavioural intentions-actual behaviour association.

The evidence emerging from these studies carried out either under strictly controlled laboratory conditions (Fishbein & Ajzen, 1975) or in more naturalistic situations (Fishbein, Ajzen, & Hinkle, 1980; Fishbein et al., 1980; Davidson & Jaccard, 1975) suggests a high correlation between intentions and behaviour supporting to a significant extent the Fishbein/Ajzen basic assumption.

As has already been mentioned, a basic tenet of the Fishbein/Ajzen model is that the best predictor of behaviour is the intention of the actor to perform the behaviour. **Behavioural intentions** constitute the central construct that is hypothesized to precede and be the immediate cause of the subsequent act or behaviour.

Behavioural intentions are in turn determined by two factors: Attitudes towards performing the related behaviour and subjective norms. **Attitudes**, reflecting the personal component, are positive or negative feelings toward performing the behaviour of interest and **subjective norms**, reflecting the influence of the immediate salient environment on behavioural intentions, are beliefs that certain important others think the individual should or should not perform the behaviour.

Fishbein and Ajzen offer as justification for distinguishing attitudinal and normative influences on behavioural intentions and behaviour the fact that these two constructs correspond to the two independent approaches used by psychologists and sociologists respectively in studying human behaviour.

According to Fishbein and Ajzen (1975)

> *"...this distinction emphasizes the importance of two basic psychological concepts that have traditionally been treated independently. Psychologists and sociologists interested in individual behaviour have frequently made use of the attitude concept whereas theorists dealing with groups and societies have often relied on the concept of social norms. By including an attitudinal and a normative component, the present theory emphasizes the importance of both concepts and provides a bridge between the two approaches to the study of behaviour ".*

A problem, however, related with this parsimonious presentation of the antecedents of behavioural intentions and actual behaviour concerns other related variables, for example personality characteristics, which are not included in the model, but which are expected to affect the dependent variables in the model. Fishbein and Ajzen (1975) maintain that the only antecedents that directly affect behavioural intentions are attitudes and subjective norms. Any other variables affect behavioural intentions only indirectly, their effect being channelled through attitudes and subjective norms.

A fundamental feature of the Fishbein/Ajzen theoretical model concerns the factors that affect the attitude-behaviour relationship. Ajzen & Fishbein (1977) in a thorough review of literature covering the span of a number

of decades of research addressing this relationship, and purporting to integrate their relatively discrepant findings, have identified three essential factors that act to foster the attitude-behaviour relationship. These factors are associated with the specification and measurement of both variables.

The first factor is the degree of specificity between attitudinal measures and behavioural criteria. This would entail that a general attitude will predict better a more general behaviour (multiple-act criterion) than a specific one, whereas a specific attitude will be more associated with a specific behaviour (single-act criterion).

The second factor relates to the type of attitude measured. Fishbein & Ajzen (1975) suggest that attitude toward the act, as opposed to attitude toward the object, is more appropriate in predicting a given act.

The third factor relates to the degree of correspondence between certain basic elements of the attitudinal and behavioural entities. Specifically the degree of correspondence between the action and target elements (Ajzen & Fishbein, 1977), are posited to affect the attitude-behaviour relationship.

The Fishbein/Ajzen model has been tested in a variety of laboratory-like settings in explaining specific types of behaviour. Such behaviours included voting, consumer behaviour in buying certain products, blood donation, drug or alcohol use, and behaviour related to weight loss. The practice in all these investigations, in line with Fishbein

& Ajzen's basic suggestion that specific patterns of behaviour are more accurately predicted by specific attitudes, has been to direct attention to specific patterns of behaviour and associate them with specific attitudes measured immediately before the behaviour occurred.

A number of researchers (Albrecht & Carpenter, 1976; Schwartz, 1978), however, have questioned this practice, maintaining that more general attitudes, while not predicting specific patterns of behaviour as accurately as specific attitudes do, predict more general patterns of behaviour, are more stable than specific attitudes, and for this reason are better predictors of long-term future behaviour than are specific attitudes. Similarly, Bentler and Speckart (1979) refer to research that attributes low attitude-behaviour correspondence to the overlooking of the multicomponent structure of attitudes (cognitive, affective, and behavioural).

The present study represents an attempt to test the Fishbein/Ajzen model by applying it to an ethnic school setting. The basic issue is whether pupils attending GS School would as future parents encourage their children to learn the Greek Language and provide for them to attend at community schools operating in the future. In this respect a model is drawn predicting such behaviour. As the unique character of the study makes it impossible to test actual behaviour itself, the dependent variable is behavioural

intentions, which in the Fishbein/Ajzen model are hypothesized to be approximately equivalent to actual behaviour under specified circumstances. The results have particular importance on theoretical grounds by providing a test of the Fishbein/Ajzen model of attitude-behaviour consistency in a more naturalistic setting outside the laboratory.

In the context of this examination an attempt is made to test an assumption of the Fishbein/Ajzen model relating to the factors which affect the attitude-behaviour relationship, i.e. that the degree of generality of the behavioural criterion is related to the degree of generality of the behavioural act. As has already been stated, studies testing the Fishbein/Ajzen model have used very specific attitudes in order to predict equally specific behavioural acts. In the context of the present study, and in line with the suggestions of Albrecht & Carpenter (1976) and Schwartz (1978), the reverse is attempted, i.e. to test whether a general attitude would predict satisfactorily a more general behavioural act.

The results of the present study are relevant on practical grounds by providing useful information to those interested in ethnic supplementary education and the GS School particularly.

The identification of the factors that influence behaviour and the estimation of their relative importance in influencing future behaviour, is of the utmost importance to those interested in being capable of

influencing the course of events with a view to effecting behaviour change to the desired direction.

In this respect Fishbein and Ajzen suggest that their model helps identify more easily those factors that should be handled in order to effect behaviour change. The first step toward this end should involve identification of the intention that is highly related to the behaviour one wants to change. Then the investigator should determine the degree to which the intention is under attitudinal or normative control. This would provide the necessary information that would help him/her decide where to target his/her ce, i.e. toward the set of beliefs that underlie attitude toward the behaviour or toward the set of beliefs underlying the subjective norm. This influence would take the form of exposing individuals to information which will change a sufficient number of beliefs to bring about the desired change in attitude or subjective norm.

CHAPTER V

METHODOLOGY

5.1 AIMS OF THE PRESENT STUDY

As has already been mentioned research on ethnic supplementary schools is very rare. The present research aspires to contribute to the examination of a field that is nearly virgin, by attempting to throw light on the motivations and attitudes of students towards their ethnic supplementary schooling.

Greek supplementary schools in London were chosen because

a) the researcher is a Greek Cypriot himself and he has worked both as a teacher and administrator of such schools for five years and

b) the Greek supplementary schools are good examples of lively and thriving institutions and are attended by a relatively large percentage of all children of Greek Cypriot origin (Taylor, 1989). According to estimates about one third of these children are attending supplementary schools (Loizidou-Papaphotis, 1984).

It is expected that the results of this research will be illuminating both to those involved in offering the provision and to the mainstream educators by providing empirical data upon which to base their reactions and their standpoints.

The purpose of the present study is twofold. The first is to obtain urgently needed data related to the motivational and attitudinal aspects of Greek supplementary

school attendance. The second is to probe the utility of the theory of reasoned action in explaining the attitudes and predicting the behaviour of pupils attending these schools.

Among the subsidiary aims of this study were the following:

1. Explore the reactions of pupils to different sections of the Greek school curriculum.

2. Explore Gardner and Lambert's suggestion concerning the existence of two types of orientation (integrative and instrumental) in learning a second language and the extent to which it applies to the case of mother tongue learning.

3. Explore pupils' conception and attitudes toward their Greek school teachers and contrast them with those toward their mainstream English school teachers.

4. Explore further in a theoretical sense the relationship of attitude and social norms with behaviour, an issue of topical interest in this area of study.

5. Finally, the present study represents a novel attempt at applying LISREL analysis to a verification of the Fishbein/Ajzen theory.

5.2 DESIGN AND MODEL

The study was psychometric in nature involving construction of scales and questionnaires. These were presented to a sample of GS schools chosen to be representative of such schools in London.

Two methods guided the research plan. The Fishbein model provided the theoretical framework for the selection of criterion and predictor variables. It also dictated the precise constructs to be used and the nature of their configuration to be examined. The LISREL statistical model imposed conditions governing the number of indicator variables employed to operationalize each construct.

5.2.1 The Fishbein/ Ajzen Model

As previously indicated in chapter IV, in the Fishbein/Ajzen model there are two components, the attitudinal and normative, which shape intentions and subsequent behaviour. The two components, attitudinal and normative, are given empirical weights according to the following equation

$$BI = w_1(A_B) + w_2(SN)$$

where BI is the intention to perform behaviour B; A_B is the attitude toward performing behaviour B; SN is the subjective norm; and, finally, w_1 and w_2 are the weights of A_B and SN respectively reflecting the relative importance of the two components in determining behavioural intentions. The model can be depicted in diagrammatic form as shown in Figure 5.1.

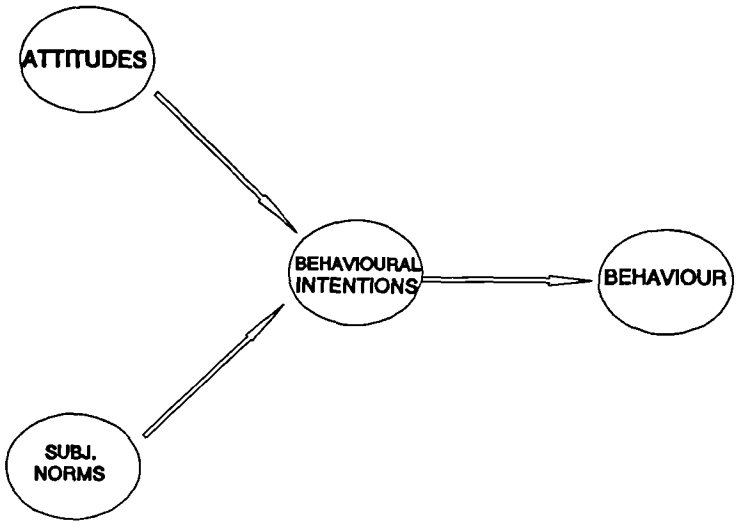


Figure 5.1

The Fishbein/Ajzen model of determinants of behaviour

As can be seen in the diagram attitudes and subjective norms causally determine behavioural intentions which in turn determine behaviour.

5.2.2 The Conceptual model of the study

Drawing the conceptual model is, according to Tatsuoka (1967), an important step before setting up the mathematical or statistical model, which could be tested directly. Keeves (1985) states that the conceptual model can be built from existing evidence, through analogy, or derived from theory.

The conceptual model of the present study is built on the basis of the theory of Fishbein and Ajzen concerning the relationship of attitude and subjective norms with behaviour..

As has already been mentioned, the central concepts in the Fishbein/Ajzen model are a personal component

(attitudes), and a social component (subjective norms), which influence and shape behavioural intentions (which are assumed to be equivalent to actual behaviour).

In the context of the present study, the Fishbein/Ajzen model would suggest that positive experiences of pupils relating to their GS School attendance and their interaction with GS School teachers would foster positive attitudes toward attending GS School. These attitudes would, in turn, increase the likelihood that they will intent to have their children attend GS School in the future. The social component that is hypothesized to shape behavioural intentions relating to future support of the institution of the GS School is the degree of the individual's identification with Greek people and the Greek community, liking of and involvement in the community's cultural practices and desire to get integrated into one's own ethnic community. Identification is the result of a long social process reflecting the influence of the family and the community and its institutions and personalities at a subsequent stage. Identification in the context of the present study is assumed to be equivalent to the concept of subjective norm of Fishbein and Ajzen, because it reflects the influence of the social environment on behaviour. A higher degree of ethnic identification, acculturation and integrative orientation on the part of the individual makes it more probable that she/he will be more exposed to social influences from his/her ethnic community and feel more pressure to comply with its perceived expectations.

A key hypothesis in our conceptual model is the path leading from identification to attitudes toward attending Greek school. This hypothesis is based on the reasoning that those with higher degrees of ethnic identification, acculturation and integrative orientation are expected to approach the Greek school and Greek school teachers with more positive sentiments and are expected subsequently to develop more positive attitudes toward attending this institution. The conceptual model of the present study is presented in Figure 5.2.

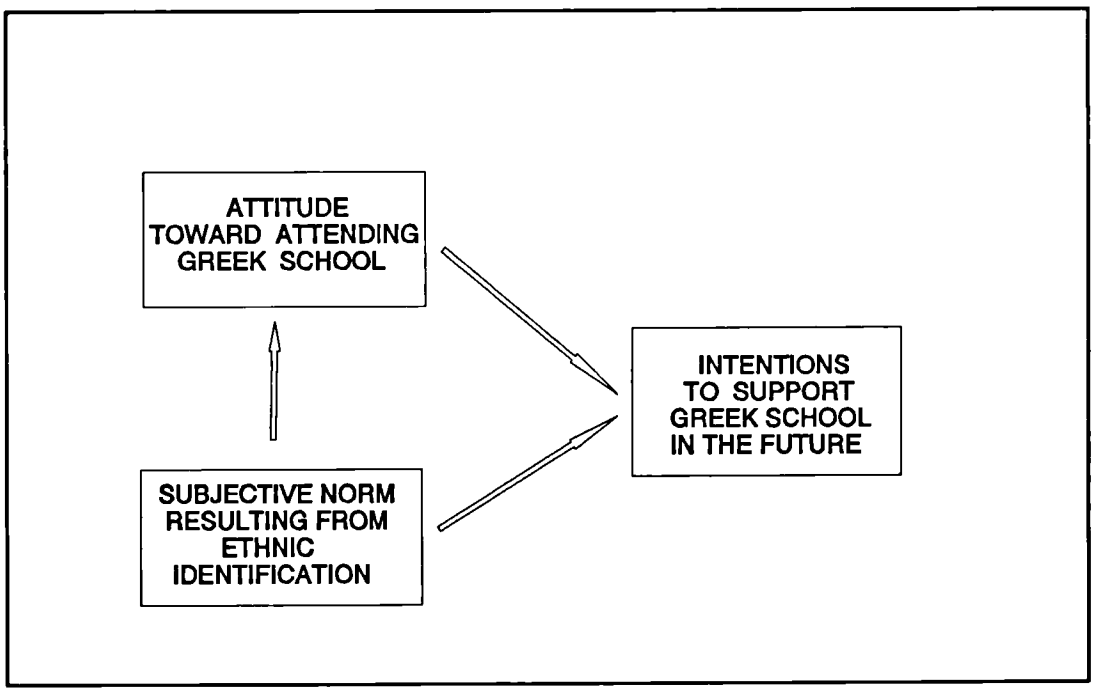


Figure 5.2

The Conceptual Model of the Study

5.2.3 The Statistical Model (LISREL)

Having drawn the conceptual model of the study leads to the next step in the process, i.e. testing the fit of the

theoretical model to the data from the research sample. This step involves transferring the conceptual model into a statistical one that is testable. According to Linden (1986) the degree to which the conceptual model lends itself to transference to a statistical model that is testable is the critical characteristic that distinguishes good conceptual models.

In order to test the hypothesized casual links in a model the researcher has to find the appropriate statistical tools, that can adequately handle multivariate relations and check for causality among variables.

For the purposes of the present research and in light with recent criticisms (Bagozzi, 1981; Bentler & Speckart, 1981) concerning the methods of statistical analysis used so far for testing the Fishbein & Ajzen model of attitude - behaviour relationship (i.e. regression and path analysis) a more powerful statistical technique is applied to test the fit of the model to the sample data. This technique, especially suitable for theory testing, is LISREL.

There follows a brief introduction to LISREL (Linear Structural Relations with Latent Variables), which concentrates on the presentation of its main features plus its advantages over other methods of model testing used so far.

5.3 STATISTICAL MODELS - STRUCTURAL EQUATION MODELS

The basic purpose of theory is to explain reality by identifying predictor-criterion relationships among variables of interest by drawing the causal links among them.

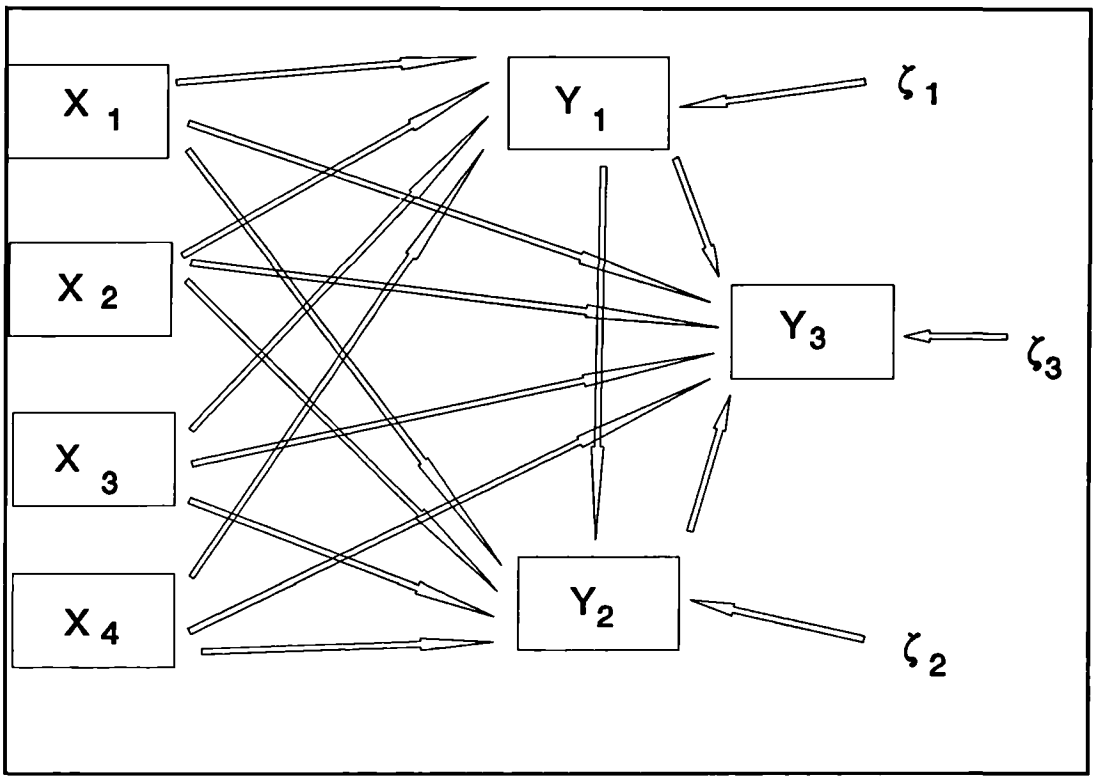
The basic statistical tool which can be used for estimating the relative contribution of predictor variables in causing a criterion variable is **regression analysis.** In order to determine causality, the basic question is whether changes in the antecedent variables result in changes in the outcome variable. Regression analysis estimates the coefficients associated with each antecedent variable, which show their direct effects on the outcome variable. Regression analysis involves estimating the coefficients in the equation

$$Y = \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_n X_n + \zeta$$

where Y is the outcome variable, Xs the independent variables, βs the direct effects of independent variables on the dependent variable, and ζ the error term.

A regression analysis can deal with one outcome variable and can only estimate the direct effect of each independent variable on the outcome variable. In the situation depicted in Figure 5.3, a single regression equation is not enough to deal with the complexity of paths hypothesized to exist. A new element of critical importance, and which renders the model more efficient in "reflecting" reality is the fact that independent variables not only affect dependent variables directly, but have indirect effects on them

through other variables.



Variables in the Model

X_1 = Intelligence
X_2 = Number of Siblings
X_3 = Father's Education
X_4 = Father's Occupation
Y_1 = Grades
Y_2 = Educational Expectation
Y_3 = Educational Aspiration

Figure 5.3: Model of Ambition and Attainment (Kenny, 1979)

Thus, for example, the independent variable Intelligence (X_1) affects directly the outcome variable Occupational Aspiration (Y_3), but has indirect effects on it through variable Grades (Y_1), through variable Educational

Expectation (Y_2), and finally, through variables Y_1 and Y_2.

This situation is more efficiently handled by the statistical tool of **path analysis**, which uses a series of multiple regression analyses in order to estimate the total effects of antecedent variables on outcome variables (Duncan, 1971). It can also decompose these total effects into direct effects and indirect effects. Path analysis belongs to the general family of structural equation models, a description of which follows.

5.3.1 Structural Equation Models - LISREL

Structural equation models appear in the literature under the rubric of different names, such as linear causal analysis, dependence analysis, simultaneous equation systems, etc.

Each model comprises one or more simultaneous equations, which are differentiated from those used in regression analysis, because the former represent the causal relations linking the variables in the system, whereas the latter represent mere empirical associations among them (Jöreskog and Sörbom, 1986; 1989). For this reason the interpretation of structural coefficients does not coincide, as will be shown later, with coefficients in regression analysis.

The statistical analysis of structural equation models is based on regression analysis and analysis of variance, as well as approaches associated with path analytic models. As will be made, however, immediately clear, they go far beyond by intermingling factor analytic concepts

with these conventional approaches to examining causality.

The LISREL model was introduced by Jöreskog (1973) and was further developed recently (Jöreskog,1977;1978;1981; Jöreskog and Sörbom, 1986; 1989). The same authors have developed a computer program (LISREL), which is used to analyze structural models and estimate the coefficients in the structural equations that define the model.

Our purpose here is just to give a very brief outline of the LISREL model. For more details one should consult the literature just mentioned or recent introductions to it (James et al., 1983; Long, 1983; Hayduk, 1987; Fassinger, 1987; Jöreskog and Sörbom, 1989;).

Very simply stated, the LISREL model is defined by a set of simultaneous equations . These equations specify the relationships among variables which belong to two categories. The first category consists of measured, observed variables, i.e. those variables that have been operationally defined and subsequently measured through questionnaire items, experimental devices etc. The second category comprises those unmeasured latent variables (hypothetical constructs) which were not observed or measured in any way but are related to observed variables. The relation among observed and latent variables is best described by its equivalence to the relationship among questionnaire items to the factors that have emerged after these items have been subjected to factor analysis.

LISREL assumes that there is a causal structure among the latent variables. Through the observed variables

information is obtained on the latent variables, which are thought to be the constructs of ultimate interest i.e. information on the observed variables is the route to latent variables, which are the underlying causes of the observed variables. An example would make things clearer. A theoretician who has included in a model the construct of intelligence obtains information on it through a series of tests that are believed to measure more or less the construct. Scores on the tests are thought to be determined by the operation of the construct of intelligence. By including in the model this latent construct (plus others) instead of a score in a particular test thought to measure Intelligence (as is done in regression or the conventional path analysis), one is assured of being on more firm grounds in approaching the essence of hypothetical constructs and basic entities in the social sciences. In this sense the LISREL approach is targeted not only in examining causality but measuring as well basic constructs efficiently.

This double orientation is better reflected in the basic distinction of the LISREL model into two interrelated parts, the measurement model and the structural equation model. The measurement model describes the measurement properties of the observed variables (what their validities and reliabilities are) and how the latent variables are derived from them.

The measurement model is defined by two general equations

$$y = \Lambda_y \eta + \epsilon$$

$$x = \Lambda_x \xi + \delta$$

where y and x are respectively the dependent and independent observed variables in the model, and η and ξ the latent endogenous and exogenous variables respectively. Λ_y and Λ_x are regression matrices of y on η and x on ξ respectively. Finally, ϵ and δ are vectors of errors of measurement in y and x, respectively.

The structural equation model specifies the causal relationships among latent variables and is defined by one general equation as follows

$$\eta = B\eta + \Gamma\xi + \zeta$$

where B and Γ are coefficient matrices and ζ are errors in equations. The elements of matrix B represent direct causal influences of latent endogenous variables on other latent endogenous variables, whereas the elements of matrix Γ represent direct causal influences of latent exogenous variables on latent endogenous variables.

In addition to the matrices already mentioned Λ_y, Λ_x, B and Γ the LISREL model assumes that the covariance matrix of the observed variables Σ comprises the following four matrices (Jöreskog & Sörbom, 1986; Pedhazur, 1982):

a. Φ (phi) is the covariance matrix of the latent exogenous variables ξ .[$\Phi = E(\xi\xi')$] .

b. Ψ (psi) is the covariance matrix of the errors in the equations (ζ) for the latent endogenous variables η .

[$\Psi = E(\zeta\zeta')$] .

c. Θ_ϵ (theta epsilon) is the covariance matrix of errors of measurement of y's (ϵ).

d. Θ_δ (theta delta) is the covariance matrix of errors of measurement of x's (δ).

Elements of these eight parameter matrices can be fixed (assigned a given value), constrained (be set equal to another parameter in the model), or free. The model estimates values of the free parameters.

The LISREL model is a powerful tool in the hands of researchers in social sciences because it covers a variety of models that are currently in frequent use, for example, exploratory and confirmatory factor analytic models, path analysis models, covariance structure models, as well as recursive and non-recursive models for cross-sectional and longitudinal data (Jöreskog and Sörbom, 1986; 1989).

In the context of the present study Linear Structural Equation Analysis with Latent Variables (LISREL) is being employed to test the Fishbein/Ajzen model. The main feature of the technique, which renders it particularly appropriate for the purpose of the present research, is its capability to take account of measurement error in measuring the variables in the theoretical model. Measurement error, which is particularly serious when psychological variables are involved, can attenuate estimated relations among the variables of interest. For this reason Bentler and Speckart (1981), warning of the irrelevant and biasing effects of measurement error in the variables, suggest that researchers base their conclusions on an analysis of latent

variables in order to

> *"divest causal regression estimates from the effects of unreliabilities of measured variables. Latent constructs with multiple indicators afford the possibility of freeing attitude and behaviour assessments and estimation of their causal relationships from narrow content ranges as well as from the unreliabilities of the overt variable".*

By using this methodology, the present research removes a source of potential error, which according to Bagozzi (1981), may have been the main cause of failure of previous research to significantly relate attitude and behaviour.

Furthermore, since attempts to evaluate the theoretical model of Fishbein and Ajzen used in their majority regression analysis, which as a technique can evaluate aspects of the theoretical model and not the model in its totality, the LISREL methodology offers the possibility of a simultaneous evaluation of all aspects of the theory (all the proposed causal connections). A number of studies, however, have used path analysis, which can evaluate simultaneously all features of the model, but with the limitation that the analysis of effects is based on observed variables which are not freed from error variance (i.e. they suffer from unreliability), whereas the LISREL methodology overcomes this disadvantage by using latent variables, which are assumed to be free from error

variance. Additionally, as the latent constructs are of a more general nature than observed variables greater generalizability is achieved.

5.4 APPLYING LISREL TO THE FISHBEIN/AJZEN MODEL

5.4.1 Specification of the Statistical Model

The general LISREL model subsumes a number of submodels, which are differentiated depending on the combination of observed and latent variables used. Figure 5.4 presents the model specification for the present study. (According to current practice circles represent latent variables whereas rectangles represent observed variables).

In all seven variables were used as indicator variables in the LISREL analysis, a description of which is provided in the paragraphs that follow. Three of the observed variables define one unobserved latent exogenous variable and the remaining four define two unobserved latent endogenous variables.

As can be seen in Figure 5.4, there is one exogenous latent variable ξ_1 which is measured by three observed variables X_1, X_2 and X_3.

Observed Exogenous Variables

X_1 = Identification (IDENT)

X_2 = Acculturation (ACCUL)

X_3 = Integrative Orientation (INTEG)

The latent variable η_1 is measured by the two indicator variables Y_1 and Y_2. These variables load on the latent variable η_1 with loadings λ_{11} and λ_{21}.

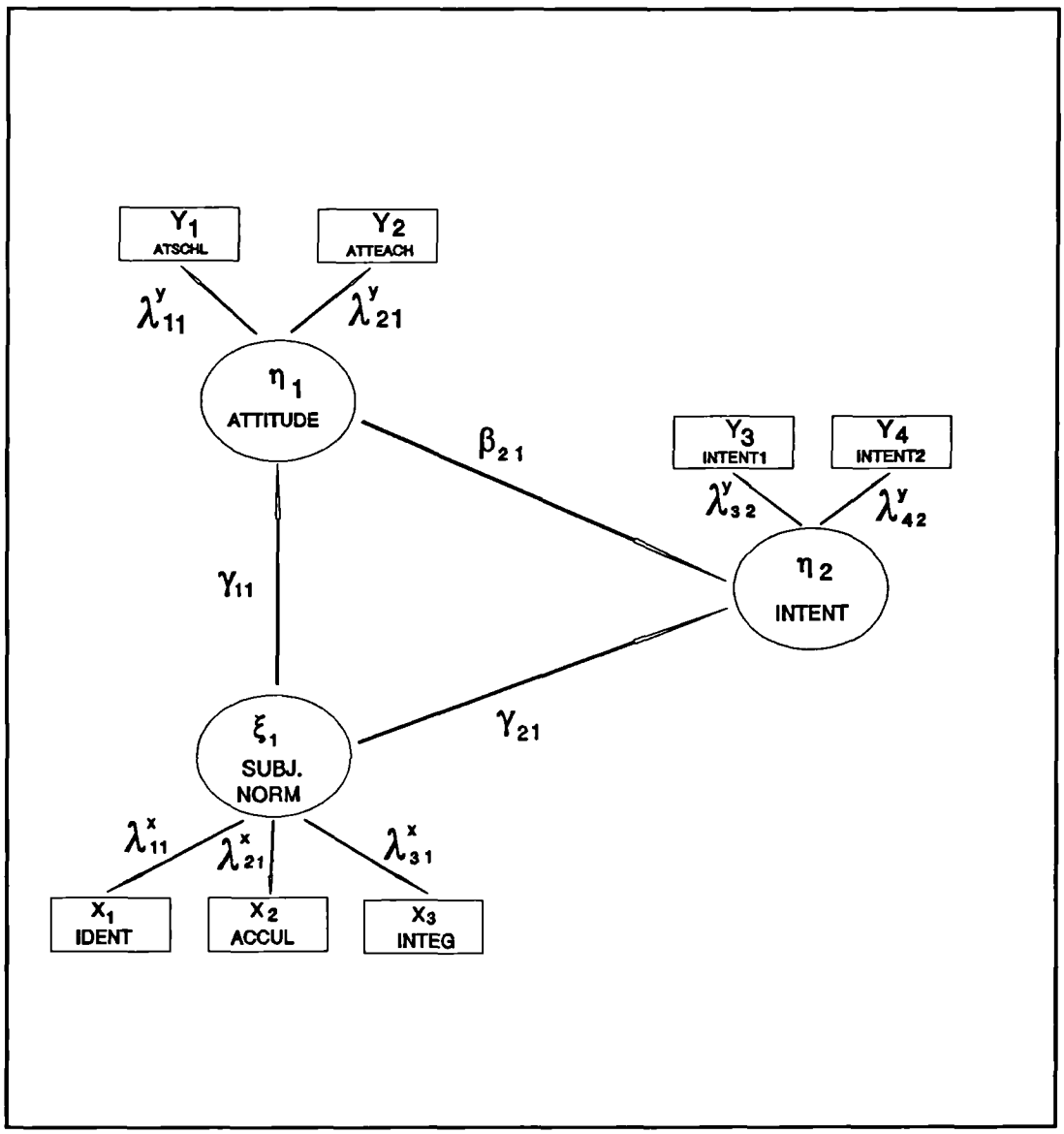


Figure 5.4

The Statistical Model

Latent variable η_2 is measured by the observed variables Y_3 and Y_4. These variables load on the latent variable η_2 with loadings λ_{32} and λ_{42}.

Observed Endogenous Variables

Y_1 = Attitude toward the GS School (ATTSCHL)

Y_2 = Attitude to GS School Teachers (ATTEACH)

Y_3 = Intention to Have his/her Children Learn Greek Language in the Future (INTENT1)

Y_4 = Intention to Have his/her Children Attend GS School in the Future (INTENT2)

The measurement equations for all variables in the model are

$$X_1 = \xi_1 + \delta_1 \qquad Y_1 = \eta_1 + \varepsilon_1$$

$$X_2 = \lambda_{21}\xi_1 + \delta_2 \qquad Y_2 = \lambda_{21}\eta_1 + \varepsilon_2$$

$$X_3 = \lambda_{31}\xi_1 + \delta_3 \qquad Y_3 = \eta_2 + \varepsilon_3$$

$$Y_4 = \lambda_{42}\eta_2 + \varepsilon_4$$

The matrix (corresponding to the measurement equations for the X variables) is

$$\begin{bmatrix} X_1 \\ X_2 \\ X_3 \end{bmatrix} = \begin{bmatrix} 1 \\ \lambda_{21} \\ \lambda_{31} \end{bmatrix} \begin{bmatrix} \\ \xi_1 \\ \\ \end{bmatrix} + \begin{bmatrix} \delta_1 \\ \delta_2 \\ \delta_3 \end{bmatrix}$$

As can be seen in the measurement matrix the loadings λ_{11} is fixed to 1 to set the metric of ξ_1. The only loadings that are free are λ_{21} and λ_{31}.

The matrix (corresponding to the measurement equations for the Y variables) is

$$\begin{bmatrix} Y_1 \\ Y_2 \\ Y_3 \\ Y_4 \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ \lambda_{21} & 0 \\ 0 & 1 \\ 0 & \lambda_{42} \end{bmatrix} \begin{bmatrix} \eta_1 \\ \\ \eta_2 \end{bmatrix} + \begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \varepsilon_3 \\ \varepsilon_4 \end{bmatrix}$$

As can be seen in the measurement matrix the loadings λ_{11} and λ_{32} are fixed to 1 to set the metric of η_1 andη_2. The only loadings that are free are λ_{21} and λ_{42} .

Θ_ϵ below is the covariance matrix of the errors in measurement of the observed endogenous variables. We assume that these errors are uncorrelated.

$$\Theta_\epsilon = \begin{bmatrix} \theta_{11} & 0 & 0 & 0 \\ 0 & \theta_{22} & 0 & 0 \\ 0 & 0 & \theta_{33} & 0 \\ 0 & 0 & 0 & \theta_{44} \end{bmatrix}$$

The structural component of the model is presented below in mathematical notation both in terms of equations and as a matrix

a) in terms of equations

$\eta_1 = \gamma_{11}\xi_1 + \zeta_1$

$\eta_2 = \beta_{21}\eta_1 + \gamma_{21}\xi_1 + \zeta_2$

b) as a matrix

$$\begin{bmatrix} \eta_1 \\ \eta_2 \end{bmatrix} = \begin{bmatrix} 0 & 0 \\ \beta_{21} & 0 \end{bmatrix} \begin{bmatrix} \eta_1 \\ \eta_2 \end{bmatrix} + \begin{bmatrix} \gamma_{11} \\ \gamma_{21} \end{bmatrix} \begin{bmatrix} \xi_1 \end{bmatrix} + \begin{bmatrix} \zeta_1 \\ \zeta_2 \end{bmatrix}$$

β_{21} represents the effect of latent endogenous variable η_1 on latent variable η_2, and γ_{11} and γ_{21} the effects of the latent exogenous variable on latent endogenous variables η_1 and η_2 respectively. A zero denotes that no direct effect of a variable on another variable is hypothesized.

It is assumed that errors in the equations predicting the two endogenous variables η_1 and η_2, are uncorrelated. For this reason the matrix Ψ takes the form

$$\Psi = \begin{bmatrix} \psi_{11} & 0 \\ 0 & \psi_{22} \end{bmatrix}$$

In terms of variable labels the structural equations take the following form :

$$\text{ATTITUDE} = \gamma_{11}\text{S.NORM} + \zeta_1$$

$$\text{BEHAV.INTENTIONS} = \beta_{21}\text{ATTITUDE} + \gamma_{21}\text{S.NORM} + \zeta_2$$

A mathematical proof of the identification of the model is provided in Appendix F.

5.4.2 Operationalising the Constructs

5.4.2i Subjective Norm (Latent exogenous variable)

It has been the practice in studies along the Fishbein/Ajzen tradition to operationalize the concept of subjective norm in the following way:

The first task of the researcher is to identify who the important others in the life of the individual are (for example parents, friends etc.) and what the individual perceives each thinks he/she should do. Then establish what the individual's degree of motivation to comply with each referent, and, finally, get an aggregate score by summing up all scores pertaining to each referent. This aggregate score, called **subjective norm**, reflects, according to Fishbein and Ajzen, the influence of the social environment on the individual, as contrasted to the attitudinal influence derived from the individual's personal experience and evaluations concerning the behaviour in question.

In the present study the influence of the social environment is operationalized in a more general manner. Thus in the context of examining the future support the individual is expected to bestow to the institution of the Greek supplementary school, the degree of his/her identification with people of the same origin and involvement in the social life and cultural practices of his/her ethnic group determines to a large extent the degree of social pressure that will be exerted on him/her to act in accordance with what is perceived as ethnically

acceptable and appropriate. This social pressure corresponds to the internalisation of the values of the group with which the individual identifies, as suggested by Tajfel's model of social identity (Tajfel, 1974). According to this model, throughout the socialisation process starting very early in the life in the family and stamped by the influence of parents and other important adults, children identify with them and with the ethnic group to which they belong. The values of the group are then internalised and act as subjective norms in guiding the individuals' behaviour. Edwards (1988) defines ethnic identity as allegiance to an ethnic group, stressing in this way the fact that the ethnic group exercises certain social influence on the individual member.

In the context of the present study, which deals specifically with the Greek community, this social pressure acquires a potential for heavier impact given the well documented traditional Greek concern for the opinion of fellow ethnic community members (Smolicz, 1988; Oakley, 1968;1979). This increased concern for acceptance by his/her ethnic group, concern for what they will say, is a guiding force, a kind of internal conscience that influences his/her actions. According to Smolicz (1985) this characteristic stems from the special bond that unites Greek families, and the spirit of solidarity and collectivism (as opposed to the individualistic orientations that characterize the family patterns prevalent in Northern Europe and USA) a key feature of

Greek life which, along with Greek language and the Greek Orthodox religion make up the three core values of the Greek culture (Smolicz, 1985).

For the above reasons this operationalization of the concept of the subjective norm, or better the construct identifying the social aspect of the pressure exerted on the individual affecting his/her propensity to act in a certain manner, is being used in the present study, bringing a new element which contributes to the generality of the concept.

As has already been mentioned the research tradition following Fishbein and Ajzen encouraged specificity (i.e. identify important referents and determine their influence on the individual). The method (referring to the operationalization of the concept of the subjective norm) used in the present study suggests a more general and indirect way of measuring the social influence exerted on the individual and affecting his future behaviour. This generality and indirect nature of the measure makes it an interesting alternative to the measure so far used in testing the Fishbein & Ajzen model and future research should test the appropriateness and relative effectiveness of the two approaches.

The following three measured variables define the latent exogenous variable Subjective Norm.

Identification with Greek Community and People (IDENT)

Acculturation (ACCUL)

Integrative Orientation (INTEG)

This construct operationally defined by these three measured variables is assumed to be analogous to the concept of subjective norm as suggested by Fishbein and Ajzen in the context of their theory explaining behavioural intentions and behaviour. The basis of the similarity rests on the fact that this construct has been included in the model, as has already been mentioned, to reflect the contribution of the social environment, as contrasted to the personal attitudinal factor, in explaining and predicting future behaviour. Identification with the Greek people and community comes about as a result of a long process of socialization that originates in the family with parents as the chief agents. The degree to which identification is nurtured and fostered later in the life of the individual depends to a large extent to the influence that community institutions coupled with the continuing influence of the family and relatives.

In this respect the present latent variable (as defined by the indicator variables IDENT and ACCUL and INTEG) reflecting the individual's positive acceptance of both the human and the institutional aspect of his/her ethnic community, is assumed to affect the probability that he/she will be open to and susceptible to social pressure to engage in ethnically acceptable behaviour.

5.4.2ii Attitude Toward Greek School Attendance (Latent endogenous variable)

In order to get a valid an reliable measure of the latent construct of attitude toward attending Greek school, it was considered appropriate to use two indicators: **Attitude to GS School** and **Attitude Toward GS School teachers.**

The first indicator is **Attitude Toward the GS School (ATTSCH).**

The second indicator **Attitude Toward GS School Teachers (GRETEA)** is expected to bring forward pupils conception of them, stemming out of their interaction during their years of attendance at GS School. Positive experiences would be reflected in positive evaluations of teachers and vice versa.

Pupils evaluations of their GS School teachers is expected to reveal indirectly a wealth of information concerning their experiences in the GS School, and furthermore, are expected to colour their attitudes toward attending this institution.

5.4.2iii Behavioural Intentions (Latent endogenous variable)

Behavioural intentions were indicated by two items: (1) In the future will you send your children to a GS School? and (2) In the future will you arrange for your children to learn the Greek Language?

Both items were measured on seven-point Likert-type scales, the answers ranging from not at all (coded 1) to definitely yes (coded 7).

A more detailed presentation of the development of the scales with reliability analysis, item analysis and factor analysis information, plus other related statistical information can be found in the chapter that follows (Chapter VI).

CHAPTER VI

SCALE CONSTRUCTION AND DATA COLLECTION

6.1 INTRODUCTION

For the purposes of the present study the following ten scales were constructed:

1. Attitude to GS School
2. Attitude to Greek Language
3. Identification with Greek Community and People
4. Greek Acculturation
5. Integrative Orientation
6. Instrumental Orientation
7. Conception of GS School Teachers
8. Conception of Mainstream English School Teachers
9. Reaction to Curriculum Content
10. Greek Language Maintenance Scale

The rest of the chapter is devoted to a detailed description of the scales and the procedure followed in their construction, of the sample, and the procedure followed in administering the scales and data collection.

First, there follows an extensive description of the development of the two attitude scales, i.e. **Attitude to GS School Scale** and **Attitude to Greek Language Scale**. The two attitude scales bear a number of similarities stemming out of the fact that both involve dichotomous items and are hypothesized to be unidimensional and a summation of scores across all items would give total attitude scores.

Then the development of the other scales is described,

and, finally, a detailed description of the characteristics of the sample used as well as the procedure followed in obtaining the data for this research.

6.2 SCALE CONSTRUCTION

6.2.1 Attitude to GS School Scale:

In order to measure the attitudes of pupils towards their GS schools a series of 30 related statements were collected in discussions with teachers teaching in these schools as well as pupils attending them. All 30 statements were used in a pilot study with 35 pupils of both sexes attending GS schools in order to test their adequacy and efficiency to serve as items in the final test. As a result of the analysis that was based on the pilot trial 8 items were dropped, either because they didn't performed as expected or because their marginal split was very extreme and in this way they were not as informative as they were expected to be.

The remaining 22 items were included in a questionnaire which was administered to a random sample of 201 pupils attending GS schools as part of second stage pilot study for the purpose of refining and finalising the Scale. The 22 items are presented in Table 6.1. Subjects were instructed to read carefully all items in the scale and put a tick (✓) in front of each item (in the space provided) with which they agreed and leave blank all items with which they disagreed.

ITEM	WORDING
ATTSCH1:	I like Greek school
ATTSCH2:	The Greek school teaches mostly useless information
ATTSCH3:	The Greek school may have its drawbacks, but I like to attend
ATTSCH4:	The Greek school does more harm than good
ATTSCH5:	I like to do Greek school work.
ATTSCH6:	One learns a lot of useful things in the Greek school
ATTSCH7:	The Greek school represents outgrown beliefs and ideas
ATTSCH8:	I like being with Greek /Cypriot people and the Greek school helps me in this respect
ATTSCH9:	The Greek school is entirely unnecessary
ATTSCH10:	The Greek school is not worth the time and money we spend
ATTSCH11:	It helps one to get a better job by attending the Greek school
ATTSCH12:	If it were not for the pressure of my parents, I wouldn't attend the Greek school
ATTSCH13:	I hate Greek school
ATTSCH14:	I may dislike some activities of the Greek school, but there some I like very much
ATTSCH15:	So far the Greek school has benefited me a lot in ways my English school could not
ATTSCH16:	The Greek school is old fashioned
ATTSCH17:	The Greek school is boring
ATTSCH18:	The Greek school helps me pass my examinations
ATTSCH19:	I receive more attention in the Greek school than in the English school
ATTSCH20:	The Greek school consumes enough of my spare time and so it does not allow me to pursue my hobbies
ATTSCH21:	I find the teachers of the Greek school friendly and helpful
ATTSCH22:	I enjoy my attendance at the Greek school

Table 6.1 : The set of items of the Attitude to GS School Scale used in the second stage pilot study

6.2.1i Item analysis

In order to check the efficiency of each individual item in the scale the the correlation of each item score with the total score (calculated by summing over all scores, where agreement with a positively worded item and disagreement with a negatively worded one was scored 1, whereas agreement with a negatively worded item and disagreement with a positively worded one 0) as well as other indices were calculated as shown in Table 6.2.

Nunnally (1978) suggests that the most important criterion for inclusion of an item in a scale, apart from its meaningfulness, is its contribution to the homogeneity of the scale, which contribution is evidenced by the size of item-total correlation. By inspection, it is readily evident that item ATTSCH7 does not satisfy this condition at all as its correlation with the total scale score is negative (-.26). Additional items that do not contribute sufficiently to the scale homogeneity, because of low item-total correlations, are ATTSCH2 and ATTSCH19 (with item-total correlations .20, and .17 respectively). For this reason all three items were excluded from further analysis.

Two additional indices of the performance of individual items in the scale are presented in Table 6.2. These are the discriminatory power and critical ratio (t-test) (McIver & Carmines, 1981), both of which provide information on whether each individual item discriminates between groups with extreme attitude scores.

ITEM	MEAN	DISCRIMINATORY POWER[1]	CRITICAL RATIO[2]	CORRECTED ITEM-TOTAL CORRELATION
ATTSCH1	.69	.78	13.49	.64
ATTSCH2	.90	.16	2.76	.20
ATTSCH3	.66	.67	9.56	.49
ATTSCH4	.95	.16	2.76	.48
ATTSCH5	.54	.75	11.30	.50
ATTSCH6	.77	.65	9.34	.56
ATTSCH7	.74	-.15	- 1.83	-.26
ATTSCH8	.73	.65	9.34	.55
ATTSCH9	.96	.12	2.59	.32
ATTSCH10	.93	.16	3.06	.34
ATTSCH11	.75	.47	6.23	.35
ATTSCH12	.73	.47	5.92	.41
ATTSCH13	.92	.33	5.00	.57
ATTSCH14	.75	.43	5.55	.29
ATTSCH15	.44	.71	10.15	.39
ATTSCH16	.86	.29	4.09	.41
ATTSCH17	.82	.51	7.21	.53
ATTSCH18	.65	.59	7.72	.35
ATTSCH19	.33	.40	4.63	.17
ATTSCH20	.74	.53	7.26	.36
ATTSCH21	.67	.76	12.29	.57
ATTSCH22	.65	.88	19.38	.69

RELIABILITY COEFFICIENT (N OF CASES = 201)
KR-20 = .86 (N of Items = 19) Items ATTSCH2, ATTSCH7, and ATTSCH19 excluded)
DISCRIMINATION COEFFICIENT
Ferguson's δ^3 = .96

[1]**ITEM DISCRIMINATORY POWER** = $X_H - X_L$, where X_H and X_L are the mean item responses of 25% of respondents at the high and low extremes of the scale respectively (McIver & Carmines, 1981).

[2]**ITEM CRITICAL RATIO** = $t = \dfrac{(X_H - X_L)}{\sqrt{(S_H^2/n_H) + (S_L^2/n_L)}}$; it evaluates the mean differences of the two subgroups at the high and low extremes of the scale relative to item score variances S_H^2 and S_L^2 (McIver & Carmines, 1981).

[3]**SCALE DISCRIMINATORY POWER** = $\delta = \dfrac{(n+1)(N^2 - \Sigma f_i^2)}{nN^2}$ (Ferguson, 1949).

Table 6.2: Item-analysis information on the Attitude to GS School Scale (Results of second stage pilot study)

By inspection it can be seen that certain other items, besides those previously excluded, are not discriminating efficiently between groups with extreme total attitude scores (items ATTSCH4 and ATTSCH9). It was, nevertheless, decided to keep these items, because their corrected item-total correlations were substantial (.48 and .32), contributing in this way to scale homogeneity and reliability. The reliability of the scale, with the three items ATTSCH2, ATTSCH7, and ATTSCH19 excluded, is satisfactory (KR-20 = 0.86) and its dicriminatory power sufficiently high (Ferguson's δ = .96).

6.2.1ii Factor Analysis of Attitude to GS School Scale Items

The most appropriate tool for testing dimensionality of scales is factor analysis, a statistical analysis based on the *intercorrelations among the scale items*. There are, however, problems connected with factor analyzing sets of dichotomous items. Kim & Mueller (1978) argue against factor analyzing scales consisting of dichotomous items. Bernstein and Teng (1989) give particular attention to the problems arising when the unit in factor analysis is the test item. Item responses fall into a small number of categories, and the correlation between a pair of items in a scale is affected by the similarity of their distributions as well as by the similarity of their content. The problem is much more grave with dichotomous items, where the categories are restricted to two.

Straightforward factor analysis may lead to misleading results, as Gorsuch (1983) warns, because in dealing with dichotomous variables (scale items), we will most probably come across pairs of items whose marginal splits (difficulty indices) are such that can underestimate their intercorrelations, which are the basic elements of factor analysis. Table 6.3 (Gorsuch, 1983) presents the maximum product-moment correlations as a function of the marginal splits of two dichotomous variables. As can be seen from the table, variables that have the same marginal split can receive a perfect positive correlation (1.00) but not a perfect negative correlation (-1.00), whereas the reverse is happening if the marginal split is reversed for one of the two variables.

Split on Variable 1	Split on Variable 2				
	.10/.90	*.20/.80*	*.50/.50*	*.70/.30*	*.90/.10*
.10/.90	1.00				-1.00
.20/.80	.66	1.00			
.50/.50	.33	.50	1.00		
.70/.30	.22	.33	.66	1.00	
.90/.10	.11	.17	.33	.51	1.00

Table 6.3: Maximum product-moment correlations between two dichotomous variables

The table also reveals that variables with similar marginal splits have higher correlations than variables with different marginal splits. This makes it possible that, even though two variables may measure the same content the fact that they have dissimilar marginal splits

will make their correlation very low, whereas two variables measuring different content but having similar marginal splits will have higher correlation.

Spurious factors or difficulty factors (Gorsuch, 1983; Berstein & Teng, 1989) are those factors emerging from factor analysis that are a result of similarity of marginal splits and do not reflect similarity of content as the traditional interpretation of factors would entail. Gorsuch (1983) suggests that results of factor analysis, especially when dichotomous items are involved, should always be examined with the possibility of difficulty factors in mind.

In order to examine the dimensionality of the scale, the intercorrelations among the 19 items in the Attitude to GS School Scale, based on the responses of 202 pupils were subjected to a principal components factor analysis. The Kaiser/Guttman criterion $\lambda > 1$ was used to determine the number of factors, yielding 5 factors that accounted for 59.6% of variance in scores. The 5 factors were rotated to the Varimax criterion and the following factor structure emerged (Table 6.4). While the the 5-factor solution is mathematically appropriate and there are enough high loadings defining each factor, by inspection we can determine no substantive interpretation for the factor pattern which emerged. The marginal splits of each cluster of items suggest that there may be difficulty factors in the factor pattern.

Item	Marginal Split	Factors I	II	III	IV	V
ATTSCH22	.65	.75	.09	.33	.10	.17
ATTSCH5	.54	.74	.06	.09	.13	-.01
ATTSCH1	.78	.73	.10	.31	.08	.17
ATTSCH21	.67	.70	.10	.16	.16	.03
ATTSCH6	.77	.64	.25	-.10	.33	.03
ATTSCH8	.73	.50	.13	.05	.45	.23
ATTSCH4	.05	.18	.80	.14	.11	.04
ATTSCH9	.04	-.08	.79	.14	.10	.15
ATTSCH10	.07	.16	.75	-.11	.04	.01
ATTSCH13	.08	.30	.55	.38	-.04	.29
ATTSCH16	.14	.17	.40	.39	.28	-.18
ATTSCH20	.26	.14	.02	.74	.10	-.01
ATTSCH12	.27	.16	.11	.72	.02	.18
ATTSCH17	.18	.37	.44	.47	-.10	.10
ATTSCH18	.65	.12	.07	.11	.75	.01
ATTSCH11	.75	.18	.08	-.02	.70	.04
ATTSCH15	.44	.14	-.00	.10	.52	.46
ATTSCH14	.25	.02	.11	.08	.12	.80
ATTSCH3	.34	.47	.14	.05	-.02	.57
Eigenvalue		5.8	1.9	1.4	1.1	1.1
Percent of Variance Explained		30.6	9.9	7.6	6.0	5.5
Total Variance Explained				59.6		

Table 6.4

Factor analysis of Attitude to Greek School Items

In order to check for possible spurious factors and achieve a meaningful interpretation of the results of this analysis two procedures suggested by Gorsuch (1983) and Cattell & Bursdal (1975) have been followed.

The first procedure, as Gorsuch (1983) suggests, is particularly appropriate in the case of factoring a set of items that are hypothesized to reflect a single factor,

and involves the use of higher-order factor analysis. For this reason, all 19 items in the scale were subjected to a principal components factor analysis (as before) and then the factors were rotated obliquely to the Oblimin criterion. This procedure produces factors that may be correlated together, in contrast to varimax rotation which produces orthogonal factors. The results of this rotation, presented in Appendix D, show that the basic factor pattern is retained. The factor correlation matrix that resulted was subjected to second-order factor analysis, which revealed the existence of only one higher-order factor in agreement with our expectation. This points to the unidimensionality of the scale.

The second procedure, named the **radial parcels procedure** (Cattell & Burdsal, 1975) aims at reducing the idiosyncratic characteristics of individual items, by averaging certain items together that are similar to each other. Similarity is decided on the basis of a preliminary factor analysis of all items in the scale. By inspecting the unrotated factors we select items that exhibit similarity of loadings across all factors. Each parcel of items is scored as a miniscale, and finally all miniscales are subjected to factor analysis. In the present attitude scale 5 parcels were selected, which not only make sense statistically but conceptually as well. For this purpose an SPSS program was written (see Appendix D). The 5 miniscales

were subjected to principal components factor analysis out of which only one factor emerged.

Concluding, we can say that the results of both procedures for detecting and eliminating spurious factors have given credence to the hypothesized unidimensionality of the **Attitude to GS School Scale.**

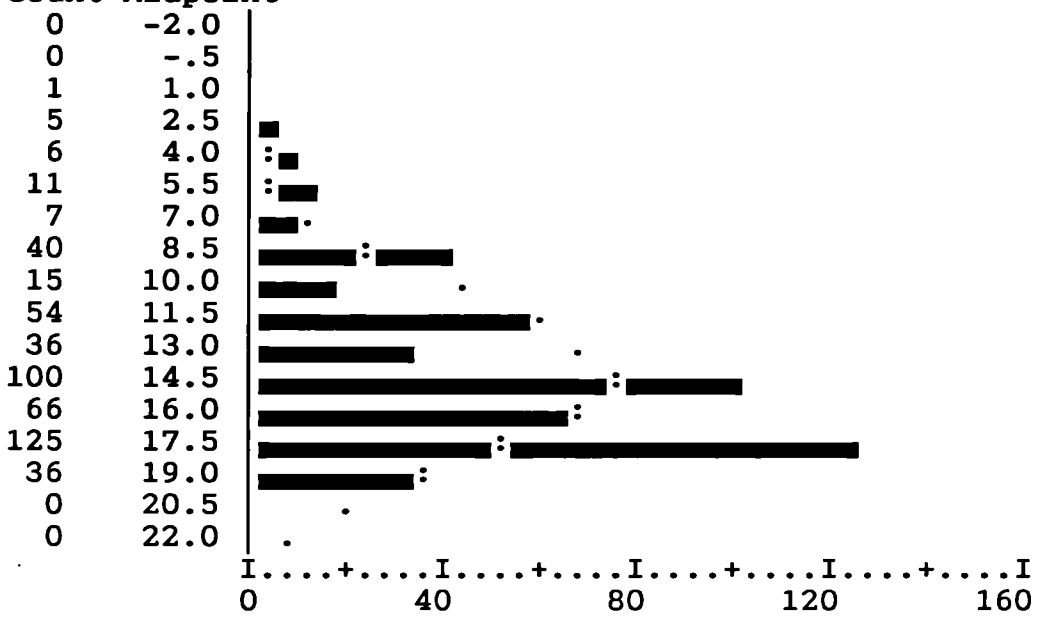
The results of the above analyses warrant the treatment of the item set as summative Likert-type scale. For each subject a cumulative score was calculated by summing all item scores. This score ranged from 0 to 19, a high score indicating a liking and positive stance towards the Greek School, whereas a low score a disliking and negative stance towards the Greek School. Table 6.5 presents the frequency histogram of scores on this variable as well as descriptive statistics.

From an inspection we can see that the distribution is skewed to the left, that is subjects' reactions to their Greek Schools are more or less situated towards the positive end of the continuum, with a mean of 14.17, standard deviation of 3.77, and index of skewness of -1.00. The skewness is not severe, but removing it purifies the scale by removing outliers, which may create problems in subsequent statistical analyses using the scale. In order to correct the skewness and make the distribution approach more towards the normal distribution, as well as decrease the influence of outliers (Rummel, 1970), the distribution of scores of the present scale were

transformed. The transformed distribution was obtained by applying the formula $X_j^* = \frac{1}{2} \log 10 \frac{1 + X_j}{1 - X_j}$

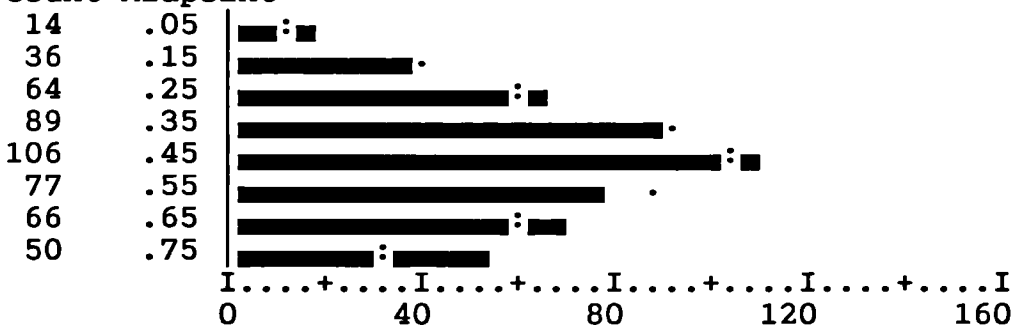
In order to apply the transformation (Rummel, 1970) the values of X_j must be $0 \leq X_j < 1.0$. So before applying the formula, the distribution had to undergo a preliminary arithmetical transformation: Each score was divided by the largest value plus 1. This procedure scaled X_j to the appropriate range. As can be seen from the Table 6.5, the transformed distribution is not skewed (skewness =.08), and is more close to a normal distribution. Furthermore, whereas the raw data distribution had 8 outliers present (extreme cases with standard scores exceeding the value of 3.00), they were eliminated in the transformed distribution. This transformed data distribution is the one used in subsequent analyses (ATSCHL). Frequency histograms and descriptive statistics for the original and the transformed distributions are provided in Table 6.5.

i. (Raw Data Distribution)



Mean	14.174	Std Err	.169	Median	15.000
Mode	17.000	Std Dev	3.768	Variance	14.201
Kurtosis	.529	Skewness	-1.004	Range	18.000
Minimum	1.000	Maximum	19.000		
Valid Cases	502	Missing Cases	9		

ii. (Transformed Data Distribution) [1]



Mean	.450	Std Err	.009	Median	.423
Mode	.546	Std Dev	.189	Variance	.036
Kurtosis	-.634	Skewness	.085	Range	.796
Minimum	.000	Maximum	.796		
Valid Cases	502	Missing Cases	8		

[1] The raw data distribution was transformed by the use of the $X_j^* = \frac{1}{2} \log 10 \frac{1 + X_j}{1 - X_j}$ transformation (Rummel,1970)

Table 6.5
Raw data (i) and transformed data (ii) distributions of the Attitude to GS School Scale

6.2.2 Attitude to Greek Language Scale

In order to measure Attitudes toward the Greek Language a set of related statements were collected. Sharp et al.'s (1973) scale Attitude towards Learning Welsh was one of the sources that provided help in wording the statements. Several other statements were produced after consultations with teachers and pupils attending GS School. The set comprising 31 statements was piloted as described previously, and as a result of the subsequent analysis 11 items were discarded.

The remaining 20 items were included in a questionnaire which was administered to a random sample of 202 pupils attending GS schools as part of second stage pilot study for the purpose of refining and finalising the Scale. The 20 items are presented in Table 6.6.

Pupils were asked to read carefully all the items and show their agreement or disagreement with each, by putting a tick (✓) next to those they agreed with and leaving blank those with which they disagreed. Agreement with a positively worded item or disagreement with a negatively worded one were scored 1, whereas agreement with a negatively worded item or disagreement with a positively worded one were scored 0.

ITEM	WORDING
ATTLAN1:	I like hearing Greek spoken.
ATTLAN2:	It's a waste of time to study the Greek language.
ATTLAN3:	I like speaking Greek.
ATTLAN4:	There are far more useful languages to spend time on than Greek.
ATTLAN5:	I don't want to learn Greek as I am not likely ever to use it.
ATTLAN6:	The Greek language is not worth studying.
ATTLAN7:	I would like to be able to read Greek books and magazines.
ATTLAN8:	There is no need to keep up the Greek language for the sake of tradition.
ATTLAN9:	Learning Greek is a pleasant activity.
ATTLAN10:	We owe it to our forefathers to preserve the Greek language.
ATTLAN11:	Greek is essential for communicating with my parents.
ATTLAN12:	The Greek language is of no use to somebody living in England.
ATTLAN13:	The Greek language has enriched the English language with a lot of words.
ATTLAN14:	Greek is essential to take part fully in Greek life.
ATTLAN15:	Greek is not much use to anybody.
ATTLAN16:	The learning of Greek should be left to individual choice.
ATTLAN17:	My learning of Greek will help me get a better job.
ATTLAN18:	Greek is a difficult language to learn.
ATTLAN19:	The Greek language is a valuable asset to anybody.
ATTLAN20:	Greek is like any other foreign language to me.

Table 6.6

The set of items of the Attitude to Greek Language Scale used in the second stage pilot study

6.2.2i Item Analysis

As in the case of the Attitude to GS School Scale, in order to check the efficiency of each individual item in the scale a set of indices providing relevant information were calculated . These indices,i.e. Discriminatory Power, Critical Ratio, and Corrected Item-Total Correlation are presented in Table 6.7.

By inspection, it can be seen that items ATTLAN6, ATLLAN15 and ATTLAN2, although do not perform efficiently in discriminating between groups with extreme attitude scores, they have nevertheless relatively high item-total correlations (.40, .45, and .44 respectively). The decision to exclude certain items from further consideration was based on their overall insufficiency as evidenced by all three indices. Special weight was given to the Corrected Item-Total Correlation Index, since it was hypothesized from the start that the scale is unidimensional, and an item that is low on that index does not contribute to the homogeneity of the scale. In this respect it was decided to exclude ATTLAN16, ATTLAN18, and ATTLAN20 because they do poorly on all three indices.

The reliability of the scale, with these three items excluded, is satisfactory (KR-20 = 0.78) and its discriminatory power high (Ferguson's δ = 0.92).

6.2.2ii Factor Analysis of the Scale

As in the case of the Attitude toward the GS School scale, the Attitude to the Greek language scale was administered to 202 pupils in a second stage pilot study. The intercorrelations among the 17 items of the Attitude to the Greek language were subjected to a principal components factor analysis.

ITEM	MEAN	DISCRIMINATORY POWER[1]	CRITICAL RATIO[2]	CORRECTED ITEM-TOTAL CORRELATION
ATTLAN1	.79	.53	7.55	.46
ATTLAN2	.97	.11	2.57	.45
ATTLAN3	.84	.43	6.32	.49
ATTLAN4	.90	.20	3.32	.26
ATTLAN5	.95	.17	3.27	.51
ATTLAN6	.98	.06	1.78	.40
ATTLAN7	.81	.39	5.27	.43
ATTLAN8	.93	.15	3.05	.29
ATTLAN9	.89	.40	5.84	.60
ATTLAN10	.58	.70	10.56	.37
ATTLAN11	.60	.49	6.06	.26
ATTLAN12	.92	.15	3.05	.33
ATTLAN13	.71	.42	5.43	.24
ATTLAN14	.70	.58	8.05	.38
ATTLAN15	.97	.08	2.07	.44
ATTLAN16	.53	.26	2.93	.06
ATTLAN17	.74	.52	7.14	.33
ATTLAN18	.63	.24	2.74	.07
ATTLAN19	.61	.60	8.11	.33
ATTLAN20	.74	.24	2.88	.08

RELIABILITY COEFFICIENT (N OF CASES = 202)
KR-20 = .78 (N of Items = 17) Items ATTLAN16, ATTLAN18, and ATTLAN20 excluded)
DISCRIMINATION COEFFICIENT
Ferguson's δ^3 = .92

[1]**ITEM DISCRIMINATORY POWER** = $X_H - X_L$, where X_H and X_L are the mean item responses of 25% of respondents at the high and low extremes of the scale respectively (McIver & Carmines, 1981).

[2]**ITEM CRITICAL RATIO** = $t = \frac{(X_H - X_L)}{\sqrt{(S_H^2/n_H) + (S_L^2/n_L)}}$; it evaluates the mean differences of the two subgroups at the high and low extremes of the scale relative to item score variances S_H^2 and S_L^2 (McIver & Carmines, 1981).

[3]**SCALE DISCRIMINATORY POWER** = $\delta = \frac{(n+1)(N^2 - \Sigma f_i^2)}{nN^2}$; (Ferguson, 1949).

Table 6.7: Item-analysis information on the Attitude to Greek language Scale (Results of second stage pilot study)

The Kaiser/Guttman criterion $\lambda > 1$ was used to determine the number of factors, yielding 4 factors which accounted for 54.1% of the variance in subject scores. The 4 factors were rotated to the Varimax criterion and the factor structure presented in Table 6.8 emerged.

Item	Marginal Split	Factor I	II	III	IV
ATTLAN2	.03	.84	.06	.04	.16
ATTLAN5	.05	.76	.30	-.04	.17
ATTLAN15	.03	.76	.23	.03	-.03
ATTLAN6	.05	.74	.10	.00	.15
ATTLAN12	.08	.56	.26	.06	-.15
ATTLAN8	.07	.50	-.01	.43	-.30
ATTLAN1	.79	.14	.81	-.01	.10
ATTLAN3	.84	.18	.73	.09	.11
ATTLAN7	.81	.18	.68	.09	.06
ATTLAN9	.89	.36	.56	.27	.16
ATTLAN14	.70	.01	.45	.34	.23
ATTLAN10	.58	.03	.09	.75	.15
ATTLAN11	.60	.00	.18	.65	.04
ATTLAN19	.61	.09	.22	.08	.63
ATTLAN17	.74	-.02	.27	.16	.56
ATTLAN4	.09	.45	-.09	-.14	.52
ATTLAN13	.71	-.03	-.01	.47	.51
Eigenvalue		4.7	2.1	1.3	1.2
Percent of Variance Explained		27.7	12.2	7.4	6.8
Total Variance Explained				54.1	

Table 6.8

Factor analysis of Attitude to Greek Language Scale items

The four-factor solution, while mathematically appropriate, did not produced clusters which can be interpreted in a straightforward manner. To the contrary, the fact that the factors that emerged group together items with either positive or negative connotation and similar marginal splits make the existence of spurious factors in operation highly probable. For this reason, and in line with Gorsuch's (1983) suggestion for higher-order factoring of sets of dichotomous items as necessary procedure for eliminating difficulty factors, all the items in the scale were subjected to a Principal Components factor analysis and then rotated to the Oblimin criterion. The correlations among the factors which emerged were the inputs for a second order factor analysis, which produced a single factor (Appendix E), pointing to the unidimensionality of the scale.

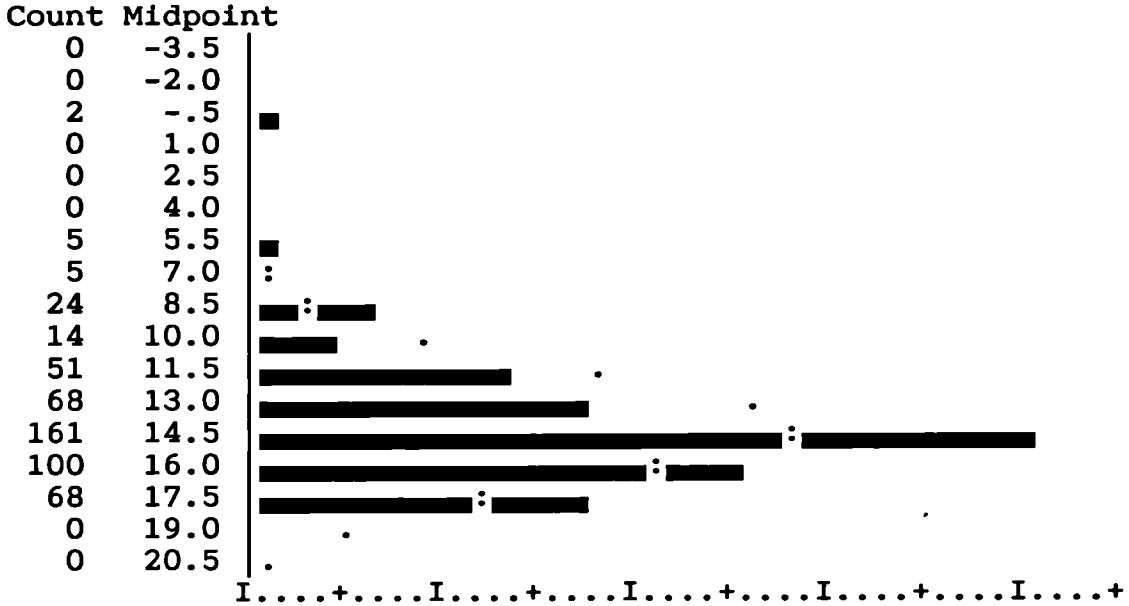
Further evidence for the unidimensionality of the scale was obtained by using the radial parcel procedure (Cattel & Burdsal, 1975), which revealed the existence of one factor (see Appendix E).

The results of the previous analyses warrant the treatment of the item set as a summative Likert-type scale. For each subject a cumulative score was calculated by summing all item scores. This score ranged from 0 to 17, a high score indicating a liking and positive stance towards the Greek language, whereas a low score a disliking and negative stance towards the Greek Language.

Table 6.9(i) presents the frequency histogram, and descriptive statistics of scores on this variable. In order to correct the skewness in the raw data distribution, and bring the distribution closer to a normal as well as decrease the effect of outliers (Rummel, 1970) the distribution was transformed by the application of the same formula as in the case of Attitude to Greek School Scale.

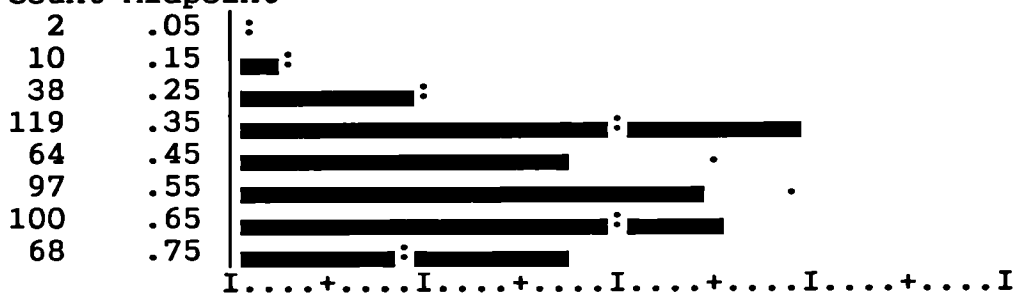
The transformed distribution with descriptive statistics is presented in Table 6.9(ii). It can be seen that the skewness has been nearly removed (skewness = -.038). Furthermore, the original distribution had 7 outliers (extreme cases with standard scores exceeding the value of ±3.00), whereas the transformed one has only 2. This transformed data distribution is the one used in subsequent analyses (ATTGRLAN).

i. (Raw Data Distribution)



Mean	14.036	Std Err	.118	Median	15.000
Mode	16.000	Std Dev	2.631	Variance	6.920
Kurtosis	3.508	Skewness	-1.534	Range	17.000
Minimum	.000	Maximum	17.000		
Valid Cases	498	Missing Cases	12		

ii. (Transformed Data Distribution)*



Mean	.498	Std Err	.007	Median	.521
Mode	.615	Std Dev	.162	Variance	.026
Kurtosis	-.358	Skewness	-.038	Range	.772
Minimum	.000	Maximum	.772		

* The raw data distribution was transformed by the use of the $X_j^* = \frac{1}{2} log10 \frac{1 + X_j}{1 - X_j}$ transformation (Rummel,1970)

Table 6.9: Raw data (i) and transformed data (ii) distributions of the Attitude to Greek Language Scale

6.2.3 Identification with Greek Community and People Scale

The identification was quantified by the six items in Table 6.10, after an examination of how this construct has been explored by a number of researchers in the past, for example Sharp et al. (1973).

Scores on this variable were obtained by summing all scores on the six items, asking subjects to provide evidence of the degree to which they identify with Greek people (have good impressions of Greek speaking people, see themselves as Greek, would like to seek Greek people to go ahead in the English society, would prefer to work with Greek people, and finally, would like to marry inside the Greek community).

Each item was measured on a seven-point Likert type scale, the answers ranging from 1 to 7. A high score (maximum 42) indicates a high degree of identification with Greek people, whereas a low score (minimum 6) a low degree of identification.

The scale was administered to a sample of 202 pupils attending Greek Schools. Principal Components factor analysis based on the intercorrelations of the answers on the six items revealed the existence of only one factor, explaining 42.2% of the variance in the scores on the scale, pointing to the unidimensionality of the scale. The reliability of the scale is satisfactory (Cronbach's alpha = .72).

Table 6.10 presents the items, distribution and descriptive statistics for the Greek Identification Scale.

(i) 1.What is your impression of the Greek-speaking people you know as individuals?

I like most of them very much ____:____:____:____:____:____:____ I don't particularly like any of them

2. Do you often think of yourself as being a Greek person, or a person of Greek ancestry?

Very often ____:____:____:____:____:____:____ Never

3. Are you interested in seeing Greek-speaking people living in England to go ahead in business or politics?

Very interested ____:____:____:____:____:____:____ Not interested at all

4. Are most of your close friends Greek or English-speaking?

Mostly Greek ____:____:____:____:____:____:____ Mostly English

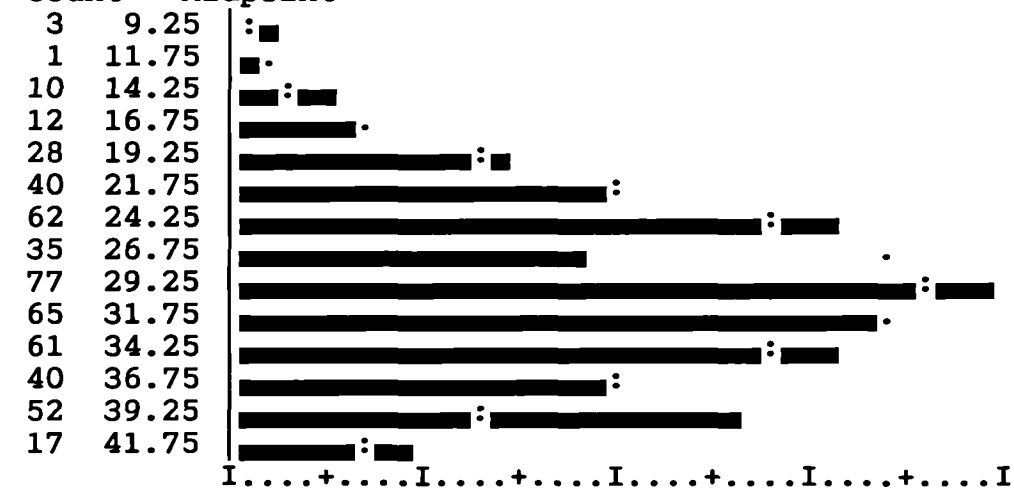
5. Would you prefer to work with Greek or English speaking people?

Prefer Greek ____:____:____:____:____:____:____ Prefer English

6. Do you want to marry someone who is of Greek origin?

Definitely yes ____:____:____:____:____:____:____ Definitely no

(ii)



Mean	29.266	Std Err	.308	Median	30.000
Mode	32.000	Std Dev	6.918	Variance	47.865
Kurtosis	-.461	Skewness	-.303	Minimum	8.000
Maximum	42.000	Valid Cases	503	Missing Cases	7

Table 6.10: Items, Distribution and Descriptive Statistics for the Greek Identification Scale

6.2.4 Acculturation Scale

Scores on this variable were obtained by adding scores on four Likert-type items measuring the extent to which the respondents enjoyed being involved in the social life and the cultural practices of their ethnic group and like their ethnic culture (enjoyed participating in Greek weddings and other festivities, attending church, listening to Greek community radio, and watching Greek videos and films). These items were included in the scale after discussions with community members and teachers employed in GS schools.

Each item was measured on a seven-point Likert-type scale, the answers ranging from definitely no (coded 1) to definitely yes (coded 7).

A high score (maximum 28) indicates a high degree of Greek acculturation, whereas a low score (minimum 4) a low degree of acculturation.

Principal Components factor analysis of the four items revealed the existence of only one factor (explaining 47.8% of the variance in scores on the scale) pointing to the unidimensionality of the scale. The reliability of the scale is satisfactory (Cronbach's alpha = .63).

Table 6.11 presents the items, the distribution and descriptive statistics for the Greek Acculturation Scale.

(i) **1.Do you enjoy participating in Greek Cypriot weddings or other festivities?**

Definitely yes ____:____:____:____:____:____:____ Definitely no

---

2. Do you enjoy going to church?

Definitely yes ____:____:____:____:____:_____:____ Definitely no

---

3. Do you enjoy listening to the Greek Community Radio?

Definitely yes ____:____:____:____:____:____:____ Definitely no

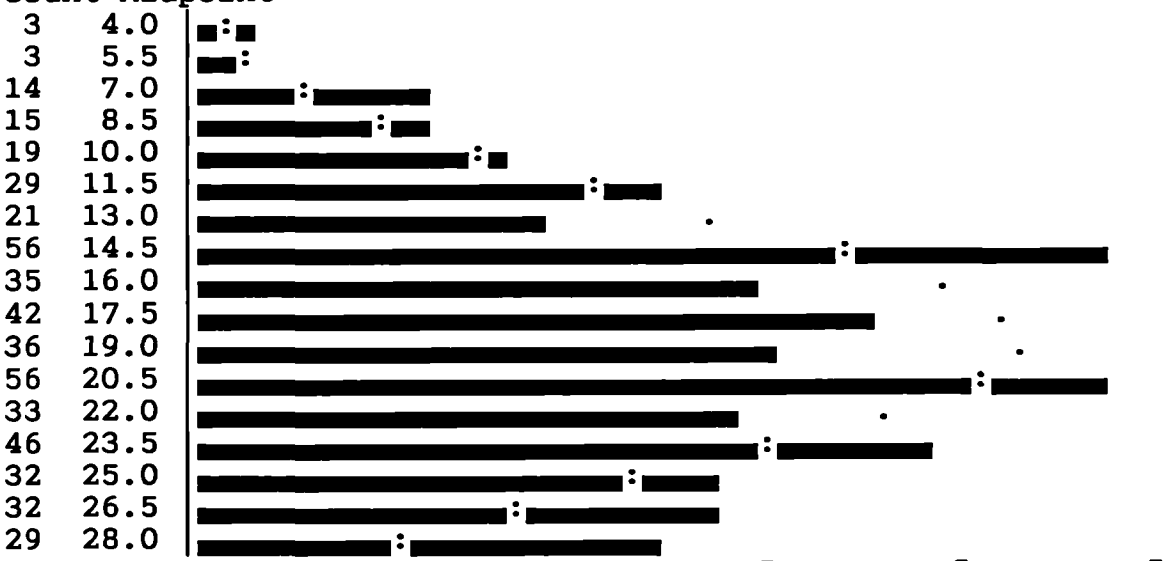
---

4. Do you enjoy watching Greek videos and films?

Definitely yes ____:____:____:____:____:____:____ Definitely no

---

(ii)



Mean	18.523	Std Err	.259	Median	19.000
Mode	19.000	Std Dev	5.800	Variance	33.642
Kurtosis	-.758	Skewness	-.227	Range	24.000
Minimum	4.000	Maximum	28.000	Valid Cases	501
Missing Cases	9				

Table 6.11: Items, Distribution and Descriptive Statistics for the Greek Acculturation Scale

6.2.5 Integrative and Instrumental Motivation Scales

6.2.5i Review of Literature

The research tradition in this field originated in a book by Gardner & Lambert (1972). These researchers set out to explain the phenomenon of differences among people in the extent to which they can master a second language. They identified three factors that account for differences in achievement in the second language, the factors being ability, aptitude and motivation, the latter playing the role of the agent that activates and energizes the other two (ability and aptitude).

Gardner & Lambert (1972) distinguished between two types of motivation in wanting to learn a foreign language, instrumental and integrative. Instrumental, as the name implies, is accompanied by a desire to get certain benefits from learning the particular language. The essential feature that defines the instrumental motive, is, according to Gardner & Lambert (1972), "a desire to gain social recognition or economic advantages". Baker (1986) points to the self-oriented, non-social and individualistic nature of the concept and to its similarity with McClelland's need for achievement (McClelland, 1958; 1961) and the concept of extrinsic motivation.

The integrative motivation differs from the instrumental one in that the benefits expected are of an interpersonal, social nature, i.e. the individual learns the language in order to gain access to a valued group (which communicates in that language) to become " like representative members

of the other language community " (Gardner & Lambert, 1972).

Concern to develop personal relationships with the other group presupposes integrative motivation. This motive reminds one of Atkinson's need for affiliation (Atkinson, 1964). According to Lambert (1977) the difference between the two types of motivation could be summed up in the fact that the instrumental motive reflects the practical value and advantages of learning a new language, whereas the integrative motive reflects an interest in the people and culture that speaks the language.

The original study investigating the two types of motivation made use of a Likert-type scale. Pupils were presented with eight statements suggesting possible reasons for studying a foreign language and were asked to respond on a 7-point scale varying from "not my feeling at all" to "definitely my feeling". The eight statements were the following:

i. It will help me to understand better the French people and their way of life

ii. It will enable me to gain good friends more easily among French-speaking people

iii.It should enable me to begin to think and behave as French

iv. It will allow me to meet and converse with more and varied people

v. I think it will some day be useful in getting a good job

vi. One needs a good knowledge of at least one foreign language to merit social recognition

vii.I feel that no one is really educated unless he is fluent in the French language

viii. I need it in order to finish High School

As has already been noted, Gardner and Lambert (1972) in their original study had as their main aim to explain achievement in a second language. The variable of motivation was included in the study because it was thought that besides aptitude and ability, motivation is an equally important factor affecting achievement.

Gardner and Lambert (1972) and their associates' suggestion of the existence of an integrative motive and more importantly its relationship with achievement in a second language have instigated a considerable number of studies with basically the same orientations as those of the original study. Gardner (1985) reviewing these studies points out that in nearly all studies the integrative motive emerges as a substantive concept. Results of factor analysis do show consistently the existence of a factor corresponding to this motive.

Attempts to causally link integrative motivation with achievement in the foreign language has produced relatively consistent results showing that the integrative motive could account for a significant percentage of the variance in second language achievement (Gardner, 1983; Gardner, Lalonde, and Pierson, 1983). Baker (1986) citing recent

research estimates the amount of variance explained (in second language achievement) to as low a portion as 5%, a percentage the significance of which should not be underestimated given the multitude of factors that influence language achievement. Supportive of the above conclusions were the results of research of a different tradition using a "glass box" approach, based mainly on measures taken through observations made during the actual working of the class. Gliksman (1976; 1981) using this approach in his research has found that the integrative motive was associated with behavioral patterns on the part of pupils that are linked to superior performance. These patterns involved more frequent volunteering, more correct answer giving, and more positive reinforcement provided by the teacher. In a similar study Naiman et al. (1978) found that both an integrative and instrumental orientation were positively related to the number of times pupils volunteered to answer questions (r=0.37 and 0.33 respectively).

The original items used by Gardner & Lambert (1972) were inspected in order to determine whether they were appropriate for use in the present study. Those items that could apply in our case were retained. In this respect items that treat the second language community as a foreign body were dropped because they didn't apply to the case of students attending GS schools. The language they are taught in these schools is their mother tongue

and the "other community" is their own community, where they live and they feel part of it.

In our search for appropriate items Sharp et al.'s (1973) modification of the original items was very helpful. These researchers investigating the two motivational orientations in the context of mother tongue learning by pupils of Welsh origin, modified the original items and included additional ones. We adopted some of these items, as being appropriate for our purpose and in the process additional items were introduced from discussions with teachers and pupils that we felt reveal an integrative or instrumental orientation. The final item set is presented below:

6.2.5ii Final Item Set

i. I want to become more a part of the Greek culture
ii. To be a good Greek I have to know the Greek language
iii. I would enjoy a more successful life in the community with a knowledge of Greek
iv. Greek is necessary to keep Greek people together
v. In the future Greek may be useful in getting a job
vi. Greek may prove useful when in holidays in Cyprus or Greece
vii. Greek will enable me to make good friends in Cyprus or Greece.
viii. I wish to enter into a profession necessitating familiarity with Greek

The above items were presented in a random order to the subjects. They were instructed that the statements that followed were some reasons given by pupils for studying Greek. Then they were instructed to indicate their agreement or disagreement with each statement on a 7-point continuum ranging from absolute agreement (definitely my feeling) to absolute disagreement (not my feeling at all).

6.2.5iii Testing Underlying Dimmensions of the Scale

The Scale was administered to a random sample of 202 pupils attending GS schools in order to examine whether the two dimensions exist.

The responses of pupils to the eight items were subjected to a principal components factor analysis. Two factors emerged from this procedure accounting for 56.5% of the variance.

As can be seen from Table 6.12 the following items load heavily on the first factor and they provide the operational definition of it:

Item 4. I want to become more a part of Greek culture (.85)
Item 5. I would enjoy a more successful life in the community with knowledge of Greek (.81)
Item 3. I wish to enter a profession necessitating familiarity with Greek (.65)

These items have in common an wish to move towards the ethnic community, attracted by the Greek culture and language. In this respect, it bears a basic similarity with

Items	Loadings (Varimax Rotation) Factors I	II
I want to become more a part of Greek culture (ORIEN4)	.85	.15
I would enjoy a more successful life in the community with knowledge of Greek (ORIEN5)	.81	.15
I wish to enter a profession necessitating familiarity with Greek (ORIEN3)	.65	.14
In the future Greek may be prove useful in getting a job (ORIEN1)	.51	.30
Greek will prove useful when in holidays in Cyprus or Greece (ORIEN8)	-.04	.79
Greek will help in gaining good friends in Cyprus or Greece (ORIEN7)	.19	.77
Greek necessary to keep Greek people together (ORIEN6)	.42	.54
To be a good Greek I have to know the Greek language (ORIEN2)	.45	.57
Eigenvalue	3.35	1.17
Percent of Variance Explained	41.9	14.7
Total Variance Explained	56.5	

Table 6.12

Factor analysis of items in the Orientations in Learning the Greek Language Scale

the integrative motive of Gardner and his associates that has been described in detail previously. One, however, can detect in item 3 an instrumental orientation (i.e. I wish to enter a given profession and learning Greek increases my chances to achieve this aim, that is learning Greek is a means to get a certain concrete benefit). The fact is, however, that in the present times those professions that necessitate the use of Greek are the ones that deal more or less exclusively with the Greek community (providing services to members of this community) and an individual's desire to enter such a profession denotes more than anything else a liking of involvement with members of this community. Support for the validity of this last view was obtained in subsequent discussions with pupils who have taken part in the study and who were asked to reflect on the content of the item and justify the answer they provided. Nearly all of them revealed their desire to be involved or keep a distance from the Greek Cypriot community when justifying their high or low agreement with the statement presented in item 3.

The following statements load heavily on the second factor:

Item 8. Greek will prove useful when in holidays in Cyprus or Greece (.79)

Item 7. Greek will help in making good friends in Cyprus or Greece (.77)

The content of these two items does suggest an instrumental orientation. It reveals an expectation of

personal advantages to accrue from learning the Greek language outside the context of the ethnic community, where they live and of which they are part. They remind one of statements that could be made by an outsider (not belonging to the Greek/Cypriot ethnic community) expecting to get some concrete benefits to compensate for his effort to learn the Greek language.

The remaining statements load about equally on both factors and for this reason they are not of any help to us in defining the factors.

In order to examine the stability of the two factors, the factor pattern that was derived from factor analysis based on the pilot data (n = 202) was compared to that derived from factor analysis based on the answers of the subjects taking part in the final study (n = 510).

Table 6.13 presents the results of factor analysis of the orientation items for the pilot and the final study. By inspection it can be seen that the factor pattern (showing the loadings of each item on the two factors and thus providing operational definitions of them) is similar in the two instances, with only minor discrepancies. This points to the stability of the two factors.

Basically, the results of the present research supported Gardner et al.'s contention for the existence of two aspects of motivation in learning a second language, an integrative and an instrumental orientation. Not all items, however, behaved as expected, a fact that may be attributed

to the distinct features of our sample and their relationship to the language of interest.

Item	Factors I		Factors II	
	Pilot	Final	Pilot	Final
ORIEN4	.85	.81	.15	.18
ORIEN3	.65	.81	.14	.03
ORIEN5	.81	.70	.15	.36
ORIEN1	.64	.44	.16	.42
ORIEN8	-.04	.01	.79	.86
ORIEN7	.19	.17	.77	.81
ORIEN6	.45	.41	.57	.50
ORIEN2	.42	.37	.54	.61
Eigenvalue	3.35	3.54	1.17	1.17
% of Variance Explained	41.9	44.2	14.7	14.5
Total Variance Explained			56.5	58.7

TABLE 6.13

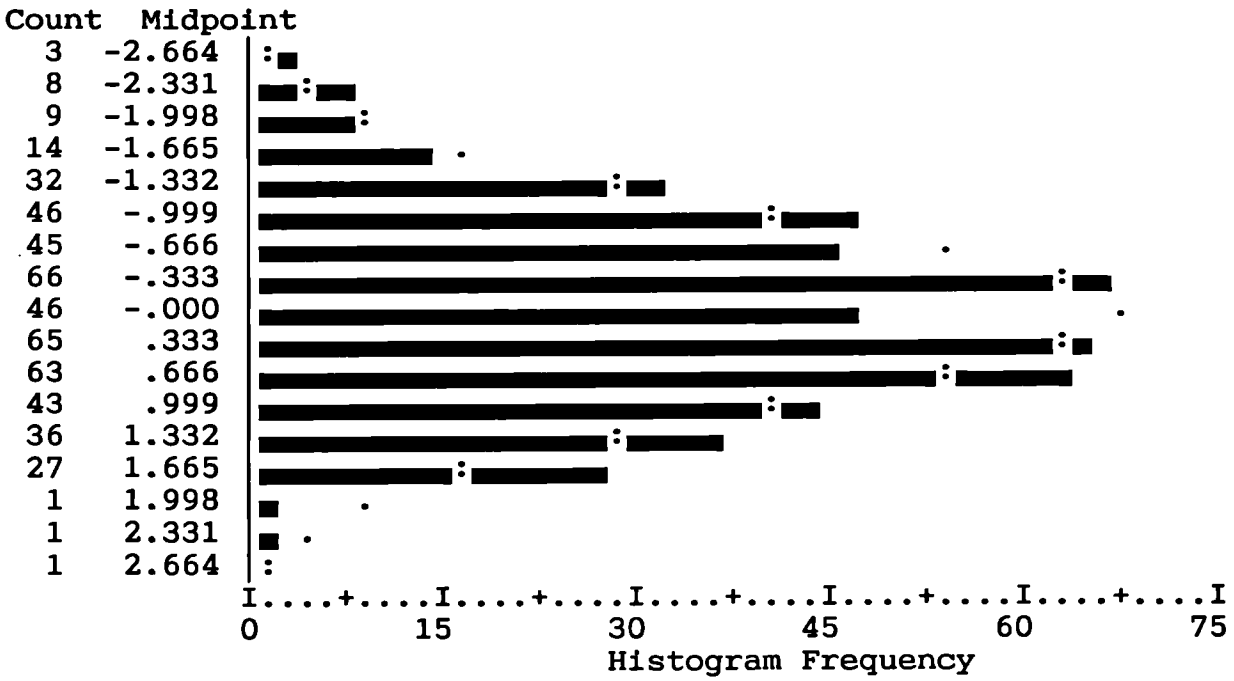
Factor analysis of items in the Orientation in Learning the Greek Language Scale based on data from the samples used in a) the pilot and b) the final study

The integrative motive has approximately the same meaning as that proposed by Gardner and his associates. It represents a move towards the ethnic community, a desire to become a more active part of it, and achieve success inside one's ethnic community. The difference in our respect lies in the fact that Gardner's other, foreign community is the mother tongue ethnic community.

The instrumental motive as is defined in our research has nearly the same meaning as that suggested by Gardner and his associates. It reveals a motive directed at gaining personal advantages and benefits out of learning a second language.

Scores on each scale were obtained by calculating the factor scores for each dimension. Tables 6.14a and 6.14b provide the distributions and descriptive statistics for the two scales.

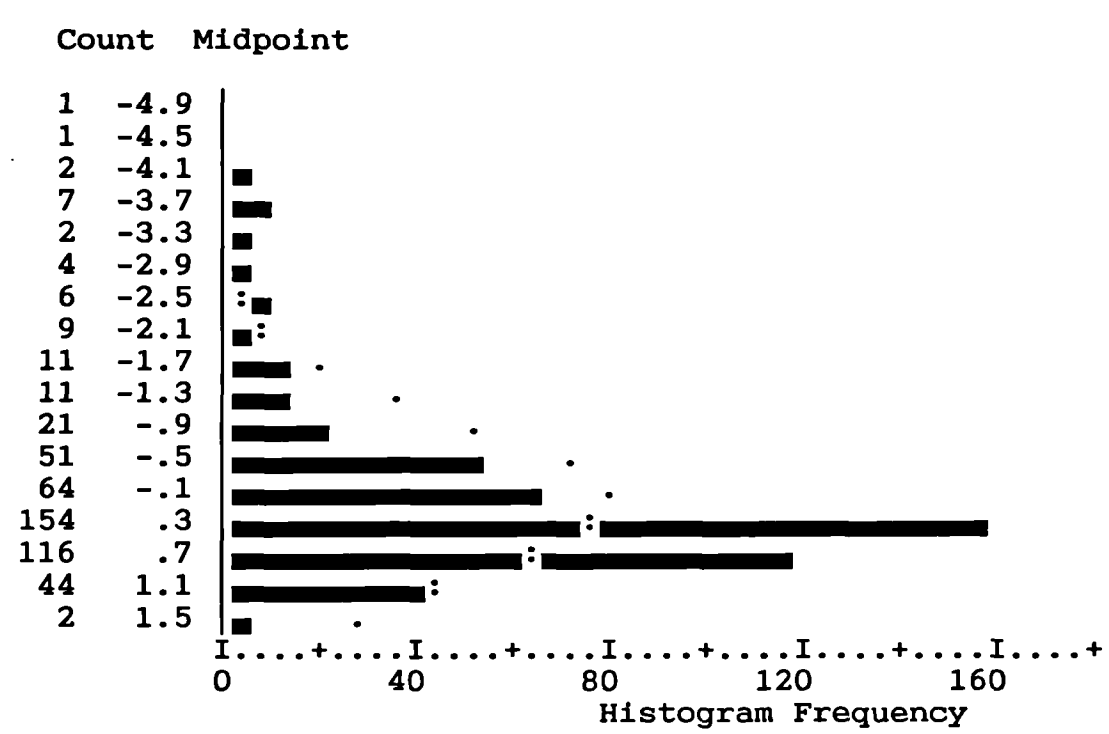
Integrative Orientation Scale
(Regression Factor Scores)



Mean	-.000	Std Err	.044	Median	.016
Mode	1.685	Std Dev	1.000	Variance	1.000
Kurtosis	-.507	Skewness	-.214	Range	5.072
Minimum	-2.552	Maximum	2.520	Valid Cases	506
Missing Cases	4				

Table 6.14a: Distribution and Descriptive Statistics for the Integrative Orientation Scale

Instrumental Orientation Scale
(Regression Factor Scores)



Mean	.000	Std Err	.044	Median	.294
Mode	.389	Std Dev	1.000	Variance	1.000
Kurtosis	4.731	Skewness	-2.015	Range	6.181
Minimum	-4.751	Maximum	1.430	Valid Cases	506

Table 6.14b: Distribution and Descriptive Statistics for the Instrumental Orientation Scale

6.2.6 Conception of Greek/English School Teachers Scales

In order to measure the conceptions which pupils of GS schools have of both their GS School teachers and their mainstream English teachers two similar scales were used. These scales consisted each of ten Likert-type items (Table 6.15) designed to measure the pupils' conceptions. Pupils using their experience in GS schools were required to assess the extent to which Greek or English school teachers possessed such qualities and characteristics such as friendliness to pupils, acceptance and respect of them, ability to maintain classroom discipline, sense of humour, kindness, nervousness, character and reliability. The last item assessed the general impression that pupils have of their teachers (general likability).

In order to check for any effects stemming out of the order of presentation of the two scales counterbalancing was used. For this purpose in half the questionnaires pupils were asked to provide their conception of English school teachers first and then that of their GS School teachers. For the other half of the questionnaires the reverse was done.

The two Scales were administered to a random sample of 202 pupils attending GS schools. A principal components factor analysis was performed on all items of each scale, out of which a single factor emerged explaining 69.7% and 54.4% of variance in the scores in the Greek and English scales respectively. The reliability was high for both the

Greek scale (Cronbach's alpha =0.94) and the English scale (Cronbach's alpha =0.89).

Scores on this variable range from 10 to 70, a high score indicating a positive conception of GS School teachers, whereas a low score denotes a negative conception of them.

A frequency histogram plus descriptive statistics for the Conception of GS School Teachers Scale are presented in Table 6.16a. By inspection it is readily seen that the distribution is skewed to the left (skewness = -.525). In order to correct the skewness and bring the distribution more close to normality a square (X_j^2) transformation was applied. The transformed distribution (skewness = -.01) is presented in Table 6.16a.

A frequency histogram plus descriptive statistics for the Conception of English School Teachers Scale are presented in Table 6.16b.

From your experience in your Greek (English) school, please rate Greek (English) School teachers in terms of the degree to which they possess the following qualities.

- **friendliness to students**

Very Much _____:_____:_____:_____:_____:_____:_____ Very Little

- **acceptance and respect of pupils**

Very Much _____:_____:_____:_____:_____:_____:_____ Very Little

- **ability to maintain discipline in the classroom**

Very Much _____:_____:_____:_____:_____:_____:_____ Very Little

- **qualifications**

Very Much _____:_____:_____:_____:_____:_____:_____ Very Little

- **sense of humour**

Very Much _____:_____:_____:_____:_____:_____:_____ Very Little

- **kindness**

Very Much _____:_____:_____:_____:_____:_____:_____ Very Little

- **nervousness**

Very Much _____:_____:_____:_____:_____:_____:_____ Very Little

- **character**

Very Much _____:_____:_____:_____:_____:_____:_____ Very Little

- **reliability**

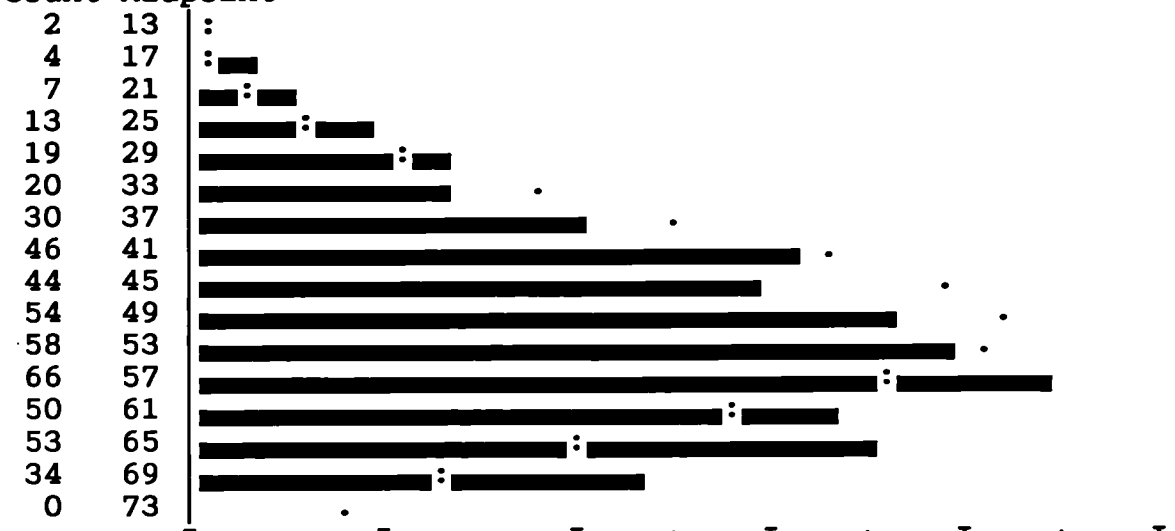
Very Much _____:_____:_____:_____:_____:_____:_____ Very Little

- **general likability**

Very Much _____:_____:_____:_____:_____:_____:_____ Very Little

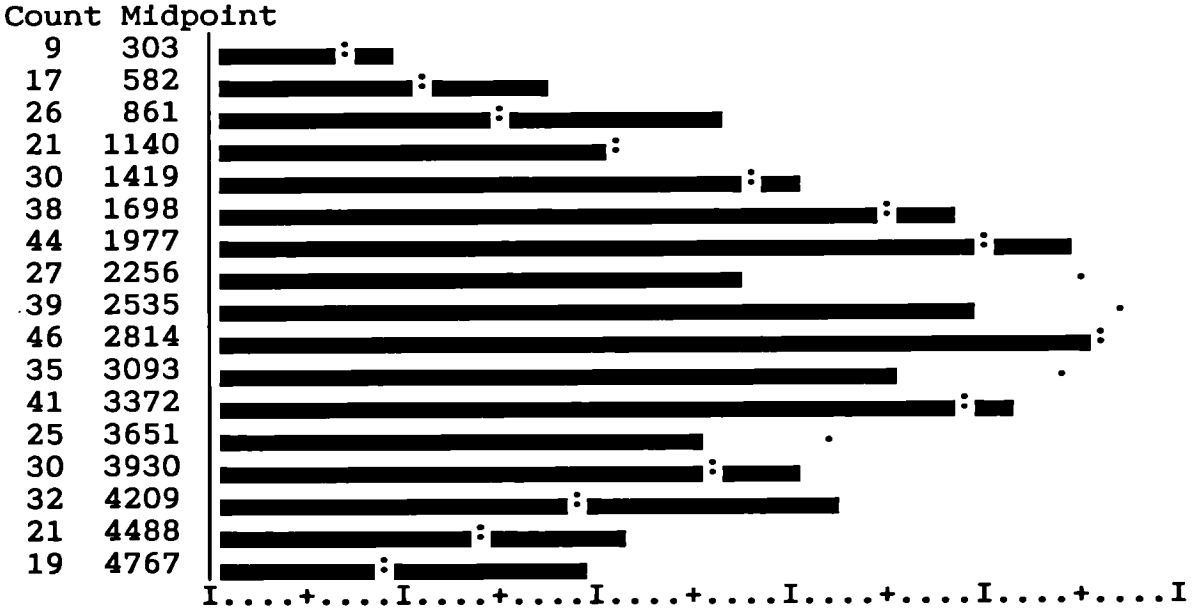
Table 6.15: The set of items in the Conception of Greek (English) School Teachers Scale

(i) **Raw Data Distribution**



Mean	49.694	Median	51.000	Std Dev	12.561
Kurtosis	-.340	Skewness	-.525	Valid Cases	500

(ii) **Transformed Distribution** *

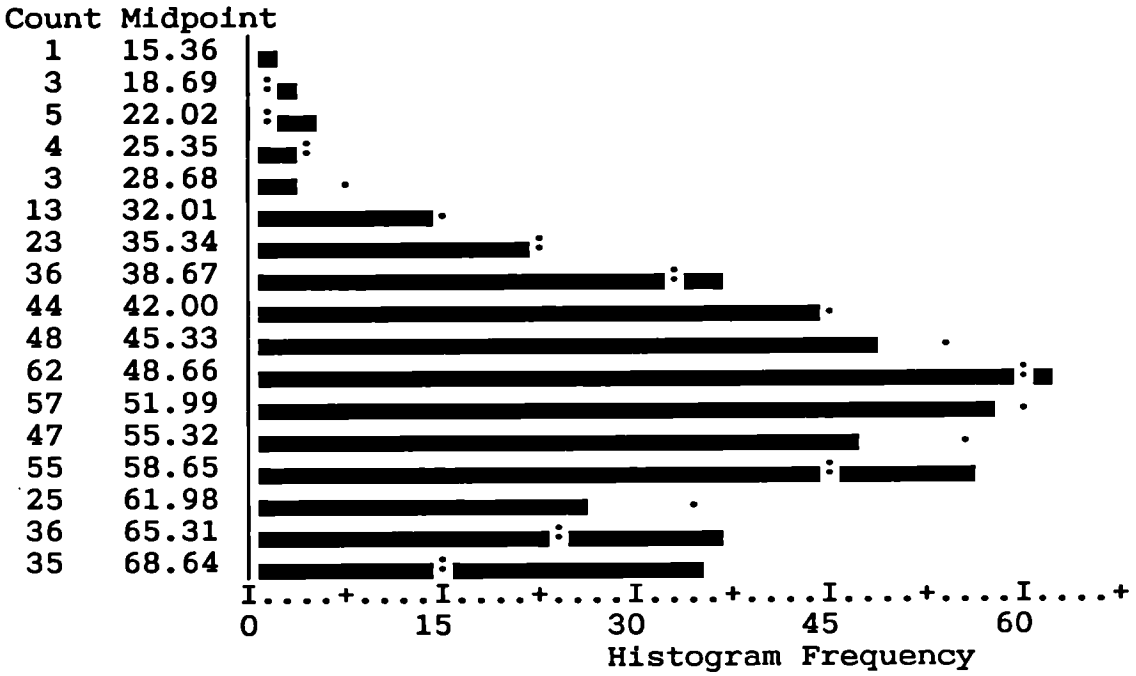


Mean	2626.954	Median	2601.000	Std Dev	1180.545
Kurtosis	-.894	Skewness	-.009	Valid Cases	500

* The raw data distribution was transformed by the use of the square (X_j^2) transformation (Rummel, 1970)

Table 6.16a: Distributions (raw and transformed) plus descriptive statistics for Conception of GS School Teachers Scale

Raw Data Distribution



Mean	50.487	Std Err	.488	Median	51.000
Mode	53.000	Std Dev	10.882	Variance	118.420
Kurtosis	-.022	Skewness	-.344	Range	56.000
Minimum	14.000	Maximum	70.000		
Valid Cases	497	Missing Cases	13		

Table 6.16b

Distribution plus descriptive statistics for Conception of English School Teachers Scale

6.2.7 Reaction to Curriculum Content

The measure used to evaluate the preferences of pupils to sections of the curriculum involved the presentation of a series of statements describing the six activities, as presented below:

i. learning the Greek language
ii. learning Greek music
iii. learning Greek dancing
iv. learning about the history and geography of Cyprus an Greece
v. learning about the Christian Orthodox religion
vi. participating in festivals and concerts organized by the GS School

Pupils were asked to rank these activities in order of the degree to which they appeal to them, by putting a number from 1 (indicating the highest preference) to 6 (indicating the lowest preference).

In order to get a common measure of comparison of the activities in terms of the preferences of pupils an Index of Preference was devised and calculated for each activity in the following way:

For each activity 1st preference was assigned the value of 5, 2nd preference the value of 4, 3d the value of 3, 4th the value of 2, 5th the value of 1, and finally, 6th preference the value of 0. For each activity a total

preference score (P_{total}) was calculated by multiplying the frequency of each preference by its corresponding value.

The index of preference is obtained by dividing P_{total} by $P_{highest}$ (a value calculated by multiplying the total number of pupils by 5, which corresponds to the highest possible preference score, which would be given to an activity if all pupils gave their highest preference to it). Values of the index range from .00 to 1.00. A value of the index of preference approaching 1 denotes high preference, whereas a value approaching 0 low preference.

6.2.8 Greek Language Maintenance Scale

Scores on this measure were obtained by combining scores on scales a and b below:

a. This measure consisted of five items evaluating the extent to which pupils use the Greek language in their conversation with other people (mother, father, brothers and sisters, relatives, and friends).

b. Three items evaluated the extent to which pupils read Greek books, magazines or newspapers.

A high composite score (maximum 8) indicated that the pupils used the Greek language to a high degree.

6.3 SUBJECTS

The sample consisted of 510 pupils (232 male and 278 female) attending GS schools in London.

The age of pupils ranged from 11 to 18. As can be seen in Table 6.17 the ages from 11 to 15 are well represented, whereas from 16 upwards the number of participants is low. This is because by the age of 15 to 16 GS School pupils with normal attendance must have completed their cycle of study of the Greek language at the GS School which consists of three phases: a.From 6 to 12: Preliminary studies, b.from 13 to 14: Modern Greek O'Level, and c.from 15 upwards: Modern Greek A' Level.

AGE (YEARS)	NO. OF SUBJECTS	%
11	74	14.5
12	112	22.0
13	130	25.5
14	85	16.6
15	69	13.5
16	26	5.1
17	10	2.0
18	4	0.8

Table 6.17
Age of pupils participating in the study

Pupils participating in the present study were drawn from 37 GS schools operating in London during the academic year 1987-1988 (Appendix B). These schools constitute the overwhelming majority of the schools run by O.E.S.E.K.A. and the Association of Independent Schools (the total of schools operating under these organizations in 1987-1988 were 46) and which are taught by members of K.E.A. (Cyprus Educational Mission) and part-time teachers. Schools under

the control of K.E.S. were not included in the sample[1] . The schools included were located in areas with high concentrations of Greek Cypriots. As can be seen in Table 6.18 each London area with high concentrations of Greek Cypriots is represented in the sample roughly in accordance with the size of the population of pupils attending Greek school in the area.

AREA[2]	NO. OF STUDENTS	%
Enfield	164 (1224)	32.16 (38.01)
Barnet	153 (874)	30.00 (27.14)
Haringey	47 (248)	9.22 (7.70)
Potters Bar	29 (138)	5.69 (4.29)
East London	26 (123)	5.10 (3.82)
Central & South London	55 (416)	10.97 (12.92)
West London	36 (197)	7.06 (6.12)
Total	510 (3220)	100.00 100.00

Table 6.18
Number and percentage of pupils in the sample by area of London where the schools are located.
In parentheses the total number of pupils (and the respective percentages) by area are presented (Academic year 1987-88).

Pupils attending GS School are, with negligible exceptions, children whose parents (both or at least one) are of Greek origin. The overwhelming majority of these children were born in Great Britain, their parents being born in Cyprus (so we speak of these children as being categorised second generation immigrants) and a small minority of children whose parents were born in Britain (these children being classified as third generation immigrants).

As shown in Table 6.19 the population of pupils taking part in this study have the following characteristics, as far as their origins are concerned:

PUPILS	N	%
Born in Cyprus or Greece	52	(10.2)
Born in Gr.Britain	458	(89.8)
Total	510	(100.0)
THEIR PARENTS		
Both parents born in Cyprus	413	(81.0)
Both parents born in Greece	17	(3.3)
Father born in Cyprus mother in Gr.Britain	33	(6.5)
Mother born in Cyprus father in Gr.Britain	30	(5.9)
Both parents born in Gr.Britain	7	(1.3)
Other	10	(2.0)
Total	510	(100.0)

Table 6.19

Country of birth of subjects and their parents

6.4 PROCEDURE

Subjects answered a questionnaire in English which included items measuring the variables that are described in previous paragraphs.

The questionnaire asked also pupils to provide information about their age, father and mother's country of birth, father's occupation, length of residence in a country other than Britain, number of visits to Cyprus or Greece, and whether their grandfather or grandmother lived with them. They also were asked to provide information

about their attendance at GS School, such as time, hours, and years of attendance, whether their parents were involved in the committee that run the GS school at which they were attending, the degree to which their parents encouraged them to attend, and the distance they travelled in order to come to the GS school.

Teachers teaching at these schools provided their own evaluation concerning each pupil's achievement and interest shown in class.

Before the administration of the questionnaire pupils were provided with information about the main objectives of the study and they were given assurances that their responses would be treated with the utmost confidentiality. They were also encouraged to respond freely and sincerely, as there was no right or wrong answer to the items of the questionnaire.

The questionnaire was administered during the normal operation of the school by the author of the present research. Where this was not possible, trained associates (teachers serving in the Cyprus Educational Mission) were used. Because the majority of measures involved 7-point Likert-type items pupils taking part in the study were given a preliminary training in how to answer these type of items, so that their answers more accurately reflect their true feelings.

The administration of the questionnaire was completed in one session and its administration took an average of 30 minutes.

Notes

[1] The fact that no schools under the control of K.E.S. were included in the study had only to do with matters relating to ease of administration of the questionnaire.
Pupils attending GS schools under the control of one authority (K.E.S., O.E.S.E.K.A., or the Independents) are not thought to differ in important respects which could pose serious limitations on the results of the present study. Furthermore, schools under all authorities are facing similar problems and have the same curricular priorities, except for the fact that schools belonging to K.E.S. (operating under the auspices of the Greek Orthodox Church) are placing more emphasis on the religious aspect of ethnic education. This may produce a different configuration of results as far as preferences for school activities are concerned (Chapter VIII). This hypothesis could be examined by future research.

[2] The name of the area shows the location of the school and not necessarily the area of residence of the students, as a substantial number reside at some distance from school (11% reside 4-5 miles from school, 5% 6-9 miles and 3% 10 miles or more).

CHAPTER VII
LISREL ANALYSIS OF THE FISHBEIN/AJZEN MODEL

7.1 INTRODUCTION

As has already been stated the focus of the present study is on two major aims under each of which a number of issues of theoretical and practical importance are examined.

The first aim is to consider the appropriateness of the theory of reasoned action proposed by Fishbein and Ajzen. Specifically the focus is on the utility of the theory in predicting the future behaviour of pupils attending GS School on the basis of their attitudes and social norms. In addition to that, the study will explore in a theoretical sense the relationship of attitudes and social norms with behaviour. A third important aspect of the first aim is to apply LISREL analysis to a verification of the theory of reasoned action.

The second aim is to fill a gap in existing research on ethnic supplementary education by obtaining data related to the motivational and attitudinal reactions pupils attending such supplementary schools in London. Under this aim a set of issues are examined, mainly of an exploratory nature. Specifically the application of Gardner and Lambert's theory of the existence of two types of orientations in learning a second language to the case of mother tongue learning is explored. Furthermore, the conceptions and attitudes of pupils toward their GS School teachers plus their reactions to sections of the GS School curriculum are

explored.

The analysis of the data that followed the administration of the questionnaire provided a set of results that help provide answers to the questions raised. The following pages are devoted to the presentation of results and the discussion of their meaning and implications. In keeping with the distinction between the two aims described previously, the set of results that relate to each aim are presented and discussed in separate chapters. The present chapter is devoted to the results relating to the first aim, whereas the following chapter (Chapter VIII) deals with the second aim.

7.2 APPLICATION OF LISREL TO THE THEORY OF FISHBEIN/AJZEN -RESULTS

The statistical model described in paragraph 5.2.4 of Chapter V, which specifies the hypothesized relationships of attitudes and social norms with behavioural intentions of pupils attending GS School was analyzed through the LISREL statistical procedure.

The structural coefficients in the hypothesized equations, as well as the other parameters in the model were estimated by LISREL by the Maximum Likelihood procedure. The input data were the following matrix of correlation coefficients (Table 7.1) indicating the relationship among the seven variables included in the model.

	X_1	X_2	X_3	Y_1	Y_2	Y_3	Y_3
X_1 (IDENT)	1.00						
X_2 (ACCUL)	.54	1.00					
X_3 (INTEG)	.41	.45	1.00				
Y_1 (ATSCHL)	.41	.46	.42	1.00			
Y_2 (ATTEACH)	.35	.38	.40	.58	1.00		
Y_3 (INTENT1)	.41	.42	.31	.38	.33	1.00	
Y_4 (INTENT2)	.47	.46	.38	.51	.41	.72	1.00

Table 7.1
Correlation Matrix of Variables in the Model

All estimates for the present model are presented in the diagram of Figure 7.1 as well as in Table 7.2.

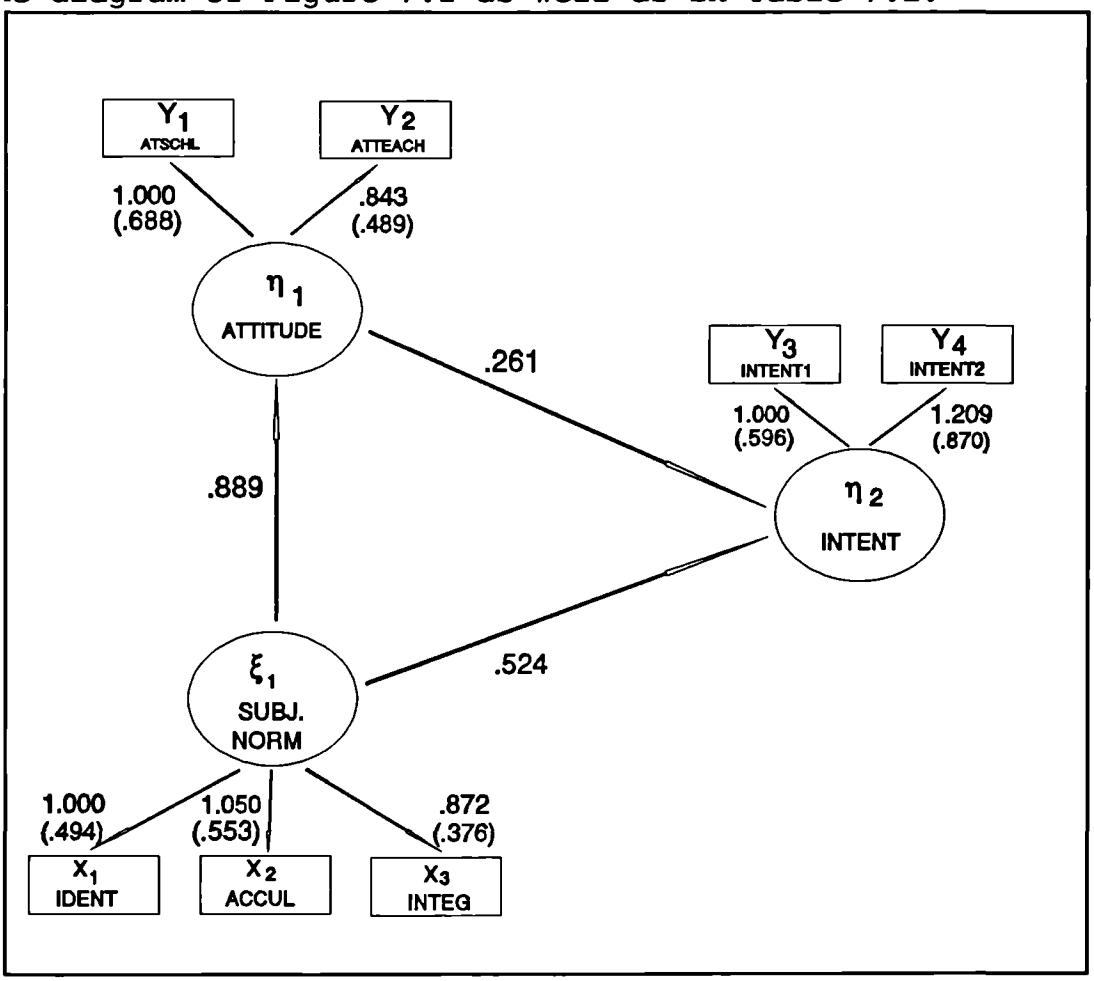


Figure 7.1

Diagram of the model with LISREL estimates

Parameter	Estimated Value	t-value
a.Measurement		
1. λ_{11}^{x}	1.000	(fixed parameter)
2. λ_{21}^{x}	1.050	13.21
3. λ_{31}^{x}	.872	11.45
4. λ_{11}^{y}	1.000	(fixed parameter)
5. λ_{21}^{y}	.843	12.84
6. λ_{32}^{y}	1.000	(fixed parameter)
7. λ_{42}^{y}	1.209	15.83
b.Structural		
1. γ_{11}	.889	11.38
2. γ_{21}	.524	4.93
3. β_{21}	.261	3.03
c.Error		
1. θ_{11}^{δ}	.506	11.70
2. θ_{22}^{δ}	.447	10.61
3. θ_{33}^{δ}	.624	13.26
4. $\theta_{11}^{\varepsilon}$	.312	6.54
5. $\theta_{22}^{\varepsilon}$	.511	11.37
6. $\theta_{33}^{\varepsilon}$	.404	10.25
7. $\theta_{44}^{\varepsilon}$	.130	2.93
8. ψ_{11}	.297	5.64
9. ψ_{22}	.292	8.37
x^2	18.49	
df	11	
Ratio (x^2/df)	1.68	

Table 7.2

Maximum Likelihood Estimates of Model Parameters

The LISREL program as well as the computer output with the results of the analysis are presented in Appendix G and H respectively.

The results of the LISREL analysis relate to three basic

aspects of our model, i.e. its overall fit, its measurement aspect, and, finally its structural aspect.

7.2.1 Fit of the model

Before any consideration of the measurement and structural aspects of the model is attempted, evidence of its overall fit to the data from the sample used in the present study should be presented.

The main concern when discussing the fit of the model is whether the model itself describes in an adequate way the correlations among the observed variables. There is an infinite number of factor matrices (and thus models) that could reproduce the matrix of correlations obtained in the present sample. In the present case we are interested in the model that specifies our hypothesized paths.

There are certain measures evaluating the goodness of fit of a model, some of which are provided by the LISREL analysis. The first measure is the **Chi-square Goodness of Fit Index** (x^2). According to Jöreskog and Sörbom (1986; 1989) one should not regard x^2 as a test statistic, but as a measure providing information on the goodness (or badness) of fit of the structural model. In this sense the practice is for large values of x^2 to be taken as evidence of bad fit, whereas small x^2-values as indicators of good fit. A problem, however, that arises relates to what x^2-values to consider as large and which small, as this measure has been found to be sensitive to sample size and deviations from normality in the variable distributions.

Thus, departures from normality and large samples tend to increase x^2 .

Jöreskog and Sörbom (1981; 1986; 1989) suggest that, in order to get over this problem and arrive at a meaningful interpretation of this measure, the x^2-values should be considered in conjunction with the degrees of freedom associated with it, which should serve as a standard by which to judge whether a given x^2-value is large or small.The degrees of freedom for x^2 are calculated by the equation

$$df = \tfrac{1}{2} k (k + 1) - t$$

where k is the number of observed variables in the model (in our case k = 7) and t is the total number of independent parameters estimated (in our case t = 17). Substituting in the equation

$$df = \tfrac{1}{2} 7 (7 + 1) - 17 = 11$$

The analysis yielded a x^2-value of 18.49 at 11 degrees of freedom, which is associated with a p value of .07. The fact that the x^2-value is not statistically significant ($p > 0.05$), points to an adequate fit of the model to the data of the present study.

In order to get to a meaningful interpretation of the obtained x^2-value Wheaton et al.(1977) as well as Wolfe (1981) suggest the application of a criterion, which is consistent with Jöreskog and Sörbom's (1986; 1989) suggestions, and which has been applied consistently by researchers in recent research using LISREL (Gardner, 1983; Gardner et al., 1983; Clement and Kruidenier, 1985).

Wheaton et al. (1977) recommend that a good fit is indicated where the ratio of x^2 by the degrees of freedom does not exceed the value of 5.00. In our study this ratio yields a value of 1.68 which suggests that this model accounts in an adequate way for the correlations among the variables included.

Bentler and Bonnet (1980) recommend the use of the **norm fit index.** This index gives the relative decrease in lack of fit between two nested models, one of the two being less restrictive than the other. The norm of the comparison is usually the null model that predicts no relations among any of the manifest variables. The normed fit index associated with the present model yields a value of .990[1] with an associated reduction in degrees of freedom in going from the null model to the structural equation model of 7. As the value of the index is very close to 1, the results mean that we have gained considerable improvement in fit at the expense of very little loss in degrees of freedom in going from the null model to our structural equation model. The structural model has captured nearly all the information in the sample variance-covariance matrix and accounts for the relationships among the seven manifest variables. This provides considerable support to the present model.

The LISREL procedure generates two further indices that provide evidence on which to base our judgements on the goodness of fit of the model. These indices are the **Goodness of Fit Index (GFI)** and the **Root Mean Square Residual (RMR).** The GFI Index measures the relative amount

of variances and covariances jointly accounted by the model (Jöreskog and Sörbom, 1981,1986; 1989; Linden, 1986). This measure is independent of the sample size (an improvement on x^2) and robust against departures from normality. Its major drawback is the fact that the distribution of GFI's is unknown, which restricts the usefulness of this measure as there is no standard to compare it with. The present analysis yielded a GFI value of 0.989 suggesting a good fit of the model, as values approaching 1 are an indication of a good fit of the model.

Another index is the RMR the value of which is 0.022 (lowest possible value is 0), which is again interpreted as suggesting a good fit of the model.

Concluding, all indices calculated suggest a satisfactory fit of the model to the data.

7.2.2 Measurement Model

The **measurement model** measures the extent to which the indicator variables represent efficiently the corresponding latent variables. This is evidenced by the factor loadings (λ's) of the manifest variables on the corresponding factors (latent variables). Values obtained for the present model are presented in Table 7.2 with their associated t-values. They are also presented in Figure 7.1. In parentheses are the square multiple correlations which are the reliabilities of the observed exogenous or endogenous variables, measuring the extent to which they are efficiently measuring the corresponding latent variables.

As can be seen all observed variables have moderate to high reliabilities with the exception of INTEG (R^2 = .38). Moreover, the LISREL analysis provides a generalized measure of reliability for all observed exogenous (x-variables) and one for all observed endogenous (y-variables). These two measures (Jöreskog & Sörbom, 1986; 1989) assess how well the observed variables measure jointly the latent variables. In the present analysis the total coefficient of determination for the x-variables is satisfactory (R^2=.738), and for the y-variables is particularly high (R^2=.964), pointing to the efficiency of the measurement model.

7.2.3 Structural Model

The **structural model** describes the causal connections in the model. As indicated by the results both Subjective Norm and Attitudes are causally related to Behavioural Intentions. The structural coefficient showing the effect of Subjective Norm on Behavioural Intentions is .52, whereas that showing the effect of Attitude on Intentions is .26, suggesting that the former has a heavier influence on Intentions than the latter. An important finding is the one related with the effect of Subjective Norm on Attitude (γ_{11}=.89), which suggests a particularly heavy impact of the former on the latter.

Comparisons of the coefficients will give an idea of the relative importance of the variables in the model. The importance of each variable is, however, better depicted in

the model than in the individual structural equation. From an inspection of the model (Figure 7.1) it becomes obvious that the variable Subjective Norm has both direct and indirect (through the variable Attitude) effects on Behavioural Intentions. The sum of direct and all indirect effects are called total effects, which give a better picture of the effect of each variable. All effects, direct, indirect and total, are presented in Table 7.3 below.

DEPENDENT VARIABLE: INTENTION

Variable	E f f e c t s			Significance
	Direct	Indirect	Total	(t-value)
SUBNORM	.53	.23	.76	11.38
ATTITUDE	.26	---	.26	3.04

Table 7.3

Direct, indirect, and total effects in the model

By inspection of Table 7.3 it can be seen that the total effect of Subjective Norm on Intentions is much higher than that revealed by its direct effect (.53) and is raised to .76.

The estimated structural equations plus the coefficients of determination associated with each (R^2- expressing the percent of variance in the dependent variable accounted for by the independent variables in the equation) are as presented in Table 7.4.

We can see that 57 percent of the variance in the latent variable Attitude are accounted for by the relationships in the model, whereas for Behavioural Intention the variance

accounted for is 51. The total percent of variance in latent endogenous variables in the model accounted for is 64.

Structural Equations	R^2
ATTITUDE = .89 SUBNORM + ζ_1	.57
INTENTION = .26 ATTITUDE + .53 SUBNORM + ζ_2	.51
Total R^2	.64

Table 7.4

Coefficients of Determination for Structural Equations in the Model

7.3 DISCUSSION

The results of the previous analysis provide further support to the Fishbein/Ajen model of attitude - behaviour relationship. All indices calculated point to the fit of the model to the data of the present sample and a substantial proportion of the variance in Intentions (51%) is explained by Attitudes and Subjective Norm, which is the basic premise of the Fishbein/Ajzen model. The fact that the study involved a more general conception of attitude and subjective norm and a more naturalistic situation adds to the credibility of the theoretical framework posed by Fishbein and Ajen.

Furthermore, the results supporting the above theory were obtained by the powerful analytical tool of LISREL, which, as has been pointed out in previous paragraphs, can deal in a more efficient way with the conceptual model suggested than other currently available techniques of

analysis.

Of particular importance is the path in the model suggesting a causal link between subjective norm and attitudes, which brings a new element in the model. These two variables were kept independent in the original model of Fishbein and Ajzen and subsequent studies testing the validity of the model. In the present study subjective norm, representing the social component and conceptualized as social pressure of important others on the individual to conform, was hypothesized to influence the attitudes of students toward GS School and teachers teaching there. This adds an interesting dimension to the model as originally conceptualized. Apart from the evident relatedness of the two components (ethnic allegiance and attitudes to ethnic institution), there is a clear time difference in the operation of the two components (at least as conceptualized in the present study) as sources affecting the individual's behavioural intentions, the social component having a longer history of exerting its influence on him/her, whereas the attitudinal component starts its operation after his/her contact with the attitudinal object (in the present study the GS School and GS School teachers). This latter point serves to increase the validity of the existence of this particular path.

The findings relating to this particular path suggest a heavy influence of the social component on attitudes, as indicated by a particularly high regression coefficient (γ_{11}=.89). What this result actually means is that the

degree of ethnic allegiance of pupils determine to a large extent the way they will approach initially the GS School and teachers teaching there and will continue colouring their experiences and thus their attitudes and conceptions. More plainly, this result suggests that the higher the ethnic allegiance of pupils the more positive their attitudes towards their ethnic supplementary schools will be.

The core question asked in the introduction of Chapter IV concerned the future of the institution of the GS School. Specifically it was asked what role the attitudes of pupils and their ethnic identification could play in influencing their intentions to provide support to this institution in the future. This support was operationally defined as the degree of their willingness and readiness (as indicated by their stated intentions) to arrange for their offsprings to attend GS School and learn the Greek language in the future. This parental support, as has been explained in the introduction to Chapter IV, operating independently or in conjunction with the support of interested agencies (the governments of Cyprus or Greece, the Church, and others) is expected to play a vital role in influencing the very existence and prosperity of the institution, especially in the future, when the first generation of immigrants will pass away. This support takes a further meaning in view of the bleak predictions of Oakley (1970) and Edwards (1988) concerning the future of these ethnic institutions, given the lower degree of ethnic

allegiance that the younger generation of immigrants are expected to show, as well as the fading away of the communicative function of the ethnic language (Edwards, 1988), which will render ethnic schools, whose main function is to transmit the ethnic language and culture, nearly redundant.

The results of the present analysis relating to the theoretical model proposed could provide some useful answers to this issue. For this reason a closer examination and interpretation of the structural coefficients indicating the causal influences of other variables on the intentions of pupils is needed.

The social component has been found to affect behavioural intentions to a considerable degree both directly (γ_{21} = 0.53) and indirectly, through attitudes (0.23), so that its total effect on behavioural intentions is raised to 0.76. The attitudinal component was found to have a lesser, but significant impact on behavioural intentions (β_{21} =0.26).

How can we interpret these findings?

On the basis of these results, it can be deduced that the major factor that determines pupils' intentions is the degree of their identification with their ethnic community, their involvement in its cultural practices and liking for their ethnic culture. This factor operates to increase pupils' readiness to provide support to this institution in the future and continue nurturing their offsprings (as future parents) along their ethnic traditions.

Furthermore, attitudes stemming out of the experiences of children in their GS school and with their GS School teachers are affecting significantly the intentions of pupils, but to a lesser degree as compared to ethnic identification.

The effect of ethnic identification is much more pronounced if apart from its direct effect on intentions the indirect effect through the channel of attitudes is taken into account. The indirect effect of ethnic identification on intentions is of particular importance and needs some further consideration. One interpretation of it is that, due to the fact that pupils' attitudes towards the GS School are to a large degree determined by the degree of their ethnic identification, a high proportion of the influence of attitudes on intentions can be traced back to it, i.e it is channelled through attitudes. Interestingly, when the effect on intentions due to the degree of ethnic identification of the pupil is removed from the direct effect of attitudes on intentions, a very small effect remains (as revealed by a regression coefficient of only 0.03). As the attitudinal component was operationalized through the pupil's experiences in the GS School and with GS School teachers, the elements in these experiences which could be thought to be independent of the pupil's ethnic identification are those responsible for the small effect of the attitudinal component on intentions.

On the other hand, as suggested by the model, the impact

of ethnic identification on intentions is amplified if it passes through the channel of the GS School. In other words, positive attitudes toward GS School attendance, gained through actual attendance and contact and interaction with GS School teachers, although themselves coloured heavily by the degree of ethnic identification of the pupil, increase the effectiveness of identification and raises its potential of affecting to a higher extent his/her intentions to support this institution in the future.

Set against the pessimistic forecasts of Edwards (1977; 1988) and Oakley (1970) concerning the fate of minority institutions, what does the model suggest to those interested in the future of the ethnic supplementary school?

Basically, it suggests that those variables should be controlled, that have been found to influence pupils' intentions. First and foremost they need to provide the necessary incentives and chances to younger generation of the community to increase their involvement in the cultural practices of their community and in the functioning of ethnic community institutions (such as ethnic associations, youth clubs, football clubs, dancing groups, etc.). The GS School itself should reexamine its objectives and curricular priorities and put more emphasis on its role as a major agent of propagating ethnic identity. These measures would in the long run raise the degree of ethnic affiliation and identification on the part of the younger

generation of the Greek Cypriot community.

Secondly, they shall make the necessary provisions for improvement in the conditions of ethnic supplementary education and in the standard of education offered through improvement in the standard of teachers staffing these schools (through better selection and inservice training).

Furthermore, they shall institute changes in the curriculum of these schools, on the basis of relevant research, so that it is better attuned to the needs of pupils attending. These changes, brought forward in cooperation and in full orchestration with their mainstream education, should render the curriculum better oriented to equipping them with the necessary armoury to function more efficiently and to the benefit of them and the society of which they will be parts, i.e the multicultural society of the future.

Cummins's (1984) and Feurstein's (1979) warnings about the long term effects of the gradual moving away from and distancing of minority group members from their own culture should be given due consideration both by community leaders and mainstream educators. Feuerstein points to the disastrous effects of the gradual alienation of a group from its own culture which leads to a disruption of the intergenerational transmission process, a process of major educational significance in the life of the individual. Cummins, in a similar vein, points to the undesirability of bicultural ambivalence, a condition in which the minority individual is unable to identify with a given culture

because of the existence of two cultures that make equal claims on his/her loyalty, that of the home (minority culture) and that of the school (majority culture). Cummins goes on to point that this condition is sustained and even worsened by the stance of those mainstream teachers who in their interactions with these pupils in the context of their mainstream education, transmit to them in a variety of ways their preconceptions and ideas about the inferiority of the pupils' home culture. Cronin (1984) documents such negative stance on the part of mainstream school teachers. This, according to Cummins (1986; 1989) leads to the disablement of minority pupils and their subsequent low academic achievement.

For the above reasons, and in connection with the results of the present study pointing to the importance of the ethnic identification of minority pupils, mainstream educators have an important role to play. Instead of seeing their pupils' bilingual and bicultural status in a negative light and as a problematic situation needing correction, they should see them as assets enriching the educational environment of the class and school as well as the wider environment of the society and become advocates for the preservation and promotion of these cultural and linguistic resources. This would facilitate and encourage ethnic children's identification with their community and home culture.

In addition to that mainstream teachers' moral backing and support of the ethnic supplementary school as well as

the recognition of its contribution to the overall development of ethnic minority children will boost its prestige among them and help nurture more positive attitudes toward them.

Concluding, if the ideal model for the future is a multicultural society, with the rich pool of languages and cultures as the individual colour stones that together make up the mosaic, the state and other related agencies involved should give serious consideration to ways of providing support both practical and moral to ethnic supplementary schools (Parker, 1985; GB. P. H of C, 1985). This would not only help actualize the rich cultural and linguistic potential of a multicultural society, but would gradually eliminate as well the very sources that feed divisiveness in it (Fishman, 1980) by instilling in ethnic minority pupils a sense of worth, self-confidence and pride in their ethnic and cultural roots.

N o t e

[1] The normed fit index is given by the formula $\delta_{0k} = \frac{(F_0 - F_k)}{F_0}$, where F_0 and F_k are indices of lack of fit of the most restricted null model and our structural model respectively. Evidence of lack of fit is obtained from the x^2-values for the two models. In the present case the value of the x^2 for the null model is 1830.71 with 18 degrees of freedom and for our structural model is 18.49 with 11 degrees of freedom. The value of the normed fit index is obtained by (1830.71 - 18.49) / 1830.71 and is equal to 0.990 with an associated reduction in degrees of freedom of (18-11) = 7.

CHAPTER VIII

MOTIVATIONAL AND ATTITUDINAL ASPECTS OF GREEK SUPPLEMENTARY SCHOOL ATTENDANCE

8.1 INTEGRATIVE AND INSTRUMENTAL ORIENTATION

8.1.1 Introduction

The distinction between an integrative and an instrumental orientation in learning a second language and the related theory have been proposed by Gardner and Lambert (1972) and subsequently developed by Gardner and his associates (Gardner & Smythe, 1981; Gardner, Lalonde and Pierson, 1983; Lalonde & Gardner, 1985) and other researchers (Gliksman, 1976; 1981; Naiman et al., 1978).

The interest in this distinction, besides its theoretical aspect, rests also on its practical implications, as the former type of orientation has been consistently found to account for a significant percentage of the variance in second language achievement.

In the context of the present study both the theory and its practical implications are of direct relevance, because children attending GS School are involved in learning a second language (second in the sense that their first language is English). There are, however, a number of differences in the pupil-language configuration between the context in which the theory has been developed and the context of the present study. These differences are analyzed in the paragraphs that follow.

The original as well as the main follow-up studies by Gardner an his co-workers have been done in Canada, a

country with an experience in bilingualism that is unique in many respects and distinct from that in other countries. The presence of two communities enjoying equal status side by side in the context of the same nation, speaking two highly prestige languages, English and French, constitutes a very different situation from that prevailing in Great Britain (as well as the United States) where there is a dominant community enjoying high status, its language and culture being in a state of dominance, as compared to other communities residing in the United Kingdom which are considered of lower status and their language and culture being in a state of subordination. This situation, however, is changing by the emergence of the new spirit of multiculturalism that is beginning to spread.

A second important consideration that springs from the first is related to the fact that the original studies in Canada have investigated motivational aspects of second language learning, the second language being French. Learning French as a second/foreign language, the learners being English language speakers, puts them in a position of additive bilingualism (Lambert, 1972). In this position the individuals are positively oriented towards that second language, because they feel that it adds to their repertoire of languages a highly acclaimed, high status language and culture and, furthermore, in this way they open their way to a community that is not in position of inferiority, but of equal status as their own community.

In our own study the situation is distinct from the one

just described in certain respects, which are the subject of the analysis that follows.

Subjects in the present study were of Greek Cypriot origin (a very small percentage only belonging to the Greek community). Their first language, i.e. the language in which they are more competent and feel more comfortable in communicating through, is the English language. The second language they are in the process of learning is not as remote and foreign as French is to British Canadians, but their mother tongue, the language of their parents and ancestors, which they used in their early life in their family but which gave way to English after their education in mainstream english schools started. So one is not saying in this respect that they are learning a second language from scratch, as British Canadians when learning French, but to their overwhelming majority they are improving or increasing their already existing capabilities in the Greek language, which is their mother tongue. (Appendix C shows frequencies of mother tongue using in the family, with brothers and sisters, with friends and relatives, as well as reading Greek books, magazines, and newspapers). It is their motivation to learn their mother tongue which is examined.

Given the existence of these substantial differences between the Canadian studies and the present one on the relationship of pupils with the second language they are trying to master, the main purpose in the present study is to check the validity of the concepts of integrative and

instrumental orientation coined by Gardner and his associates in the GS School setting with pupils engaged in learning their mother tongue or expanding their mother tongue skills that already exist.

Our task is to examine whether the nature of the two types of orientation, which have been identified and developed by Gardner and his associates in Canada, extends to the present case i.e. whether the meaning of the two orientations is substantially the same, as these concepts have been identified and developed by Gardner and his associates.

Part of the results of the present study relating to the theory of integrative and instrumental orientations have been presented in Chapter VI paragraph 6.5. It has been shown that factor analysis of the items in the Greek Language Orientation Scale revealed the existence of two dimensions, the interpretation of which points to their similarity with the integrative and instrumental dimensions. The fact that two separate factor analyses based on data from the pilot and the main study revealed the existence of similar factor patterns pointed to the stability of the two factors (see paragraph 6.5.3).

In an attempt to gain a better insight into the meaning of the two factors, factor scores for each factor were calculated and then correlated with other measures obtained in the study. The correlations are shown in Table 8.1.

The fourth column in Table 8.1 presents the t-values calculated in order to check whether the pairs of

	(Integ)	(Instr)	t	df	Signif of Dif/nce
1.Conception of GS School Teachers	.40	.24	2.57	493	**
2.Greek Identity	.41	.27	2.66	494	**
3.Greek Language Maintenance	.40	.09	5.15	471	***
4.Attitude to Greek Language	.40	.31	1.27	491	
5.Attitude to GS School	.42	.21	3.81	489	***
6.Greek acculturation	.45	.22	4.17	493	***
7.Interest shown in class (teachers' rating)	.17	.06	1.73	450	

** p < .05 ** p < .01 *** p < .001*

Table 8.1
Correlations among Integrative and Instrumental Orientation and other variables

correlations are significantly different. As can be seen from Table 8.1 the correlations among the variable Integrative Orientation and other variables reflecting a move towards the ethnic community are significantly higher than those obtained between the same variables and Instrumental Orientation. In this respect integrative orientation was found to be related to a statistically significant higher degree (than instrumental orientation) with Greek identification (.41), Greek language maintenance and use (r=.40) as well as with Greek acculturation (.45), which reflects liking of activities cultural and other that in the long run promote competence in this language and,

finally, liking for GS School (.42) and more positive attitude toward GS school teachers (.40).

In general the above correlations enhance the previous interpretation of the two factors and point to the construct validity of the Integrative Scale.

8.1.2 Discussion

The results of the present study provide further support to the validity of the distinction between an integrative and an instrumental orientation. The importance of the results of the present study is based mainly on the fact that the study has been carried out in a different setting, i.e. ethnic supplementary mother tongue classes in Great Britain, which is distinct in many respects from the setting of the studies in which the concepts of integrative and instrumental motivation originated and were refined. In the present study there was an attempt to examine the extent to which the two concepts are applicable to the case of mother tongue or heritage language learning. Baker (1986) identifies this need as an important one both on theoretical as well as on practical grounds. Mother tongue learning constitutes a conceptually different case from second or foreign language learning in a number of respects. First the individual is expected to have formed a special sentimental bond with the language spoken at home and by the ethnic community and which is a marker of his/her ethnicity. Second as this language has been used as the basic means of communication in his/her formative

years, before the mainstream english language took over (after his/her attendance at the mainstream english school), the individual is expected to have a basic mastery of the mother tongue.

Mother tongue or heritage language learning acquires further importance as it is becoming more widely recognised that the linguistic as well as the cultural potential existing in a given country should be given the chance and helped to be actualized for the long term benefit of the society a s whole. For this reason clarifying the role and importance of each contributor variable to mother tongue achievement, including language aptitude and integrative motivation, would be of practical as well as theoretical interest. Future research could probe further this issue.

Further studies should address specifically the issue of the relationship between integrative motivation and mother tongue achievement. Recent theoretical and empirical developments in the field of second language achievement, especially the developments concerning the sociocultural model of second language learning of Gardner and his associates (Gardner, 1983;1985; Gardner, Lalonde, and Pierson, 1983) offer useful parallels that could be used in understanding mother tongue learning or the expansion and growth of existing mother tongue capabilities and the contribution of integrative motivation in this respect.

8.2 PUPILS' REACTION TO THE GS SCHOOL CURRICULUM

8.2.1 Introduction

One major attitudinal aspect of children's attendance at GS School is the way they react to the curriculum they are exposed to, and more specifically the educational activities they are involved in during their attendance.

The curriculum of the GS School provides for a number of activities all planned and targeted toward promoting the superordinate aim of this institution, namely to preserve the ethnic identity and culture and transmit it to future generations of immigrants.

There are six main activities through which these schools aim at promoting their objectives: Learning the Greek language, Greek dancing, Greek music, learning about the history and geography of Cyprus and Greece, learning about the basic aspects of their Christian Orthodox religion, and participating in school festivals and concerts.

The examination of pupils' reactions could assume a number of forms, depending on the aims of the researcher. In the present case an exploratory examination was attempted, aimed at obtaining the preference pattern that pupils exhibit toward these activities.

The measure used to evaluate the preferences of pupils, which is described in detail in Chapter V, involved the presentation of a series of statements describing the six activities. Pupils were asked to rank these activities in order of the degree to which they appeal to them.

8.2.2 Results

Table 8.2 presents the results from the adminstration of the Preference Scale.

ACTIVITY	RANKING 1st	2nd	3d	4th	5th	6th	Index of Pref.
	% of pupils						
Learning the Greek Language	48	24	16	6	4	2	.80
Learning Greek dancing	29	23	13	14	12	9	.63
Learning about the history & geography of Cyprus/Greece	12	27	19	17	16	9	.55
Learning about the Christian Orthodox Religion	3	10	24	22	24	17	.39
Participating in School Festivals and Concerts	5	12	16	23	27	17	.39
Learning Greek Music	3	7	12	15	18	44	.26

Table 8.2

Rankings of GS School activities by pupils

The first column presents the activities being rated. The following six columns present the percent of students in the sample who gave 1st through to 6th rating to each activity, and the final column shows the Index of Preference for each activity, which has been designed and calculated as described in Chapter V in order to provide a common measure of comparison of the six activities.

As can be seen in the table learning the Greek language was found to be the most preferred activity of the GS School, learning Greek dancing came second, and learning about the history and geography of Cyprus or Greece third.

The activities related to learning about the Orthodox Christian religion and participating in GS School festivals and concerts received about equal ratings and came fourth in terms of their appeal to pupils. Finally, learning Greek music received the lowest rating and occupies the bottom of the preferences of GS School pupils.

8.2.3 Discussion

The exploratory nature of this attempt at probing into the reactions of pupils to the GS School curriculum and the type of data obtained do pose certain limitations as to the conclusions that could be drawn out of them.

Thus the present results are informative by showing that certain activities are preferred to others and vice versa, but they do not provide any information concerning the degree of liking for each activity. Such information could be obtained by using Likert-type rating scales for each individual activity. Furthermore, the present results do not provide any information that could support the conclusion that certain activities (for example learning Greek music, the activity which received the lowest rankings) are rejected or negatively approached by pupils.

Notwithstanding these limitations the present results show that the primary reason that lies behind the establishment of Greek supplementary schools, namely the teaching of the Greek language to the children of Greek origin, does coincide with pupils' highest preferences. Although the curriculum of the GS School has been enriched

with a variety of activities, learning the Greek language is still first in the preferences of the majority of pupils. This, furthermore, reflects the fact that language learning figures prominently in the curriculum of the GS School by being allocated half the teaching time, whereas Greek dancing and music teaching are allocated one quarter of it. The remaining quarter of the teaching time is allocated to the other activities.

The fact that the majority of pupils in the sample are preparing for examinations in O' level (more recently GCSE) or A'level in Modern Greek or are very near that stage could provide a partial explanation of these results as learning the Greek language acquires instrumental value for them. Learning the mother tongue is, furthermore, directed by an integrative orientation, as has been shown in the previous section of this chapter, because language is a core value of the Greek community and a basic marker of Greek identity (Smolicz, 1981; 1985). Smolicz (1981), referring to the Australian setting, points to the high attendance at Greek ethnic schools as an indication of the importance of language for members of the greek community

> *"many of whom zealously preserve their mother tongue not simply as a convenient mode of family communication but as a central element of their cultural heritage".*

The high rankings given to the activity related to learning Greek dancing could be attributed to the prestige

and social approval that accompanies exhibition of mastery of this skill. In this respect it should mentioned that the Greek Cypriot community provides a lot of occasions (school concerts, weddings and other festivities, dinner and dances) for the youth to show their skills in dancing, which skills are highly approved of by parents and other members of the community.

At the bottom of pupils' preferences is the activity related to learning Greek music. Although music in the traditional school curriculum could be said to provide, along with physical education and art, another dimension and some sort of outlet, in the ethnic supplementary school this should be much more so, given the inappropriate hours during which it operates, which should make musical activities a pleasant, and thus lovable experience . It seems highly probable that the main reason behind the low degree of preference that this activity attracts has to do with the total unfamiliarity with the type of music taught at these schools, as well as the acculturation of pupils to the English musical culture that is propagated through all the media they are exposed to and endorsed by their colleagues and friends in their mainstream school. Another reason which could be responsible for the low preferences is the fact that the songs taught in the GS School are selected on the basis of their relevance with concerts presented to parents on the occasion of certain important events (national celebrations, Christmas and Easter celebrations etc.), and they are totally unfamiliar to

pupils.

Based on the present results it is suggested that the GS School reexamines the curricular provisions regarding the teaching of Greek music. Further research should probe further the reactions of pupils toward these activities, and especially those that the present research has found to be low on pupils' preferences (music, participating in GS School festivals and concerts, and learning about the Christian Orthodox religion). It would be interesting to have an accurate picture of the reasons behind the lower performance of certain activities. This would be very informative both for practical reasons, providing useful information to educational planners and organizers of this provision in order to adjust their curricula, but on theoretical grounds as well by providing answers to issues relating to the pupils' endorsement or rejection of certain elements of their ethnic culture due to the acculturation in the dominant culture as well as the future structure of ethnic identity of future generations of Greek immigrants.

Future research could also examine the degree to which the objectives of the school curriculum (operationalized by the activities mentioned) are compatible with pupils' psychological and motivational needs and priorities. These pupils are in the midst of two cultures, which claim their allegiance with particular strength and exert heavy social pressure on them. Furthermore, as these individuals have to function in the midst of two cultures, the presence of elements in the two cultures which are incompatible with

each other would create a sort of internal tension in the individuals needing resolution. Triseliotis (1967) documents, from a psychiatric social worker's point of view and experience, the scale of the impact on ethnic minority children of " divided loyalties and the pressure to adhere to double standards " , which in most cases bring confusion to the children and sometimes cause antisocial behaviour to occur.

In a similar vein, and, drawing on the American experience with ethnic supplementary schools, Parker (1985) questions the appropriateness of certain objectives of these schools, by pointing to their incompatibility with certain key characteristics, values and commonly accepted objectives of the multiethnic society in which they live and function. These incompatibilities, would certainly impose serious psychological strains on the pupils who more or less try to keep their loyalty and allegiance to their ethnic group and culture and at the same time feel part of this society and would wish not to be marginalised in any manner.

Concluding, the examination of these issues by future research will provide valuable information to all interested in ethnic supplementary educational provision.

8.3 CONCEPTION OF GREEK AND ENGLISH SCHOOL TEACHERS

8.3.1 Introduction

The administration of the Attitude to GS School Teachers Scale provided a basic measure necessary to operationalize a component of the theoretical model (Attitude to GS School Attendance), but also, in conjunction with the administration of the Attitude to Mainstream English Teachers Scale, furnished data that helped probe further into pupils' experiences stemming out of their GS School attendance, and more specifically out of their interaction with their GS School teachers.

The basic procedure followed in this respect is one of contrasting the conceptions that pupils have of their mainstream English school teachers with those of their GS School teachers. The contrast is based on the assumption that attendance at these two institutions leads to qualitatively different experiences, and, furthermore, different conceptions of teachers on the part of pupils.

These conceptions are, however, influenced not only by variables related to teachers themselves, but also on other variables that are hypothesized to operate in concert in the GS School which is conceived as a system, i.e. those related to the special situation of the GS School itself and those related to the pupils themselves.

Treating the conditions prevailing in mainstream English schools as the standard of comparison, attendance at GS School is hypothesized to be qualitatively different as a result of the operation of three basic sets

of variables, i.e. school-related, pupil-related, and teacher-related variables.

i. **School-related variables** are those features of the GS School that make up its special character, as has been drawn up in the introduction. Such features include certain negatively construed ones such as the inappropriate hours of operation (evening hours during the weekdays or all day hours on Saturdays), the restrictive space in which they are accommodated (usually buildings belonging to mainstream schools) and which is not under the control of GS School teachers to the desired degree (teachers not having mastery of the classroom space as many restrictions are usually imposed on their use by headmasters, teachers and caretakers of mainstream English schools). Moreover, the feature of separateness which is projected to pupils as they alone with their fellow community youngsters attend GS School.

There are, however, certain features that could be construed as operating in a positive manner, such as the close ties between the school and the parents who are directly involved and interested in its operation. Furthermore, the fact that the school draws together pupils having the same origins and face relatively the same linguistic and cultural experiences and dilemmas can be counted as a positive aspect of attending GS School.

ii.Pupil-related variables

Such factors, related to the pupils themselves, are certain presumed needs of them which are not presently satisfied by their mainstream English schools. For example, the need for recognition and approval of their linguistic and cultural background, need and desire to develop their linguistic abilities in their mother tongue so as to be able to communicate more efficiently with their parents, relatives, and other valued community members, in general to function in a more efficient manner inside the community, which as has been pointed out in the introduction exerts a dynamic influence on them.

Furthermore, their need to be among other children who are considered similar in a lot of respects (e.g. physical appearance, similar problems stemming mainly from the fact that they belong to the same ethnic minority).

iii.Teacher-related variables are special factors which are associated with teachers serving in GS School and which are hypothesized to affect the conceptions that pupils attending these schools form. Prominent among these factors is the diversity in qualifications possessed by teachers serving in these schools, ranging from nearly no qualifications at all (except of their being Greek Cypriots having a good command of the language and cultural fluency) to all necessary qualifications (as, for example, have been set out by the Swann Committee e.g. a major in the Greek language and proper pedagogical training in a British

Institution).

Other important factors stem from the fact that GS School teachers have the same linguistic, cultural, and religious background as the children and their parents and, furthermore, are actively engaged in promoting those linguistic and cultural features that form the background of pupils attending GS School and which are more or less negated in the wider society, due to the suppressing influence of the dominant culture.

8.3.2 Results

As the aim in this chapter centres on the differences in conceptions that GS School pupils have of their mainstream and GS School teachers the analysis that was performed involved a series of t-tests examining possible differences in conceptions on the ten qualities assessed by the two scales, i.e Attitude to GS School Teachers and Attitude to Mainstream English School Teachers. As has already been mentioned when describing the development of the two scales, pupils were asked to rate Greek and mainstream English school teachers on the following ten qualities: Friendliness to pupils, acceptance and respect of pupils, ability to maintain classroom discipline, qualifications, sense of humour, kindness, nervousness, character, reliability, and general likability.

The results are presented in Table 8.3.

Quality	Mean Rating Greek / Engl.	Mean Dif/ce	t-Value	Probability	Sign/ce
a.Friendliness to pupils	5.25	5.06	.19	2.43	.015	*
b.Acceptance and respect of pupils	4.95	4.73	.21	2.70	.007	**
c.Ability to maintain classroom discipline	4.86	4.87	-.02	-.22	.825	
d.Qualifications	5.23	5.74	-.51	-7.39	.000	***
e.Sense of humour	4.56	5.04	-.48	-6.12	.000	***
f.Kindness	5.08	4.92	.16	2.05	.041	*
g.Nervousness	5.11	5.17	-.06	-.80	.426	
h.Character	4.68	4.93	-.25	-3.48	.001	**
i.Reliability	5.00	5.08	-.08	-1.15	.249	
k.General likability	4.94	4.96	-.02	-.27	.786	

Degrees of freedom = 496

*$p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 8.3
Results of t-tests comparing conceptions of Greek and mainstream English teachers on a number of qualities

In addition to the above measures a combined measure assessing the general conception that GS School pupils have of their mainstream and GS School teachers was derived by adding scores on all ten characteristics. These combined measures were subjected to t-test analysis in order to check whether a difference exists between the general conceptions of mainstream and GS School teachers. The results of the analysis are presented in Table 8.4 .

	Mean Rating	Diff/ce	t-Value	Probability	Signif.
Gr.Sch.Teachers	49.66				
		-0.86	-1.48	.14	---
Engl.Sch.Teachers	50.52				

Degrees of freedom = 496

** p < 0.05* *** p < 0.01*

Table 8.4
Comparison of pupils' general conceptions of Greek and English School teachers

As can be seen from Tables 8.3 and 8.4 GS School teachers are conceived by pupils as more friendly, more accepting and respectful of pupils and more kind than mainstream English school teachers. They are, however, conceived as less qualified, having less sense of humour, and less character. No significant differences were found between the conception of Greek and English school teachers on the following qualities: Ability to maintain classroom discipline, nervousness and general likability. No significant difference was also obtained on a measure reflecting the general conception that GS School pupils have of Greek and English school teachers.

Generally, it can be said that pupils attending GS School regard GS School teachers as excelling in personal and social qualities, whereas mainstream English school teachers are seen as superior on some qualities related with professional expertise and teaching efficiency.

8.3.3 Discussion

The comparisons of the conceptions that pupils attending GS School have of their GS and their mainstream school teachers showed that pupils conceive of the former as excelling on qualities related to social interaction and personality, but inferior to their mainstream English counterparts on qualities related to professional qualifications and expertise.

How could we account for these results?

As far as the first set of results is concerned (i.e. the qualities on which GS School teachers are seen to surpass their mainstream counterparts), a number of hypotheses could be put forward.

First, it appears that GS School teachers in their interactions with pupils attending these schools are satisfying certain needs of them which are not satisfied to an adequate degree by their mainstream English teachers. It is suggested that most probably, and in line with Cummins' theory on the empowerment of minority pupils (Cummins, 1989), these needs of pupils relate to a desire for approval and acceptance of their cultural backgrounds. As GS Sschool teachers have the same cultural backgrounds with their pupils and, furthermore, are actively engaged in promoting the ethnic language and culture, through their teaching and active involvement in the cultural events of the community, they are in a position to satisfy these needs felt by the pupils.

Second these results should be related to the fact that

the GS School forges close relationships between teachers and parents who, in addition to the fact that they share the same ethnicity, cultural and linguistic backgrounds, have the chance to get together in a lot of occasions both formal (under the auspices of the school such as school festivities, dinner and dances, excursions etc.) and informal (community festivities, meetings and festivities organized by community organizations, clubs, etc.). These closer relationships between GS School teachers and parents of children attending GS School play an important part in influencing their conceptions and attitudes towards their GS School teachers.

Third a partial explanation of these results could be provided by the fact that the GS School operates on a voluntary basis and there is not a pressure on both pupils and teachers for high academic results (due to virtual lack of evaluation). This is coupled with an effort on the part of GS School teachers to forge a more pleasant and satisfying environment to make up for the adverse conditions under which the GS School is operating.

Explaining the second set of results, which showed that GS School teachers are seen as inferior to mainstream teachers on qualities related to professional expertise, seems to be a more straightforward task.

As has already been analyzed in the introduction on Greek supplementary schools a significant proportion of teaching in these schools (see Chapter III Table 3.4) is

delivered by unqualified staff due to the unavailability of qualified teachers. This is evidently related to the fact that GS School teachers get lower ratings than their English counterparts on qualities related to teaching expertise and efficiency.

Both sets of results are important on practical as well as theoretical grounds.

The practical implications of these results could be summarized in the clear and straightforward messages they send to those agencies that are responsible for selecting and employing teachers for service in the GS School. They suggest that the organizers and planners of Greek supplementary education should give serious consideration to the issue of the qualifications of the teachers employed in the GS School. Better qualifications on the part of the teachers will render them more effective and efficient in promoting its aims. Furthermore, this will in the long run increase their prestige and produce more confidence and trust of them on the part of pupils, which will be beneficial to pupils and the future of the institution of the GS School itself.

In this respect the operation of the institute of inservice training of staff employed in the GS School, which started its operation in the autumn of 1990 through the initiatives of the Cyprus Educational Mission in London, should be considered a move to the right direction.

Furthermore, the positive conception of GS School

teachers should be enhanced and developed further. This could be achieved by increasing the involvement of teachers in the social and cultural life of the community and the furthering of GS School-home links, which will lead to the establishment of closer ties between teachers, parents and pupils.

The theoretical aspect of these results is mainly concentrated on their direct relevance to the theoretical model put forward and tested as described in previous chapters. The aim of the model was to explain the motivational factors that influence the future of the GS School. One component of the model which was hypothesised and later found to exert a substantial effect on pupils' intentions to provide future support to this major community institution was their attitudes toward attending GS School. The degree to which GS School teachers were conceived in a positive or negative manner was hypothesised and found to have a direct impact on pupils' intentions. The measure, however, used to represent pupils' conceptions of their GS School teachers was an overall attitude measure, operationalized by the sum of ratings of teachers on all ten qualities described previously.

The comparison attempted in this chapter between pupils' conceptions of GS and mainstream English school teachers on each individual quality (as well as general measure derived through adding ratings on the individual qualities) threw a new light on the model and clarified further that part of

it which relates to pupils' attitudes toward GS School teachers by identifying a number of factors that act to affect the direction and magnitude of pupils' attitudes.

CHAPTER IX

SUMMARY

The present study aiming at examining basic motivational and attitudinal aspects of Greek supplementary school attendance explored a number of issues and produced results of both practical and theoretical relevance.

The practical aspects of the contribution of the present study are of immediate relevance to those involved in planning and organizing Greek supplementary education in Britain, and more generally to all those interested in promoting ethnic supplementary schools as institutions that play an important role in a multiethnic and multicultural society.

First the analysis of the model predicting the future behaviour of pupils identified ethnic identification and attitudes toward GS School attendance as the parameters, the key antecedent variables that influence this behaviour. Moreover, this analysis quantified the effect of each variable and in this respect it provided insight as to the relative impact of each on pupils' behavioral intentions to provide support to this institution in the future. The message from the present research to those interested in the developmental promotion of this institution, which plays a vital role in preserving the ethnic language and culture to the younger generation, is first to embark on serious attempts to improve the conditions under which

supplementary schools operate and improve the standard of teachers staffing these schools with a view to affecting pupils' attitudes toward attending such schools and making them more positive. Second, and more important (as the analysis showed social norms resulting from ethnic identification and acculturation to have a much heavier impact on behaviour) to provide the necessary incentives and chances to the younger generation to increase their involvement in the cultural practices of their ethnic community. Moreover, the family, the church, the GS School itself and community leaders, as well as mainstream educators as moral supporters, should provide the conditions for the younger generation to develop a healthy ethnic identification, which will feed back in supporting the cohesion of the ethnic community and the survival and progress of its institutions.

The results relating to the second aim of the present study provide useful suggestions to the planners, organizers, and teachers of the GS School as well as to people of other communities involved in similar educational efforts.

First, the results relating to the existence of two types of orientation in learning mother tongue have implications for both teachers and parents. As research has shown that the integrative orientation is one of the determinants of achievement in language, teachers and parents should nurture this type of orientation to their

children and thus enhance the preservation of the ethnic language among the younger generations.

Second, the results pertaining to the reactions of pupils to sections of the GS School curriculum show that pupils' preferences are in line with the planners' and organizers' ideas concerning the value of learning mother tongue. Although further probing is needed into the reactions of pupils, this research pointed to the value of this type of information as providing feedback in modifying the curriculum so that it better serves the needs of pupils.

Third, the results contrasting the conceptions that pupils attending GS School have of their Greek and mainstream English school teachers suggest the urgent need for improving the quality of the teachers employed in supplementary schools. Furthermore, these results suggest that GS School teachers are exerting positive effects on pupils, as revealed by their pupils' conceptions of them as being more friendly, more kind, and more accepting and respectful of pupils.

Turning now to the theoretical aspects of the contribution of the present study, a number of points should be mentioned.

A major aspect of the study involved the novel application of the LISREL methodology to the examination of a practical issue, i.e. the antecedents that influence pupils' intentions to provide future support to the

institution of the GS School. The whole endeavour points to the usefulness and significance of the LISREL methodology, as well as its potential in applications to tackle not only theoretical but practical issues as well.

A second contribution also related to the LISREL methodology is its application in testing a theory, i.e the theory of reasoned action proposed by Fishbein and Ajzen. This methodology, as has been pointed out in the present study, offers a clear advantage over other techniques, e.g multiple regression, used so far in testing the theoretical model in two important ways: First the LISREL technique can test the overall effects of antecedent variables on other variables (estimating the direct as well indirect effects plus total effects) by taking account of all the variables in the model, and second by removing errors of measurement through the use of multiple indicator variables to represent each construct of interest in the model.
The final results of applying the LISREL analysis to testing the Fishbein\Ajzen model support the model and in this way the present research adds credence and points to the validity of the model.

A further contribution of the present study relates to the fact that it has brought new and fresh insight to bear on the long standing issue of the relative contribution of attitudes and social norms in determining future behaviour. The results of this study suggest that social norms have a much heavier impact on future behaviour than attitudes.
Special mention should be made to an attempt in the present

study to add a pathway leading from social norms to attitudes, which was not present in the Fishbein\Ajzen model, as the two constructs have been kept independent. The results showing a heavy influence of the social norms on attitudes point to a new conceptualization of the model, which should be taken into account by future research.

Apart from the theoretical aspects related to testing the Fishbein/Ajzen model, the present study made a substantial contribution by extending Gardner and Lambert's theory of integrative and instrumental orientation in learning a second/foreign language to the case of mother tongue learning.

Finally, the present research has contributed in a psychometric sense, by developing psychometric scales, which are listed and described in detail in Chapter VI. These scales, properly developed and analyzed, are ready for application by future research.

Summarising, the present study through its practical implications and concrete suggestions, the answers it provided to issues of theoretical interest and the development of useful psychometric tools, is an attempt to put this sensitive field on a more scientific footing.

APPENDICES

APPENDIX A

THE COMPLETE RESEARCH QUESTIONNAIRE

Greek School Research Project

Name .....

Greek School .....

Class .....

Sex Male / Female

(circle number)

1 2

. Please answer the following questions:

1.How old are you?_____

2.Where was your father born? (country)_____

3.What is the occupation of your father? _____

4.Where was your mother born? (country)_____

5.Have you lived in another country? YES _____ NO _____

If YES a) Which country?_____

b) For how long?_____

6.Is your grandmother or grandfather living with you?

YES _____ NO _____

7.How many times have you been

a) to Cyprus? _____

b) to Greece? _____

8.What language do you speak mostly in yor family?

Greek? _____

English? _____

9.What language do you use mostly in your conversation with

a)your mother?	Greek_____	English_____
b)your father?	Greek_____	English_____
c)your brothers and sisters?	Greek_____	English_____
d)your relatives?	Greek_____	English_____
e)your friends?	Greek_____	English_____

10.Apart from your school textbooks, do you read

Greek books? YES ____ NO ____

Greek magazines? YES ____ NO ____

Greek newspapers? YES ____ NO ____

11. Does your mother

peak Greek? not at all____, a little____, fairly well____,fluently____

ead Greek? not at all____, a little____, fairly well____,fluently____

rite Greek? not at all____, a little____, fairly well____,fluently____

12. Does your father

peak Greek? not at all____, a little____, fairly well____,fluently____

ead Greek? not at all____, a little____, fairly well____,fluently____

rite Greek? not at all____, a little____, fairly well____,fluently____

13. Do you

peak Greek? not at all____, a little____, fairly well____,fluently____

ead Greek? not at all____, a little____, fairly well____,fluently____

rite Greek? not at all____, a little____, fairly well____,fluently____

nderstand Greek?
not at all____, a little____, fairly well____,fluently____

YOUR GREEK SCHOOL

15. How many times a week do you attend Greek school? _____

16. How many hours in all do you attend Greek school? _____

17. When do you attend Greek school? Tick (✓).

a) weekday evening _____

b) Saturday morning _____

c) Saturday afternoon _____

d) other _____

18.How many years have you been attending Greek school for? _____

19.Is your father/mother involved in the committee that runs your Greek school? YES _____ NO _____

20. How far from home is your Greek school?

a) 0-1 mile b) 2-3 miles c)4-5 miles

d) 6-9 miles e) 10 miles or more

21.How much do your parents encourage you to study Greek?

Not at all _____:_____:_____:_____:_____:_____:_____ Very much

22. In the future, will you arrange for your children to learn to speak Greek?

Definitely yes ____:____:____:____:____:____:____ Definitely no

23. In the future, will you send your children to a Greek school?

Definitely yes ____:____:____:____:____:____:____ Definitely no

24. There follows a list of 6 activities that are related with the Greek school. Please rank these activities in order of the degree to which they appeal to you by puting a number from 1 (most preferred) to 6 (least preferred) opposite each activity.

--------- Learning the Greek language

--------- Learning to dance Greek dances

--------- Learning to sing Greek songs

--------- Learning about the history and geography of Cyprus or Greece

--------- Learning about the Christian Orthodox religion

--------- Participating in school festivals and concerts

26. There follow some statements about the Greek language made by students. Put a tick (✓) opposite each one with which you agree. Do not tick those with which you disagree.

---- It's a waste of time to study the Greek language.

---- I like speaking Greek.

---- There are far more useful languages to spend time on than Greek.

---- I don't want to learn Greek as I am not likely ever to use it.

---- The Greek language is not worth studying.

---- I would like to be able to read Greek books and magazines.

---- There is no need to keep up the Greek language for the sake of tradition.

---- Greek is a language worth learning.

---- We owe it to our forefathers to preserve the Greek language.

---- Greek is essential for communicating with my parents.

---- The Greek language is of no use to somebody living in England.

---- The Greek language has enriched the English language with a lot of words.

---- Greek is essential to take part fully in Greek life.

---- Greek is not much use to anybody.

---- The learning of Greek should be left to individual choice.

---- My learning of Greek will help me get a better job.

---- The Greek language is a valuable asset to anybody.

27. There follow some statements about the Greek school made by students. Put a tick (✓) opposite each one with which you agree. Do not tick those with which you disagree.

---- I like Greek school

---- I like to attend Greek school despite its drawbacks

---- The Greek school does more harm than good

---- I like to do Greek school work.

---- One learns a lot of useful things in the Greek school

---- I like being with Greek /Cypriot people and the Greek school helps me in this respect

---- The Greek school is entirely unnecessary

---- The Greek school is not worth the time and money we spend

---- It helps one to get a better job by attending the Greek school

---- If it were not for the pressure of my parents, I wouldn't attend the Greek school

---- I hate Greek school

---- I may dislike some activities of the Greek school, but there some I like very much

---- So far the Greek school has benefited me a lot in ways my English school could not

---- The Greek school is old fashioned

---- The Greek school is boring

---- The Greek school helps me pass my examinations

---- The Greek school consumes enough of my spare time and so it does not allow me to pursue my hobbies

---- I find the teachers of the Greek school friendly and helpful

---- I enjoy my attendance at the Greek school

28. Below there are some reasons given by students for studying the Greek language. Read each one carefully and then indicate the extent to which it applies to your own case.

---

1. In the future Greek may prove useful in getting a job.

Not my feeling at all _____:_____:_____:_____:_____:_____:_____ Definitely my feeling

---

2. In order to be a good Greek I have to know the Greek language.

Not my feeling at all _____:_____:_____:_____:_____:_____:_____ Definitely my feeling

---

3. I wish to enter a profession in which it is necessary to be familiar with Greek.

Not my feeling at all _____:_____:_____:_____:_____:_____:_____ Definitely my feeling

---

4. I want to become more a part of the Greek culture.

Not my feeling at all _____:_____:_____:_____:_____:_____:_____ Definitely my feeling

---

5. One can enjoy a more successful life in the community with a knowledge of Greek.

Not my feeling at all _____:_____:_____:_____:_____:_____:_____ Definitely my feeling

---

6. Greek is necessary to keep the Greek people together.

Not my feeling at all _____:_____:_____:_____:_____:_____:_____ Definitely my feeling

---

7. Greek will enable me to gain good friends more easily in Greece or in Cyprus.

Not my feeling at all _____:_____:_____:_____:_____:_____:_____ Definitely my feeling

---

8. Greek will prove useful for me when I go for holidays in Cyprus or Greece.

Not my feeling at all _____:_____:_____:_____:_____:_____:_____ Definitely my feeling

---

29. From your experience in your English School, please rate English School teachers in terms of the degree to which they possess the following qualities.

- friendliness to students

Very Little ____:____:____:____:____:____:____ Very Much

- acceptance and respect of students

Very Little ____:____:____:____:____:____:____ Very Much

- ability to maintain classroom discipline

Very Little ____:____:____:____:____:____:____ Very Much

- qualifications

Very Little ____:____:____:____:____:____:____ Very Much

- sense of humour

Very Little ____:____:____:____:____:____:____ Very Much

- kindness

Very Little ____:____:____:____:____:____:____ Very Much

- nervousness

Very Little ____:____:____:____:____:____:____ Very Much

- character

Very Little ____:____:____:____:____:____:____ Very Much

- reliability

Very Little ____:____:____:____:____:____:____ Very Much

- general likability

Very Little ____:____:____:____:____:____:____ Very Much

30. From your experience in the Greek School you have been attending so far, please rate Greek School teachers in terms of the degree to which they possess the following qualities.

- friendliness to students

____:____:____:____:____:____:____
Very Little — Very Much

- acceptance and respect of students

____:____:____:____:____:____:____
Very Little — Very Much

- ability to maintain classroom discipline

____:____:____:____:____:____:____
Very Little — Very Much

- qualifications

____:____:____:____:____:____:____
Very Little — Very Much

- sense of humour

____:____:____:____:____:____:____
Very Little — Very Much

- kindness

____:____:____:____:____:____:____
Very Little — Very Much

- nervousness

____:____:____:____:____:____:____
Very Little — Very Much

- character

____:____:____:____:____:____:____
Very Little — Very Much

- reliability

____:____:____:____:____:____:____
Very Little — Very Much

- general likability

____:____:____:____:____:____:____
Very Little — Very Much

31.

1.What is your impression of the Greek-speaking people you know as individuals? Please indicate your answer on the line below:

I like most of them very much ____:____:____:____:____:____:____ I don't particularly like any of them

---

2. Do you often think of yourself as being a Greek person, or a person of Greek ancestry?

Very often ____:____:____:____:____:____:____ Never

---

3. Are you interested in seeing Greek-speaking people living in England to go ahead in business or politics?

Very interested ____:____:____:____:____:____:____ Not interested at all

---

4. Are most of your close friends Greek or English-speaking?

Mostly Greek ____:____:____:____:____:____:____ Mostly English

---

5. Would you prefer to work with Greek or English speaking people?

Prefer Greek ____:____:____:____:____:____:____ Prefer English

---

6. Do you want to marry someone who is of Greek origin?

Definitely yes ____:____:____:____:____:____:____ Definitely no

---

7.Do you enjoy participating in Greek Cypriot weddings or other festivities?

Definitely yes ____:____:____:____:____:____:____ Definitely no

---

8. Do you enjoy going to church?

Definitely yes ____:____:____:____:____:_____:____ Definitely no

---

9. Do you enjoy listening to the Greek Community Radio?

Definitely yes ____:____:____:____:____:____:____ Definitely no

---

10. Do you enjoy watching Greek videos and films?

Definitely yes ____:____:____:____:____:____:____ Definitely no

---

APPENDIX B

GREEK SCHOOLS INCLUDED IN THE STUDY

1). ASHMOLE
2). BOWES
3). CHRIST COLLEGE
4). COPPETS WOOD
5). CROYDON
6). EARLHAM
7). EAST BARNET
8). FULHAM
9). GEARIES
10). HACKNEY
11). HAZELWOOD(C)
12). HIGH BARNET
13). HILLINGDON
14). HUXLEY
15). KINGSBURY
16). LANGHAM
17). MANOR HILL
18). MOSS HALL
19). OAKTHORPE
20). POTTERS BAR
21). QUEENSWELL
22). RAGLAN
23). RAYNHAM
24). ROKESLY
25). SOUTH HARINGEY(A)
26). SOUTH HARINGEY(B)
27). SOUTH HARINGEY(C)
28). SOUTHBURY
29). SOUTHGATE
30). STREATHAM
31). TOOTING
32). TOTTENHALL(A)
33). TOTTENHALL(B)
34). TOTTENHALL(C)
35). UPTON PARK
36). WALKER
37). WILLESDEN

APPENDIX C

GREEK LANGUAGE USE BY PUPILS

HOMELAN: What language do you mostly use in your family?

Value	Frequency	Percent	Valid Percent	Cum Percent
English	232	45.4	45.8	45.8
Both	65	12.7	12.8	58.6
Greek	210	41.1	41.4	100.0
9	3	.8	MISSING	
TOTAL	510	100.0	100.0	

Mean .478 Std Dev .467

MLAN: What language do you use mostly in your conversation with your mother?

Value	Frequency	Percent	Valid Percent	Cum Percent
English	190	37.2	37.3	37.3
Both	33	6.5	6.5	43.8
Greek	286	56.0	56.2	100.0
9	1	.4	MISSING	
TOTAL	510	100.0	100.0	

Mean .594 Std Dev .475

FLAN: What lanhguage do you mostly use in your conversation with your father?

Value	Frequency	Percent	Valid Percent	Cum Percent
English	213	41.7	42.0	42.0
Both	53	10.4	10.5	52.5
Greek	241	47.2	47.5	100.0
9	3	.8	MISSING	
TOTAL	510	100.0	100.0	

Mean .528 Std Dev .473

BRLAN: What language do you mostly use in your conversation with your brother(s) and sister(s) (if you have any)?

Value	Frequency	Percent	Valid Percent	Cum Percent
English	455	89.0	92.3	92.3
Both	22	4.3	4.5	96.8
Greek	16	3.1	3.2	100.0
9	17	3.5	MISSING	
TOTAL	510	100.0	100.0	

Mean .055 Std Dev .202

RELLAN: What language do you mostly use in your conversation with your relatives?

Value	Frequency	Percent	Valid Percent	Cum Percent
English	102	20.0	20.2	20.2
Both	88	17.2	17.4	37.5
Greek	316	61.8	62.5	100.0
	4	1.0	MISSING	
	510	100.0	100.0	

Mean .711 Std Dev .403

FRLAN: What language do you mostly use in your conversation with your friends?

Value	Frequency	Percent	Valid Percent	Cum Percent
English	459	89.8	90.5	90.5
Both	37	7.2	7.3	97.8
Greek	11	2.2	2.2	100.0
	3	.8	MISSING	
TOTAL	510	100.0	100.0	

Mean .058 Std Dev .191

BOOKS: Apart from your school textbooks, do you read Greek books?

Value	Frequency	Percent	Valid Percent	Cum Percent
No	300	58.7	59.1	59.1
Yes	208	40.7	40.9	100.0
	2	.6	MISSING	
TOTAL	510	100.0	100.0	

Mean .409 Std Dev .492

MAGAZ: Apart from your school textbooks, do you read Greek magazines?

Value	Frequency	Percent	Valid Percent	Cum Percent
No	420	82.2	83.8	83.8
Yes	81	15.9	16.2	100.0
	9	2.0	MISSING	
TOTAL	510	100.0	100.0	

Mean .162 Std Dev .369

NEWSP: Apart from your school textbooks, do you read Greek newspapers?

Value	Frequency	Percent	Valid Percent	Cum Percent
No	297	58.1	59.2	59.2
Yes	205	40.1	40.8	100.0
	8	1.8	MISSING	
TOTAL	510	100.0	100.0	

Mean .408 Std Dev .492

APPENDIX D
PRINCIPAL COMPONENTS, OBLIQUE, AND SECOND ORDER FACTOR ANALYSIS PLUS RADIAL PARCELS PROCEDURE (ATTITUDE TO GS SCHOOL SCALE)

Principal Components Extracted 5 factors.

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
ATTSCH22	.75412	-.25028	-.26563	-.08411	-.07242
ATTSCH1	.73096	-.22848	-.26056	-.07990	-.09420
ATTSCH13	.67358	.36242	-.12959	.12447	-.07747
ATTSCH21	.63923	-.26444	-.12683	-.22273	-.07790
ATTSCH6	.62972	-.21953	.21470	-.28235	-.16329
ATTSCH8	.62578	-.29173	.22257	.01560	-.02481
ATTSCH17	.62540	.29556	-.29073	-.02003	.02127
ATTSCH5	.60466	-.31732	-.12760	-.28825	-.13179
ATTSCH4	.59178	.53719	.20824	-.12932	-.04095
ATTSCH3	.55301	-.12662	-.07537	.28948	-.40127
ATTSCH16	.48818	.23102	.03781	-.17303	.36260
ATTSCH12	.48762	.11787	-.38864	.26177	.33164
ATTSCH15	.42228	-.26952	.31527	.39890	.08555
ATTSCH9	.43588	.64200	.26771	.06969	-.00125
ATTSCH10	.43648	.49621	.28523	-.21243	-.21248
ATTSCH11	.38946	-.27439	.49060	-.02013	.25551
ATTSCH18	.40127	-.24836	.45920	.02380	.40560
ATTSCH14	.35734	-.01289	.12505	.68014	-.24753
ATTSCH20	.41622	.04539	-.38731	.13850	.48276

Final Statistics:

Variable	Communality		Factor	Eigenvalue	Pct of Var	Cum Pct
ATTSCH1	.66966	*	1	5.81477	30.6	30.6
ATTSCH3	.57235	*	2	1.87957	9.9	40.5
ATTSCH4	.70053	*	3	1.43891	7.6	48.1
ATTSCH5	.58305	*	4	1.13285	6.0	54.0
ATTSCH6	.59721	*	5	1.05204	5.5	59.6
ATTSCH8	.52711	*				
ATTSCH9	.67869	*				
ATTSCH10	.60838	*				
ATTSCH11	.53335	*				
ATTSCH12	.58122	*				
ATTSCH13	.62334	*				
ATTSCH14	.66736	*				
ATTSCH15	.51680	*				
ATTSCH16	.45454	*				
ATTSCH17	.56386	*				
ATTSCH18	.59864	*				
ATTSCH20	.57754	*				
ATTSCH21	.55031	*				
ATTSCH22	.71421	*				

Rotated Factor Matrix:

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
ATTSCH22	.74775	.09262	.33014	.10102	.16526
ATTSCH5	.74470	.05540	.08863	.13212	-.00907
ATTSCH1	.72681	.10310	.30910	.07843	.17055
ATTSCH21	.69957	.09539	.16278	.15638	.02922
ATTSCH6	.64106	.25440	-.10214	.33154	.03438
ATTSCH8	.50020	.12707	.04901	.45091	.23461
ATTSCH4	.17789	.79712	.13553	.11514	.04318
ATTSCH9	-.08359	.78722	.13833	.10210	.14977
ATTSCH10	.16355	.75364	-.10855	.04153	.01212
ATTSCH13	.30457	.55219	.37714	-.03848	.28628
ATTSCH16	.16639	.40382	.39196	.27583	-.18459
ATTSCH20	.13865	.02041	.74030	.09903	-.00716
ATTSCH12	.15659	.11057	.71597	.02478	.17677
ATTSCH17	.36697	.43789	.46579	-.10201	.10043
ATTSCH18	.11976	.07043	.11415	.75247	.00994
ATTSCH11	.18433	.08185	-.02180	.70055	.03789
ATTSCH15	.13577	-.00214	.09549	.52325	.46417
ATTSCH14	.02456	.11119	.08428	.12160	.79530
ATTSCH3	.46891	.13741	.05161	-.01936	.57493

Oblimin Rotation 2, Extraction 1, Analysis 1 - Kaiser Normalization.

Oblimin converged in 10 iterations.

Pattern Matrix:

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
ATTSCH5	.78441	-.04299	.02942	-.07803	-.01510
ATTSCH22	.73744	-.03145	-.01351	.08906	.22774
ATTSCH1	.71796	-.01495	-.03467	.09731	.20721
ATTSCH21	.71300	-.00492	.05647	-.04121	.06361
ATTSCH6	.63750	.18924	.23784	-.03238	-.22247
ATTSCH8	.44272	.04561	.38035	.17947	-.03840
ATTSCH9	-.24179	.82027	.06302	.11395	.07140
ATTSCH4	.05501	.80254	.04344	-.01659	.03525
ATTSCH10	.08801	.78686	-.02532	-.03190	-.21379
ATTSCH13	.18878	.50470	-.12889	.22863	.28683
ATTSCH16	.06713	.36078	.24193	-.24804	.35530
ATTSCH18	.01046	.01633	.75673	-.03168	.09788
ATTSCH11	.10025	.03613	.69319	-.00068	-.05626
ATTSCH15	.01810	-.06198	.50506	.44517	.06567
ATTSCH14	-.10324	.08098	.08583	.80197	.04416
ATTSCH3	.42876	.07161	-.11521	.54589	-.04653
ATTSCH20	.04646	-.07359	.07722	-.05589	.75694
ATTSCH12	.04622	.02070	-.01422	.13089	.71257
ATTSCH17	.29049	.37494	-.19014	.03626	.38977

Factor Correlation Matrix:

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
FACTOR 1	1.00000				
FACTOR 2	.29939	1.00000			
FACTOR 3	.27983	.15940	1.00000		
FACTOR 4	.22533	.13361	.11648	1.00000	
FACTOR 5	.29388	.24858	.08026	.13603	1.00000

S E C O N D O R D E R F A C T O R A N A L Y S I S

Principal Components Extracted 1 factors.

Factor Matrix:

	FACTOR 1
FACTOR1	.74744
FACTOR2	.62561
FACTOR5	.58421
FACTOR3	.53116
FACTOR4	.51015

Final Statistics:

Variable	Communality		Factor	Eigenvalue	Pct of Var	Cum Pct
FACTOR1	.55866	*	1	1.83373	36.7	36.7
FACTOR2	.39139	*				
FACTOR3	.28213	*				
FACTOR4	.26025	*				
FACTOR5	.34130	*				

R A D I A L P A R C E L S P R O C E D U R E

SPSS PROGRAM

```
compute parcel1 = attsch22 + attsch1 + attsch21 + attsch5.
compute parcel2 = attsch13 + attsch4 + attsch17 + attsch12
                  + attsch20.
compute parcel3 = attsch6 + attsch8 + attsch11 + attsch18
                  + attsch15.
compute parcel4 = attsch9 + attsch10 + attsch16.
compute parcel5 = attsch3 + attsch14.
factor /variables parcel1 parcel2 parcel3
  parcel4 parcel5 /format sort.
```

Principal Components Extracted 1 factor.

	FACTOR 1
Parcel1	.80762
Parcel2	.76975
Parcel3	.72594
Parcel5	.64627
Parcel4	.63655

Final Statistics:

Variable	Communality		Factor	Eigenvalue	Pct of Var	Cum Pct
Parcel1	.65225	*	1	2.59462	51.9	51.9
Parcel2	.59251	*				
Parcel3	.52699	*				
Parcel4	.40520	*				
Parcel5	.41766	*				

APPENDIX E
PRINCIPAL COMPONENTS, OBLIQUE, AND SECOND ORDER FACTOR ANALYSIS PLUS RADIAL PARCELS PROCEDURE (ATTITUDE TO GREEK LANGUAGE SCALE)

Principal Components Extracted 4 factors.
Factor Matrix:

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
ATTLAN5	.76174	-.33492	-.00513	.10244
ATTLAN9	.69661	.19537	-.09761	-.08579
ATTLAN2	.69535	-.45114	.21550	.06541
ATTLAN15	.67560	-.39765	.01381	-.09665
ATTLAN6	.63222	-.38993	.14755	.08603
ATTLAN3	.61397	.27107	-.37704	-.04241
ATTLAN1	.59530	.27285	-.50578	.00771
ATTLAN7	.57007	.23137	-.35706	-.07060
ATTLAN12	.52801	-.28279	-.07305	-.19959
ATTLAN10	.30711	.46115	.44644	-.30698
ATTLAN14	.41806	.44042	-.02758	-.03881
ATTLAN11	.28317	.42625	.28033	-.34778
ATTLAN17	.33742	.40439	.09315	.34953
ATTLAN13	.23289	.44542	.45637	.16498
ATTLAN8	.38312	-.21630	.27585	-.50880
ATTLAN4	.38238	-.21505	.24862	.49161
ATTLAN19	.38796	.29622	.13074	.44800

Final Statistics:

Variable	Communality		Factor	Eigenvalue	Pct of Var	Cum Pct
ATTLAN1	.68470	*	1	4.70113	27.7	27.7
ATTLAN2	.73775	*	2	2.07648	12.2	39.9
ATTLAN3	.59439	*	3	1.25936	7.4	47.3
ATTLAN4	.49596	*	4	1.15290	6.8	54.1
ATTLAN5	.70294	*				
ATTLAN6	.58091	*				
ATTLAN7	.51098	*				
ATTLAN8	.52854	*				
ATTLAN9	.54032	*				
ATTLAN10	.60053	*				
ATTLAN11	.46141	*				
ATTLAN12	.40394	*				
ATTLAN13	.48813	*				
ATTLAN14	.37101	*				
ATTLAN15	.62409	*				
ATTLAN17	.40823	*				
ATTLAN19	.45605	*				

Rotated Factor Matrix:

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
ATTLAN2	.84161	.06207	.03692	.15567
ATTLAN5	.76330	.29828	-.03888	.17270
ATTLAN15	.75520	.22793	.02834	-.03179
ATTLAN6	.74016	.09584	.00031	.15459
ATTLAN12	.55892	.25964	.05506	-.14526
ATTLAN8	.50077	-.00950	.43318	-.30006
ATTLAN1	.13912	.80940	-.01467	.10004
ATTLAN3	.18413	.73507	.09420	.10621
ATTLAN7	.18413	.68189	.09005	.06317
ATTLAN9	.35647	.56227	.26779	.15937
ATTLAN14	.00817	.44877	.33957	.23289
ATTLAN10	.03012	.08980	.75500	.14671
ATTLAN11	.00115	.18038	.65376	.03828
ATTLAN19	.09445	.21546	.08254	.62761
ATTLAN17	-.01687	.26631	.15764	.55873
ATTLAN4	.44971	-.08565	-.13696	.51732
ATTLAN13	-.03154	-.01167	.47240	.51365

Oblimin Rotation 2, Extraction 1,
Analysis 1 - Kaiser Normalization.

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
ATTLAN2	.85637	.01979	.04520	.10874
ATTLAN6	.74786	-.02081	-.00673	.11216
ATTLAN5	.74031	-.08610	-.22294	.11388
ATTLAN15	.73655	-.00679	-.15437	-.09059
ATTLAN12	.52639	.01988	-.21498	-.20064
ATTLAN8	.49488	.44304	.09839	-.35831
ATTLAN10	-.00442	.76349	.00403	.08063
ATTLAN11	-.04820	.64959	-.11434	-.02781
ATTLAN1	.01374	-.11585	-.84101	.02172
ATTLAN3	.06873	.00451	-.74378	.02426
ATTLAN7	.07653	.00705	-.69039	-.01397
ATTLAN9	.26950	.20159	-.51655	.07219
ATTLAN14	-.07017	.29248	-.42291	.16759
ATTLAN19	.07379	.05270	-.16875	.60228
ATTLAN17	-.05278	.12547	-.23153	.52773
ATTLAN4	.49204	-.13936	.16052	.51852
ATTLAN13	-.03364	.48326	.09604	.48425

Factor Correlation Matrix:

		FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
FACTOR	1	1.00000			
FACTOR	2	.08973	1.00000		
FACTOR	3	-.27451	-.24717	1.00000	
FACTOR	4	.05321	.10830	-.16271	1.00000

S E C O N D O R D E R F A C T O R A N A L Y S I S

Principal Components Extracted 1 factors.
Factor Matrix:

	FACTOR 1
FACTOR3	-.77120
FACTOR2	.59994
FACTOR1	.58044
FACTOR4	.44560

Final Statistics:

Variable	Communality	Factor	Eigenvalue	Pct of Var	Cum Pct
FACTOR1	.33691	* 1	1.49014	37.3	37.3
FACTOR2	.35993	*			
FACTOR3	.59475	*			
FACTOR4	.19856	*			

R A D I A L P A R C E L S P R O C E D U R E

SPSS PROGRAM

```
compute parcel1 = attlan6 + attlan2 + attlan9 + attlan5
                  + attlan8 + attlan15 + attlan12.
compute parcel2 = attlan3 + attlan7 + attlan10 .
compute parcel3 = attlan13 + attlan14 + attlan10.
compute parcel4 = attlan17 + attlan19 + attlan11.
factor /variables parcel1 parcel2 parcel3 parcel4
              /format sort.
```

- - - - F A C T O R A N A L Y S I S - - - -

Factor Matrix:

	FACTOR 1
Parcel2	.83897
Parcel3	.81187
Parcel4	.62661
Parcel1	.55455

Final Statistics:

Variable	Communality	Factor	Eigenvalue	Pct of Var	Cum Pct
Parcel1	.30752	* 1	2.06317	51.6	51.6
Parcel2	.70387	*			
Parcel3	.65914	*			
Parcel4	.39264	*			

APPENDIX F

IDENTIFICATION OF THE MODEL

The parameters in the structural component of the model must be proved to be identified before any estimation of their values is attempted.

Each of the $\beta's$, $\gamma's$, and $\psi's$ should be solved for in terms of the variances and covariances among the latent variables ($\eta's$ and $\xi's$). This presupposes that the variances and covariances of the latent variables are identified. To identify the variances and covariances of the latent variables we have to show that they could be solved for in terms of the variances and covariances of the observed variables.

The linkage of latent to the observed variables is provided by the measurement model, and for this reason the measurement equations should be shown to be identified.

The method used for examining whether the model (measurement and structural) are identified is the one suggested by Long (1983).

F.1 Measurement Model

The measurement equations that should be shown to be identified are the following:

$$X_1 = \xi_1 + \delta_1 \qquad Y_1 = \eta_1 + \varepsilon_1$$

$$X_2 = \lambda_{21}\xi_1 + \delta_2 \qquad Y_2 = \lambda_{21}\eta_1 + \varepsilon_2$$

$$X_3 = \lambda_{31}\xi_1 + \delta_3 \qquad Y_3 = \eta_2 + \varepsilon_3$$

$$Y_4 = \lambda_{42}\eta_2 + \varepsilon_4$$

All possible pairs of measurement equations are multiplied, expectations are taken and since all variables are measured as deviations from zero, these expectations equal the covariances and variances among the observed variables, as is shown below.

$$E(x_i, x_j) = COV(\xi_i, \xi_j); \quad E(y_i, y_i) = VAR(\eta_i)$$

For example, by multiplying the equations for X_1 and Y_1 we get

$$E(X_1, Y_1) = \sigma_{X_1 Y_1} = COV(\xi_1, \eta_1) + COV(\xi_1, \varepsilon_1) + COV(\eta_1, \delta_1) + COV(\delta_1, \varepsilon_1)$$

A fundamental assumption of the Covariance Structure Model is that common factors (that is, latent variables $\xi's$ and $\eta's$) and unique factors (that is, errors in measurement of the x's and y's $\delta's$ and $\varepsilon's$) are uncorrelated :

$$E(\xi\delta') = 0 \text{ or } E(\delta\xi') = 0; \quad E(\eta\varepsilon') = 0 \text{ or } E(\varepsilon\eta') = 0$$
$$\text{or } E(\xi\varepsilon') = 0 \text{ or } E(\varepsilon\xi') = 0 \text{ or } E(\eta\delta') = 0 \text{ or } E(\delta\eta') = 0$$

For this reason in Equation Sets 1 (Table F.1) and 2 (Table F.2) all the covariances among common and unique factors equal zero and have been written with a line crossing them out.

As can be seen from equations 10 and 12 (in Equation Set 1) the covariances between the latent exogenous variable and the two latent endogenous variable are identified. Based on this fact we can see that all loadings (λ's) are identified in equations 11,13 and 14 (Equation Set 1) and equations 1 through 8 (Equation Set 2).

What remains to be identified are the parameters $VAR(\xi_1)$, $VAR(\eta_1)$, $VAR(\eta_2)$, $COV(\eta_1,\eta_2)$ as well as all Θ^{δ}'s and Θ^{ε}'s.

If we make the assumption that errors in the measurement of the exogenous variables IDENT, ACCUL, and INTEG are uncorrelated (i.e. $\Theta^{\delta}_{12} = \Theta^{\delta}_{13} = \Theta^{\delta}_{23} = 0$) then $VAR(\xi_1)$, Θ^{δ}_{11}, Θ^{δ}_{22}, and Θ^{δ}_{33} are proved identified.

In the same way if we make the assumption that errors in the measurement of the endogenous variables ATSCHL, ATEACH, INTENT1 and INTENT2 are uncorrelated (i.e. $\Theta^{\varepsilon}_{12}=\Theta^{\varepsilon}_{13}=\Theta^{\varepsilon}_{14}=\Theta^{\varepsilon}_{23}=\Theta^{\varepsilon}_{24}=\Theta^{\varepsilon}_{34} = 0$) then $VAR(\eta_1,\eta_2)$, $\Theta^{\varepsilon}_{11}$, $\Theta^{\varepsilon}_{22}$, $\Theta^{\varepsilon}_{33}$ and $\Theta^{\varepsilon}_{44}$ are proved identified.

Thus, all parameters in the measurement model and all variances and covariances of the latent variables are proven to be identified and we can conclude that the measurement part of the model is identified.

1. $\sigma_{X_1X_1} = VAR(\xi_1) + \cancel{2COV(\xi_1, \delta_1)} + \Theta^{\delta}_{11}$

2. $\sigma_{X_2X_2} = \lambda^{x\,2}_{21} VAR(\xi_1) + 2\lambda^{x}_{21} \cancel{COV(\xi_1, \delta_2)} + \Theta^{\delta}_{22}$

3. $\sigma_{X_3X_3} = \lambda^{x\,2}_{31} VAR(\xi_1) + 2\lambda^{x}_{31} \cancel{COV(\xi_1, \delta_3)} + \Theta^{\delta}_{33}$

4. $\sigma_{Y_1Y_1} = VAR(\eta_1) + \cancel{2COV(\eta_1, \epsilon_1)} + \Theta^{\epsilon}_{11}$

5. $\sigma_{Y_2Y_2} = \lambda^{2}_{21} VAR(\eta_1) + 2\lambda_{21} \cancel{COV(\eta_1, \epsilon_2)} + \Theta^{\epsilon}_{22}$

6. $\sigma_{Y_3Y_3} = VAR(\eta_2) + \cancel{2COV(\eta_2, \epsilon_3)} + \Theta^{\epsilon}_{33}$

7. $\sigma_{Y_4Y_4} = \lambda^{2}_{42} VAR(\eta_2) + 2\lambda_{42} \cancel{COV(\eta_2, \epsilon_4)} + \Theta^{\epsilon}_{44}$

8. $\sigma_{X_1X_2} = \lambda^{x}_{21} VAR(\xi_1) + \lambda^{x}_{21} \cancel{COV(\xi_1, \delta_1)} + \cancel{COV(\xi_1, \delta_2)} + \Theta^{\delta}_{12}$

9. $\sigma_{X_1X_3} = \lambda^{x}_{31} VAR(\xi_1) + \lambda^{x}_{31} \cancel{COV(\xi_1, \delta_1)} + \cancel{COV(\xi_1, \delta_3)} + \Theta^{\delta}_{13}$

10. $\sigma_{X_1Y_1} = COV(\xi_1, \eta_1) + \cancel{COV(\xi_1, \epsilon_1)} + \cancel{COV(\eta_1, \delta_1)} + \cancel{COV(\delta_1, \epsilon_1)}$

11. $\sigma_{X_1Y_2} = \lambda^{y}_{21} COV(\xi_1, \eta_1) + \cancel{COV(\xi_1, \epsilon_2)} + \lambda^{y}_{21} \cancel{COV(\eta_1, \delta_1)} + \cancel{COV(\delta_1, \epsilon_2)}$

12. $\sigma_{X_1Y_3} = COV(\xi_1, \eta_2) + \cancel{COV(\xi_1, \epsilon_3)} + \cancel{COV(\eta_2, \delta_1)} + \cancel{COV(\delta_1, \epsilon_3)}$

13. $\sigma_{X_1Y_4} = \lambda^{y}_{42} COV(\xi_1, \eta_2) + \cancel{COV(\xi_1, \epsilon_4)} + \lambda^{y}_{42} \cancel{COV(\eta_2, \delta_1)} + \cancel{COV(\delta_1, \epsilon_4)}$

14. $\sigma_{X_2X_3} = \lambda^{x}_{21}\lambda^{x}_{31} VAR(\xi_1) + \lambda^{x}_{21} \cancel{COV(\xi_1, \delta_3)} + \lambda^{x}_{31} \cancel{COV(\xi_1, \delta_2)} + \Theta^{\delta}_{23}$

Table F.1

Equation Set 1

1. $\sigma_{X_2Y_1} = \lambda_{21}^{x} COV(\xi_1, \eta_1) + \cancel{COV(\eta_1, \delta_2)} + \lambda_{21}^{x} \cancel{COV(\xi_1, \varepsilon_1)} + \cancel{COV(\delta_2, \varepsilon_1)}$

2. $\sigma_{X_2Y_2} = \lambda_{21}^{x}\lambda_{21}^{y} COV(\xi_1, \eta_1) + \lambda_{21}^{x} \cancel{COV(\xi_1, \varepsilon_2)} + \lambda_{21}^{y} \cancel{COV(\eta_1, \delta_2)} + \cancel{COV(\delta_2, \varepsilon_2)}$

3. $\sigma_{X_2Y_3} = \lambda_{21}^{x} COV(\xi_1, \eta_2) + \cancel{COV(\eta_2, \delta_2)} + \lambda_{21}^{x} \cancel{COV(\xi_1, \varepsilon_3)} + \cancel{COV(\delta_2, \varepsilon_3)}$

4. $\sigma_{X_2Y_4} = \lambda_{21}^{x}\lambda_{42}^{y} COV(\xi_1, \eta_2) + \lambda_{21}^{x} \cancel{COV(\xi_1, \varepsilon_4)} + \lambda_{42}^{y} \cancel{COV(\eta_2, \delta_2)} + \cancel{COV(\delta_2, \varepsilon_4)}$

5. $\sigma_{X_3Y_1} = \lambda_{31}^{x} COV(\xi_1, \eta_1) + \cancel{COV(\eta_1, \delta_3)} + \lambda_{31}^{x} \cancel{COV(\xi_1, \varepsilon_1)} + \cancel{COV(\delta_3, \varepsilon_1)}$

6. $\sigma_{X_3Y_2} = \lambda_{31}^{x}\lambda_{21}^{y} COV(\xi_1, \eta_1) + \lambda_{31}^{x} \cancel{COV(\xi_1, \varepsilon_2)} + \lambda_{21}^{y} \cancel{COV(\eta_1, \delta_3)} + \cancel{COV(\delta_3, \varepsilon_2)}$

7. $\sigma_{X_3Y_3} = \lambda_{31}^{x} COV(\xi_1, \eta_2) + \cancel{COV(\eta_2, \delta_3)} + \lambda_{31}^{x} \cancel{COV(\xi_1, \varepsilon_3)} + \cancel{COV(\delta_3, \varepsilon_3)}$

8. $\sigma_{X_3Y_4} = \lambda_{31}^{x}\lambda_{42}^{y} COV(\xi_1, \eta_2) + \lambda_{31}^{x} \cancel{COV(\xi_1, \varepsilon_4)} + \lambda_{42}^{y} \cancel{COV(\eta_2, \delta_3)} + \cancel{COV(\delta_3, \varepsilon_4)}$

9. $\sigma_{Y_1Y_2} = \lambda_{21}^{y} VAR(\eta_1) + \lambda_{21}^{y} \cancel{COV(\eta_1, \varepsilon_1)} + \cancel{COV(\eta_1, \varepsilon_2)} + \Theta_{12}^{\varepsilon}$

10. $\sigma_{Y_1Y_3} = COV(\eta_1, \eta_2) + \cancel{COV(\eta_1, \varepsilon_3)} + \cancel{COV(\eta_2, \varepsilon_1)} + \Theta_{13}^{\varepsilon}$

11. $\sigma_{Y_1Y_4} = \lambda_{42}^{y} COV(\eta_1, \eta_2) + \lambda_{42}^{y} \cancel{COV(\eta_2, \varepsilon_1)} + \cancel{COV(\eta_1, \varepsilon_4)} + \Theta_{14}^{\varepsilon}$

12. $\sigma_{Y_2Y_3} = \lambda_{21}^{y} COV(\eta_1, \eta_2) + \lambda_{21}^{y} \cancel{COV(\eta_1, \varepsilon_3)} + \cancel{COV(\eta_2, \varepsilon_2)} + \Theta_{23}^{\varepsilon}$

13. $\sigma_{Y_2Y_4} = \lambda_{21}^{y}\lambda_{42}^{y} COV(\eta_1, \eta_2) + \lambda_{21}^{y} \cancel{COV(\eta_1, \varepsilon_4)} + \lambda_{42}^{y} \cancel{COV(\eta_2, \varepsilon_2)} + \Theta_{24}^{\varepsilon}$

14. $\sigma_{Y_3Y_4} = \lambda_{42}^{y} VAR(\eta_2) + \lambda_{42}^{y} \cancel{COV(\eta_2, \varepsilon_3)} + \cancel{COV(\eta_2, \varepsilon_4)} + \Theta_{34}^{\varepsilon}$

Table F.2

Equation Set 2

F.2 The Structural Model

The structural component of the model is defined by the following two structural equations:

$$\eta_1 = \gamma_{11}\xi_1 + \zeta_1$$
$$\eta_2 = \beta_{21}\eta_1 + \gamma_{21}\xi_1 + \zeta_2$$

A necessary condition for identification (Long,1983) is the order condition, which states that for an equation in a structural model to be identified, the number of variables that are excluded from the equation (i.e. are hypothesized not to have a direct effect on the latent endogenous variable defined by the given equation) is greater than or equal to the number of equations in the system minus one. If this condition is not true the equation is not identified and some restrictions should be imposed for achieving identification.

As far as the present model is concerned, it can be seen by inspection of the equations that the order condition is satisfied in the first but not the second equation:

Equation for	Number of excluded variables	No of equations minus one
η_1	1	1
η_2	0	1

Having established that a structural equation satisfies the order condition, however, does not prove that it is identified. A sufficient condition for identification is to

prove that each parameter in the structural model is identified, i.e. can be solved for in terms of the variances and covariances of the observed variables. Or, as the previous paragraphs have shown, because the variances and covariances of latent variables are identified (i.e. can be directly solved for in terms of the variances and covariances of the observed variables), identification of the structural parameters can be proved by showing that they can be solved for in terms of the variances and covariances of the latent variables.

F.2.1 Identification of Equation for η_1 :

a. This equation is first multiplied by ξ_1. The following equation results:

$$COV(\eta_1,\xi_1) = \gamma_{11}\ VAR(\xi_1) + COV\ (\xi_1,\zeta_1)$$

b. Next the equation is multiplied by itself. The following equation results:

$$VAR(\eta_1) = \gamma_{11}^2\ VAR(\xi_1) + \psi_{11} + 2\gamma_{11}\ COV(\xi_1,\zeta_1)$$

In the above equations $COV\ (\xi_1,\zeta_1)$ equals 0 (a basic assumption of the Covariance Structure Model is that exogenous variables and errors in equations are uncorrelated). Furthermore, the parameters $COV(\eta_1,\xi_1)$, $VAR(\xi_1)$ and $VAR(\eta_1)$ have been proved identified as elements of the measurement model. There are only two unknowns (γ_{11} and ψ_{11}) in two equations which can be solved for and thus are identified.

F.2.2 Identification of Equation for η_2 :

a. The equation is first multiplied by η_1. The following equation is obtained:

$$COV(_{\eta 1},_{\eta 2}) = \beta_{21}\ VAR(\eta_1) + \gamma_{21}\ COV(_{\eta 1},\xi_1) + \psi_{12}$$

b.Next it is multiplied by ξ_1 . The following equation results:

$$COV(_{\eta 2},\xi_1) = \beta_{21}\ COV(\eta_1,\xi_1) + \gamma_{21}\ VAR(\xi_1) + COV(\xi_1,\zeta_2)$$

c. Finally, the equation is multiplied by itself. The following equation is obtained:

$$\begin{aligned} VAR(_{\eta 2}) = {} & \beta_{21}^2\ VAR(\eta_1) + \gamma_{21}^2 VAR(\xi_1) + \psi_{22} \\ & + 2\beta_{21}\gamma_{21}\ COV(\eta_1,\xi_1) + 2\beta_{21}\ \psi_{12} \\ & + 2\gamma_{21}\ COV(\xi_1,\zeta_2) \end{aligned}$$

In the three equations above the parameter $COV(\xi_1,\zeta_2)$ equals by assumption 0 and the parameters $VAR(\xi_1)$, $VAR(\eta_1)$, $VAR(_{\eta 2})$, $COV(_{\eta 1},_{\eta 2})$,$COV(_{\eta 2},\xi_1)$, and $COV(\eta_1,\xi_1)$ have been proved identified as elements of the measurement model. There are four unknowns (γ_{21}, β_{21}, ψ_{12} and ψ_{22}) in three equations. As errors in predicting $_{\eta 1}$ and $_{\eta 2}$ are not assumed to be correlated ψ_{12} equals 0. The three remaining parameters can be solved for and are thus identified.

APPENDIX G

THE LISREL PROGRAM

```
TEST OF FISHBEIN/Ajzen MODEL OF ATTITUDE-BEHAVIOR
RELATIONSHIP
DA NI=7 NO=490 MA=KM
LA
 *
 'ident' 'accul' 'integ' 'atschl' 'atteach' 'intent1'
 'intent2'
 KM SY
 100
  54 100
  41  45 100
  41  46  42 100
  35  38  40  58 100
  41  42  31  38  33 100
  47  46  38  51  41  72 100
 SE
 4 5 6 7 1 2 3
 MO NY=4 NX=3 NE=2 NK=1 BE=FU GA=FI PS=DI
 LE
 'Attitude''Intention'
 LK
 'SubjNorm'
 FR LX(2,1) LX (3,1) LY(2,1) LY(4,2)
 FR BE(2,1)
 FR GA(1,1) GA(2,1)
 VA 1 LY(1,1) LY(3,2) LX(1,1)
 OU SE TV EF MI RS TO
```

APPENDIX H
THE LISREL COMPUTER OUTPUT

DOS - L I S R E L 7.16
BY
KARL G JORESKOG AND DAG SORBOM
This program is published exclusively by

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Mooresville, Indiana 46158, U.S.A.
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```
OTHE FOLLOWING LISREL CONTROL LINES HAVE BEEN READ :
TEST OF FISHBEIN/Ajzen MODEL OF ATTITUDE-BEHAVIOR RELATIONSHIP
  DA NI=7 NO=490 MA=KM

  LA
   *
   'ident' 'accul' 'integ' 'atschl' 'atteach' 'intent1'
   'intent2'
   KM SY
   100
    54 100
    41  45 100
    41  46  42 100
    35  38  40  58 100
    41  42  31  38  33 100
    47  46  38  51  41  72 100
   SE
   4 5 6 7 1 2 3
   MO NY=4 NX=3 NE=2 NK=1 BE=FU GA=FI PS=DI
   LE
   'Attitude''Intention'
   LK
   'SubjNorm'
   FR LX(2,1) LX (3,1) LY(2,1) LY(4,2)
   FR BE(2,1)
   FR GA(1,1) GA(2,1)
   VA 1 LY(1,1) LY(3,2) LX(1,1)
   OU SE TV EF MI RS TO

0                          NUMBER OF INPUT VARIABLES  7
0                          NUMBER OF Y - VARIABLES    4
0                          NUMBER OF X - VARIABLES    3
0                          NUMBER OF ETA - VARIABLES  2
0                          NUMBER OF KSI - VARIABLES  1
0                          NUMBER OF OBSERVATIONS   490
0
```

CORRELATION MATRIX TO BE ANALYZED

	ATSCHL	ATTEACH	INTENT1	INTENT2	IDENT	ACCUL
ATSCHL	1.000					
ATTEACH	.580	1.000				
INTENT1	.380	.330	1.000			
INTENT2	.510	.410	.720	1.000		
IDENT	.410	.350	.410	.470	1.000	
ACCUL	.460	.380	.420	.460	.540	1.000
INTEG	.420	.400	.310	.380	.410	.450

CORRELATION MATRIX TO BE ANALYZED

	INTEG
INTEG	1.000

PARAMETER SPECIFICATIONS

LAMBDA Y

	ATTITUDE	INTENTIO
ATSCHL	0	0
ATTEACH	1	0
INTENT1	0	0
INTENT2	0	2

LAMBDA X

	SUBJNORM
IDENT	0
ACCUL	3
INTEG	4

BETA

	ATTITUDE	INTENTIO
ATTITUDE	0	0
INTENTIO	5	0

GAMMA

	SUBJNORM
ATTITUDE	6
INTENTIO	7

PHI

	SUBJNORM
SUBJNORM	8

PSI

	ATTITUDE	INTENTIO
	9	10

THETA EPS

	ATSCHL	ATTEACH	INTENT1	INTENT2
	11	12	13	14

THETA DELTA

	IDENT	ACCUL	INTEG
	15	16	17

```
0INITIAL ESTIMATES (TSLS)
0         LAMBDA Y
0            ATTITUDE   INTENTIO
+          ________   ________
   ATSCHL      1.000       .000
  ATTEACH       .845       .000
  INTENT1       .000      1.000
  INTENT2       .000      1.153
0         LAMBDA X
0            SUBJNORM
+          ________
    IDENT      1.000
    ACCUL      1.033
    INTEG       .855
0         BETA
0            ATTITUDE   INTENTIO
+          ________   ________
 ATTITUDE       .000       .000
 INTENTIO       .214       .000
0         GAMMA
0            SUBJNORM
+          ________
 ATTITUDE       .890
 INTENTIO       .589
0         COVARIANCE MATRIX OF ETA AND KSI
0            ATTITUDE   INTENTIO   SUBJNORM
+          ________   ________   ________
 ATTITUDE       .687
 INTENTIO       .413       .625
 SUBJNORM       .451       .395       .506
0         PSI
0            ATTITUDE   INTENTIO
+          ________   ________
                .286       .304
0         THETA EPS
0              ATSCHL    ATTEACH    INTENT1    INTENT2
+          ________   ________   ________   ________
                .313       .510       .375       .170
0         THETA DELTA
0               IDENT      ACCUL      INTEG
+          ________   ________   ________
                .494       .460       .630
0         SQUARED MULTIPLE CORRELATIONS FOR Y - VARIABLES

0              ATSCHL    ATTEACH    INTENT1    INTENT2
+          ________   ________   ________   ________
                .687       .490       .625       .830
0 TOTAL COEFFICIENT OF DETERMINATION FOR Y - VARIABLES IS .957

0         SQUARED MULTIPLE CORRELATIONS FOR X - VARIABLES

0               IDENT      ACCUL      INTEG
+          ________   ________   ________
                .506       .540       .370
OTOTAL COEFFICIENT OF DETERMINATION FOR X - VARIABLES IS .736
```

OSQUARED MULTIPLE CORRELATIONS FOR STRUCTURAL EQUATIONS

	ATTITUDE	INTENTIO
	.584	.514

OTOTAL COEFFICIENT OF DETERMINATION FOR STRUCTURAL EQUATIONS IS.665

OLISREL ESTIMATES (MAXIMUM LIKELIHOOD)

LAMBDA Y

	ATTITUDE	INTENTIO
ATSCHL	1.000	.000
ATTEACH	.843	.000
INTENT1	.000	1.000
INTENT2	.000	1.209

LAMBDA X

	SUBJNORM
IDENT	1.000
ACCUL	1.058
INTEG	.872

BETA

	ATTITUDE	INTENTIO
ATTITUDE	.000	.000
INTENTIO	.261	.000

GAMMA

	SUBJNORM
ATTITUDE	.889
INTENTIO	.524

COVARIANCE MATRIX OF ETA AND KSI

	ATTITUDE	INTENTIO	SUBJNORM
ATTITUDE	.688		
INTENTIO	.410	.596	
SUBJNORM	.440	.374	.494

PSI

	ATTITUDE	INTENTIO
	.297	.292

THETA EPS

	ATSCHL	ATTEACH	INTENT1	INTENT2
	.312	.511	.404	.130

THETA DELTA

	IDENT	ACCUL	INTEG
	.506	.447	.624

SQUARED MULTIPLE CORRELATIONS FOR Y - VARIABLES

ATSCHL	ATTEACH	INTENT1	INTENT2
.688	.489	.596	.870

TOTAL COEFFICIENT OF DETERMINATION FOR Y - VARIABLES IS .964

SQUARED MULTIPLE CORRELATIONS FOR X - VARIABLES

IDENT	ACCUL	INTEG
.494	.553	.376

TOTAL COEFFICIENT OF DETERMINATION FOR X - VARIABLES IS .738

SQUARED MULTIPLE CORRELATIONS FOR STRUCTURAL EQUATIONS

ATTITUDE	INTENTIO
.568	.509

TOTAL COEFFICIENT OF DETERMINATION FOR STRUCTURAL EQUATIONS IS .640

CHI-SQUARE WITH 11 DEGREES OF FREEDOM = 18.49 (P = .071)

GOODNESS OF FIT INDEX = .989

ADJUSTED GOODNESS OF FIT INDEX = .972

ROOT MEAN SQUARE RESIDUAL = .022

FITTED COVARIANCE MATRIX

	ATSCHL	ATTEACH	INTENT1	INTENT2	IDENT	ACCUL
ATSCHL	1.000					
ATTEACH	.580	1.000				
INTENT1	.410	.346	1.000			
INTENT2	.496	.418	.720	1.000		
IDENT	.440	.371	.374	.452	1.000	
ACCUL	.465	.392	.396	.478	.523	1.000
INTEG	.383	.323	.326	.394	.431	.456

FITTED COVARIANCE MATRIX

	INTEG
INTEG	1.000

FITTED RESIDUALS

	ATSCHL	ATTEACH	INTENT1	INTENT2	IDENT	ACCUL
ATSCHL	.000					
ATTEACH	.000	.000				
INTENT1	-.030	-.016	.000			
INTENT2	.014	-.008	.000	.000		
IDENT	-.030	-.021	.036	.018	.000	
ACCUL	-.005	-.012	.024	-.018	.017	.000
INTEG	.037	.077	-.016	-.014	-.021	-.006

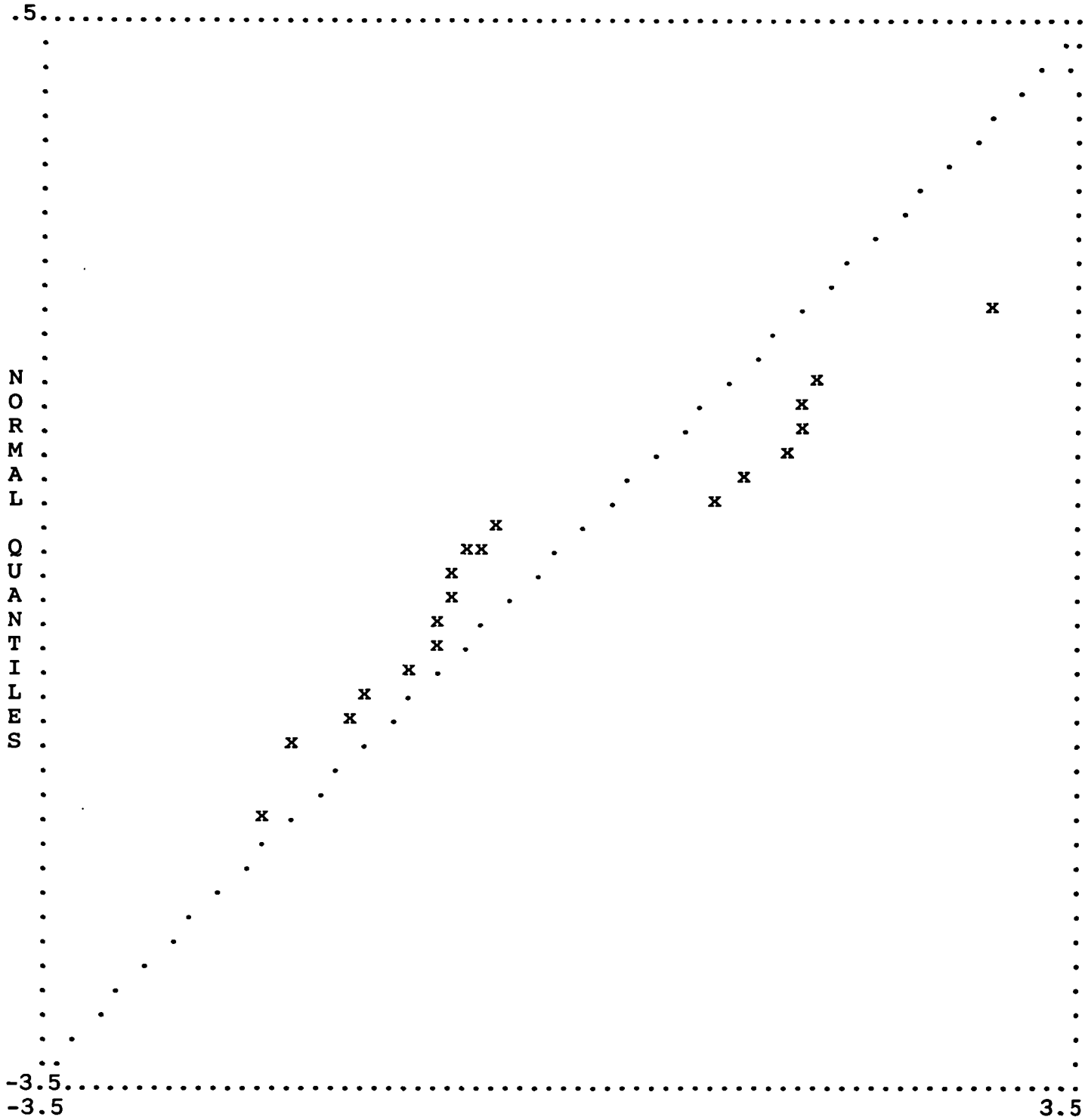
```
0         FITTED RESIDUALS
0               INTEG
+
    INTEG         .000
-SUMMARY STATISTICS FOR FITTED RESIDUALS
 SMALLEST FITTED RESIDUAL =    -.030
   MEDIAN FITTED RESIDUAL =     .000
  LARGEST FITTED RESIDUAL =     .077
-STEMLEAF PLOT
 - 2|0011
 - 0|86642865000000000
   0|478
   2|467
   4|
   6|7

0         STANDARDIZED RESIDUALS
0          ATSCHL   ATTEACH  INTENT1   INTENT2     IDENT     ACCUL
+
   ATSCHL    .000
  ATTEACH    .000     .000
  INTENT1 -1.856     -.716     .000
  INTENT2  1.734     -.542     .000      .000
    IDENT -1.695     -.948    1.659     1.097      .000
    ACCUL  -.327     -.618    1.249    -1.305     1.570      .000
    INTEG  1.672     2.937    -.631     -.694    -1.189     -.409
0         STANDARDIZED RESIDUALS
0               INTEG
+
    INTEG         .000

-SUMMARY STATISTICS FOR STANDARDIZED RESIDUALS
 SMALLEST STANDARDIZED RESIDUAL =   -1.856
   MEDIAN STANDARDIZED RESIDUAL =     .000
  LARGEST STANDARDIZED RESIDUAL =    2.937
-STEMLEAF PLOT
 - 1|97
 - 1|32
 - 0|977665
 - 0|43000000000
   0|
   0|
   1|12
   1|6777
   2|
   2|9
-LARGEST POSITIVE STANDARDIZED RESIDUALS

0RESIDUAL FOR    INTEG AND  ATTEACH =   2.937
```

QPLOT OF STANDARDIZED RESIDUALS



```
-STANDARD ERRORS
0         LAMBDA Y
0            ATTITUDE    INTENTIO
+                ________    ________
   ATSCHL          .000        .000
  ATTEACH          .066        .000
  INTENT1          .000        .000
  INTENT2          .000        .076
0         LAMBDA X
0            SUBJNORM
+                ________
    IDENT           .000
    ACCUL           .080
    INTEG           .076
0         BETA
0            ATTITUDE    INTENTIO
+                ________    ________
 ATTITUDE        .000        .000
 INTENTIO        .086        .000
0         GAMMA
0            SUBJNORM
+                ________
 ATTITUDE        .078
 INTENTIO        .106
0         PHI
0            SUBJNORM
+                ________
 SUBJNORM        .062
0         PSI
0            ATTITUDE    INTENTIO
+                ________    ________
                 .053        .035
0         THETA EPS
0              ATSCHL    ATTEACH    INTENT1    INTENT2
+                ________    ________    ________    ________
                 .048        .045        .039        .044
0         THETA DELTA
0              IDENT       ACCUL       INTEG
+                ________    ________    ________
                 .043        .042        .047


-T-VALUES


0         LAMBDA Y
0            ATTITUDE    INTENTIO
+                ________    ________
   ATSCHL          .000        .000
  ATTEACH        12.841        .000
  INTENT1          .000        .000
  INTENT2          .000      15.834
0
```

```
      LAMBDA X
0             SUBJNORM
+             ________
    IDENT         .000
    ACCUL       13.210
    INTEG       11.452
0         BETA
0             ATTITUDE   INTENTIO
+             ________   ________
 ATTITUDE         .000       .000
 INTENTIO        3.035       .000
0         GAMMA
0             SUBJNORM
+             ________
 ATTITUDE       11.379
 INTENTIO        4.926
0         PHI
0             SUBJNORM
+             ________
 SUBJNORM        7.950
0         PSI
0             ATTITUDE   INTENTIO
+             ________   ________
                5.644      8.367
0         THETA EPS
0               ATSCHL    ATTEACH    INTENT1    INTENT2
+             ________   ________   ________   ________
                6.545     11.373     10.248      2.927
0         THETA DELTA
0               IDENT      ACCUL      INTEG
+             ________   ________   ________
               11.698     10.610     13.256

-TOTAL AND INDIRECT EFFECTS
0         TOTAL EFFECTS OF KSI ON  ETA
0             SUBJNORM
+             ________
 ATTITUDE         .889
 INTENTIO         .757
0         STANDARD ERRORS FOR TOTAL EFFECTS OF KSI ON  ETA

0             SUBJNORM
+             ________
 ATTITUDE         .078
 INTENTIO         .076
0         INDIRECT EFFECTS OF KSI ON  ETA
0             SUBJNORM
+             ________
 ATTITUDE         .000
 INTENTIO         .232
0 STANDARD ERRORS FOR INDIRECT EFFECTS OF KSI ON  ETA
0             SUBJNORM
+             ________
 ATTITUDE         .000
 INTENTIO         .075
```

```
0         TOTAL EFFECTS OF ETA ON  ETA
0            ATTITUDE   INTENTIO
+                ------     ------
 ATTITUDE        .000       .000
 INTENTIO        .261       .000
0 LARGEST EIGENVALUE OF B*B' (STABILITY INDEX) IS  .068
0 STANDARD ERRORS FOR TOTAL EFFECTS OF ETA ON  ETA
0            ATTITUDE   INTENTIO
+                ------     ------
 ATTITUDE        .000       .000
 INTENTIO        .086       .000
0         INDIRECT EFFECTS OF ETA ON  ETA
0            ATTITUDE   INTENTIO
+                ------     ------
 ATTITUDE        .000       .000
 INTENTIO        .000       .000
0  STANDARD ERRORS FOR INDIRECT EFFECTS OF ETA ON  ETA
0            ATTITUDE   INTENTIO
+                ------     ------
 ATTITUDE        .000       .000
 INTENTIO        .000       .000
0         TOTAL EFFECTS OF ETA ON  Y
0            ATTITUDE   INTENTIO
+                ------     ------
   ATSCHL       1.000       .000
  ATTEACH        .843       .000
  INTENT1        .261      1.000
  INTENT2        .316      1.209
0  STANDARD ERRORS FOR TOTAL EFFECTS OF ETA ON  Y
0            ATTITUDE   INTENTIO
+                ------     ------
   ATSCHL        .000       .000
  ATTEACH        .066       .000
  INTENT1        .086       .000
  INTENT2        .103       .076
0         INDIRECT EFFECTS OF ETA ON  Y
0            ATTITUDE   INTENTIO
+                ------     ------
   ATSCHL        .000       .000
  ATTEACH        .000       .000
  INTENT1        .261       .000
  INTENT2        .316       .000
0  STANDARD ERRORS FOR INDIRECT EFFECTS OF ETA ON  Y
0            ATTITUDE   INTENTIO
+                ------     ------
   ATSCHL        .000       .000
  ATTEACH        .000       .000
  INTENT1        .086       .000
  INTENT2        .103       .000
```

```
0         TOTAL EFFECTS OF KSI ON  Y
0            SUBJNORM
+            --------
   ATSCHL        .889
  ATTEACH        .750
  INTENT1        .757
  INTENT2        .914
0 STANDARD ERRORS FOR TOTAL EFFECTS OF KSI ON  Y
0            SUBJNORM
+            --------
   ATSCHL        .078
  ATTEACH        .075
  INTENT1        .076
  INTENT2        .079

-MODIFICATION INDICES AND ESTIMATED CHANGE
0         MODIFICATION INDICES FOR LAMBDA Y
0            ATTITUDE   INTENTIO
+            --------   --------
   ATSCHL        .000       .516
  ATTEACH        .000       .516
  INTENT1       4.368       .000
  INTENT2       4.368       .000
0         ESTIMATED CHANGE FOR LAMBDA Y
0            ATTITUDE   INTENTIO
+            --------   --------
   ATSCHL        .000       .099
  ATTEACH        .000      -.084
  INTENT1       -.279       .000
  INTENT2        .337       .000
0NO NON-ZERO MODIFICATION INDICES FOR LAMBDA X
0NO NON-ZERO MODIFICATION INDICES FOR BETA
0NO NON-ZERO MODIFICATION INDICES FOR GAMMA
0NO NON-ZERO MODIFICATION INDICES FOR PHI
0NO NON-ZERO MODIFICATION INDICES FOR PSI
0NO NON-ZERO MODIFICATION INDICES FOR THETA EPS
0NO NON-ZERO MODIFICATION INDICES FOR THETA DELTA
0MAXIMUM MODIFICATION INDEX IS 4.37 FOR ELEMENT ( 4,1)
 OF LAMBDA Y
THE PROBLEM USED 6192 BYTES (= 2.4% OF AVAILABLE WORKSPACE)
                         TIME USED :    32.6 SECONDS
```

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