

# *The National Examination's System of Greece and its function as a mechanism of social selection*

DIONYSSIOS GOUVIAS

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## GENERAL INTRODUCTION

This paper is part (and outcome) of my research on the inequality of access to higher education in Greece. My main focus will be the National Examinations for entrance into universities and other HE institutes (*Genikes Exetasis*). I will explore the relationship between various personal and social characteristics of Greek students in the last year of the upper-secondary school (*lyceum*), and their average school performance, score in the National Examinations, chances to enter higher education, as well as the patterns of their distribution in various higher education institutes. The data concentrated on the case of the Greater Athens Area, which showed certain similarities and certain discrepancies to the picture emerging at national level.

So far, there has not been any in-depth empirical study - except some contributions in the theoretical debate - about the association between success in entering higher education and the patterns of allocation to various disciplines, according to the individual's background, after the 1983 reform of the examination system (Kasimati, 1991, Katsikas and Kavvadias, 1994, 1996; Kiridis, 1996; Polydorides, 1985, 1995a,b, 1996; Psacharopoulos and Papas, 1987, 1993).

The main aim of the study was that of an exploration of patterns of selection and classification of students through the National Examination system. Another aim was to highlight (if any) its function regarding the legitimisation of the existing social hierarchies, as they are defined by, and interact with the labour market structures and the social power relationships.

A short reference to theoretical debates on assessment and its explicit or implicit assumptions will be attempted. This will be followed by an extended reference to the evolution of the Greek school system (from 1964 onwards). I will also talk briefly about the Greek labour market characteristics, and how these relate the status of certain disciplines, with special reference to the case of Athens.

Furthermore, the main research questions and hypotheses will be highlighted. Additionally, the research methodology will be outlined (sampling process, variables used, data collection, practical problems encountered and classification principles). Then the results of the statistical analysis will be presented, and a discussion of the findings will follow.

## THEORETICAL FRAMEWORK

First I would like to make clear what are my personal beliefs and ideological standpoints, as far as the role that education and, particularly, assessment play today. This will clarify and explain, not only my personal engagement with the particular topic, but also the perspectives through which I am approaching the relationship between school and society. In this way certain perplexities and unclear points - relating to issues of interest, analytical tools, research methodologies and statistical techniques - will be avoided.

The main drive of this work has been the existence of deep divisions and inequalities in today's educational institutions, throughout the world. My main references will focus on the technologically advanced societies, and especially on the European experience, mainly due to limitations of bibliographical sources, as well as the research tradition in educational matters.<sup>1</sup>

During the 1950s and 1960s, the study of education - until then dominated by the traditional 'individualistic' values of 'excellence' and 'merit' - became more closely associated to the social scientific approach. That is not surprising at all, if one considers the context of the education environment on a global scale, after the Second World War. All the disciplines included in the so-called social sciences domain (especially the sociology and psychology, and very often the economics as well) faced highly controversial problems concerning the consequences of the rapid growth in school enrolment rates which characterised most countries. The enrolment explosion at the secondary school level and the expanded admission to the University-preparing school as well as to the University itself has given rise to questions about the standard of the students processed through a system of mass education, as compared to an elitist one. In a selective system, by means of organisational differentiation at an early age children are allocated to different types of school, and also at an early stage of their school career, grouping practices are employed aimed at spotting those who are supposed to be particularly academically oriented.

Nevertheless, 'selection' is not only about 'sorting out' the ablest or academically oriented pupils. At the same time it is a general social phenomenon, an indispensable aspect of the existence of human societies. Sociologists since Durkheim's age concluded that school contributes to the continuity of 'social balance', by transmitting to the new generations a certain amount of rules, principles and moral categories, which reflect the society's 'views' about what is good and bad, progressive and conservative etc. The controversy starts when one questions the legitimacy of those values and principles as serving specific interests of specific social 'groups', or 'classes', or 'layers'. In an ideal society, only the inherited abilities of an individual would define his/her position within the social system, and that could start from the very early stages of his/her socialisation, including the school role. However, many factors other than the ability of the students influence their eventual educational experiences and attainments. These include differences in the level and quality of education available in the country, region, or community in which they live; differential access to educational facilities according to their social class status, religion, race and ethnic origins; differences in the willingness and abilities of their parents and others to provide the financial and psychological supports necessary for the maximisation of their potential talents.

## **INFLUENTIAL 'PARADIGMS' AND THEORETICAL PERSPECTIVES**

My main approach to society as a whole, and the education 'system' (I do not generally employ the 'Parsonian' meaning here) is one that emphasises the complexity of 'interests', 'power relations' and 'negotiation mechanisms', through an indefinite process of interactions, changes - in quality and in quantity. My view of education has been influenced by :

- a) Theories of structural interaction, either in a neo-Marxist form (Althusser, 1972; Poulantzas, 1973), or in the form of more 'typological' analyses of the educational system (Hopper, 1968; Archer, 1979), which perceive education as a system of interdependent power 'blocks'. Especially the work of Margaret Archer, *Social Origins of the Educational Systems* (1979) has been very influential on me, because it gives a detailed insight into the way various types of educational systems (centralised or not) operate, and how these reflect, in a way, the existing balance of power not only in purely educational but also in generally social grounds. However, we should be very cautious when we apply these theoretical concepts, especially in

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<sup>1</sup> Nevertheless, the picture of inequality depicted in this brief summary of the international theoretical debates is certainly even worse in 'less developed' countries, since in many of them the lack of material progress makes any talk about equality of educational provision rather a 'luxury'.

the case of certain social formations - as the Greek one - which have been characterised by a model of 'depended development', and in which the non-correspondence of the capitalist mode of production to the pre-existed social structures, has been evident (see Tsoukalas, 1977; Mouzelis, 1978). In other words, reducing real group structures to an aggregation of isolated individuals suppressed by the 'dominant' mode of production (e.g. the social-stratification approach of Althusser), entails the danger not only of dismissing altogether the possibility that in certain types of society political cleavages are closely linked with developments in the religious, ethnic, cast or patronage spheres, but also of neglecting to answer questions about the transitional periods and the developmental processes that have been witnessed in the evolution of the examined systems throughout the centuries.<sup>2</sup> Therefore, these theories can help us to put education 'in context', rather than discover the 'content'; to generally 'describe' what is going on and (sometimes) by whom, rather than discern how it is done, or what should be done.

- b) 'Conflict' theories (Williams, 1957; Anderson, 1968; Bowles and Gintis, 1972, 1975 and 1976; Carnoy and Levin, 1976;) which show that the educational system is a crucial element in the reproduction of the division of labour. Although the concept of the 'capitalist class' has been repeatedly contested, especially in the last two decades when an unprecedented wave of technological development and structural economic changes made the definition of clear-cut class boundaries difficult, numerous empirical studies have shown the persistent patterns of social reproduction across the globe. For example, the Coleman Report (1966) showed clearly that any nationally set up 'equalising programme' can not remedy the prevailing inequalities of the society as a whole. I believe that even when schools on the base of individual IQ scores - the flagship of the 'meritocrats' around the world, and subsequently the main argument of the socio-economic power-elites - treat students of varying social origins differently, reinforce those class-based personality traits that, much more than cognitive differences, explain why the children of the privileged tend to occupy the higher positions in the social division of labour.
- c) Theories of 'cultural reproduction' and works on ideological and cultural domination have also been very influential in my approach on issues surrounding the specific research topic. Notions such as 'cultural capital', 'systems of meaning', 'social competencies', 'social styles' and 'group dispositions' (Bourdieu), have proved of immense importance in analysing the 'map of inequalities' existed in the Greek - and indeed in any - educational system.
- d) 'Critical Theory' and certain post-modern approaches to education - which are not by any means contradictory to theories of cultural reproduction - helped me to avoid the 'trap' of economic, ideological, or cultural determinism, and to stand critical against perceptions which place emphasis on the overwhelming and one-sided nature of mass culture as a dominating force. The subsequent examination of the Greek educational system, as well as the statistical analysis of data, will show how unsound, trivial and obsolete - in theoretical, epistemological and methodological terms - such an approach would be.

It is true that, apart from theoretical tools necessary to understand the interaction between social context and educational system in a macro-level - which presupposes an 'abstract' way of thinking - it is also important to perceive education in a more 'pragmatic', 'descriptive' and policy-focused framework. In other words, I do not believe that knowledge is objective and tangible, and the

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<sup>2</sup> M. Archer (1979), in her analysis of the 'collective interests' in the social and educational systems, succeeded in not being either over-deterministic in the structural models she proposed, or a supporter of 'atheoretical' empiricist approaches.

researcher is required to take an observer role, using the methods of the natural science. It is also true that research in the post-war years - primarily concerned with the structural problem of the relation between the educational system and the system of social stratification - has had little to say about the content of education, and the relation between educational policies, curriculum design and pedagogical methods.

However, this is not the case in the approaches mentioned above - at least for those contributions that influenced my research - despite the criticism by some of the proponents of the so-called 'new sociology of education' (see Karabel and Halsey, 1977, pp. 52-62). In my approach to the educational system of Greece, I decided not to attempt a 'microcosmic' analysis because of two essential considerations:

- ◆ The centralised nature of the Greek educational system and the inertia - at national as well as at local level - characterising every reform attempt in the past, do not allow for the inclusion of school-based strategies and initiatives in a wider analytical framework that could elucidate the evolution of the system. It is rather in the field of 'political manipulation' processes (Archer, 1979) and their interactions with the State mechanisms, that we can trace any noticeable change in the basic components of the Greek educational system.
- ◆ I also believe that the mainly 'interpretative' approaches in social sciences - which unavoidably deal with the 'micro-level' interactions - somehow lack of theoretical imagination (Mills, 1959). For example, a case study that examines the behavioural problems of an ethnic minority in an urban secondary school - through the use of, say, observation - although it would probably be proved invaluable for the identification of some problems faced by the specific minority pupils, at the same time it would certainly focus on a very narrow research context, defined by the characteristics of the individual school (school environment, resources allocated, curriculum content, pedagogical methods adopted, parental contribution, community ties etc.). That means, that it would, quite possibly, lack 'generalisability', which I think is crucial to any kind of meaningful social research, and not research *per se*. In other words, although the proliferation of highly elaborated - in terms of both quantitative and qualitative methods used - studies at micro-level lead to significant advances in educational research, very often tend to pay more attention to the 'technician' side of the researcher, rather than her/his 'social scientific' image.

## **HISTORICAL BACKGROUND**

Although the most fundamental changes in the Greek educational system were introduced after the re-establishment of democracy in 1974, the 'seeds' for these changes had existed in the mid-sixties, when the liberal party of George Papandreou was in office. Amongst the changes brought about by this government - which attempted in an unfavourable social climate to attack the 'classicism', 'conservatism' and 'intellectualism' of the precedent right-wing governments - the most important were the follow:

- free education at all levels of public education
- nine-year compulsory attendance instead of the six-year system that existed
- restructuring of secondary schools into the three-year *gymnasium* (lower) and three-year *lyceum* (upper); the latter would include general and technical-vocational types.
- *demotiki*, the vernacular, would be the language of instruction in primary schools and taught along with *katharevousa* (a simplified form of ancient Greek) in secondary schools.
- at the end of secondary education the pupils would sit special examinations to get the 'Academic Certificate' that would allow entry to the Universities.

The 1967 'junta' brought to a halt every reform attempt, and reinforced the conservatism of the 'traditionalists'. Among the counter reform measures of the period 1967-74, was the reduction of compulsory education from 9 to 6 years long, the abolition of translated ancient Greek literature texts, and the replacement of social sciences in the new curriculum. The teaching of *demotiki* was restricted to the first 3 grades of primary school. Secondary education remained 'integrated' in the form of the six-year *gymnasium* (see diagram 1). In general, in those years, Greek education was more classics-orientated, bookish and old-fashioned than in the previous decade. The most important changes were to be observed in the 'hidden curriculum' (Young, 1971) of schools and the disciplinary environment in which teaching was taking place. The regime attempted to turn the attention of pupils towards values of the past, especially through emphasis on ancient Greek and its simplified form of school instruction, the *katharevousa* (the pure language).

It is true that the increase in enrolment and output ratio of technical education during the 1967-74 period was of an unprecedented level for Greece. While the output of the six-year gymnasium increased between 1968 and 1974 at a rate of 37.6%, that of the (lower and middle) technical-vocational schools increased at a rate of 78.8%. The graduates of the latter were about 42% of those of the former (15,898 as compared to 37,844) in 1968, but in 1974 the proportion was 58% (28,657 and 49,183, respectively), although it started to fall again in the following years (OECD, 1980, p. 132). Despite the improvements, the importance given to the 'helleno-cristian tradition' and the mainly classics-oriented curriculum of the Greek schools at that period affected, not only the content of technical education and the resources allocated to it by the government, but also its status in the eyes of the public (see Dimaras, 1975; Drettakis, 1977; Noutsos, 1982). As a result, secondary technical-vocational education continued to attract the type of pupil with no hope of having access to 'prestigious' occupations, that is those who were expected to benefit by a vocationally-oriented educational provision (blue-collar workers, office clerks, farmers etc.).

That was the case also with the participation in higher education by different socio-economic groups. According to OECD calculations, in the years before the 1976-77 reform, participation in higher education was highly unequal when examined on the basis of the father's occupation. Although the situation from the 1950s to the 1970s had been changed in favour of the 'lower' professions, in the mid-1970s there were still wide differences of access in certain University departments. In 1975-76 for example, Humanities was the only field where all occupational categories were represented almost 'equally', whereas Law was "over-represented by professionals and managerial personnel", Social Sciences and Teacher-training were "over-represented by people in agriculture and by blue-collar workers", and the more elite occupations were "concentrated in the more 'elite' fields of study, e.g., Medicine" (OECD, 1980, p. 121).

When democracy was re-introduced in 1974, the climate was in favour of major political, social and educational reform. The recommendations of international bodies, such as World Bank and OECD, pointed out to the great need of support for technical education, while they commented on the great 'inequalities' in educational opportunities, prevailing in the 1970s, in relation to gender and socio-economic status (see OECD, 1980).

Assessing the 1976-77 reform, we must first summarise the major considerations embodied in the laws 309/1976 and 576/1977:

- The raising of the school-leaving age, which was a constitutional mandate (article 16 of the 1975 Greek Constitution), ranked as a very important precondition for the goals of democratisation and modernisation. Compared to other Western societies, especially those of the European Economic Community, Greece had the fewest years of compulsory schooling (6 compared to generally 9).
- Selection through examinations at the end of compulsory schooling (age 15+), and the reorganisation of upper secondary education, would deflate the increasing bulge of aspirants for admission into the Universities and other post-secondary institutions. At the same time, they

would alleviate the problems of under-employment and psychological frustration (see diagram 2).

- Related to the above was a concern to make the education system more efficient and capable of satisfying the economic needs of a ‘modernising’ society.
- A strong desirability of maintaining control over educational standards, such as the attainment of certain levels of knowledge and the ‘screening’ of the most ‘talented’ for the few places that were - and still are - of necessity available in the Universities.

It is important here to stress the selective and credentialising role which examinations performed in Greek education, in a period when the high social demand for general education and for University degrees was running against every attempt to control educational standards, and output. Revealing of this demand was the increased proportion of entrees in the late seventies and early eighties - although it still remained relatively low. In 1974 the number of entrees in higher education (Universities and KATEEs) was 16,025 in a total of 68,063 applicants (23.5%), in 1978 21,375 out of 84,417 (25.3%), in 1981 26,754 out of 75,206 (35.5%) and in 1982 33,235 out of 78,708 (42.3%) (Katsikas, 1994, p. 136). The need to screen the ‘intellectually most capable’ for the few places that were of necessity available in the Universities and other higher institutions (the prevailing principle was that of ‘meritocracy’) was indisputable, but, at the same time, the highly selective procedure raised questions of ‘equity’ and ‘social justice’. Especially the educational opportunity within higher education was found to favour students with fathers in the highest places of the occupational pyramid, and that was a conclusion derived not only by Greek researchers (Eliou, 1976; Drettakis, 1977; Milonas, 1984; Fragoudaki, 1985; Polydorides, 1995a,b), but also by international organisations like the OECD (1980).

From 1982 already, the entrance examinations to the *lyceum* were abolished, and a new type of *lyceum* was introduced in 1984 at the post-compulsory level. This was called ‘multilateral’ *lyceum*, and it combined characteristics of the general and technical-vocational types. On the whole, the curriculum of this *lyceum*, rather resembles the curriculum of the general *lyceum*, with a few additional subjects, rather than that of the technical-vocational one. It seems that - although there are no specific surveys on the balance between theory and practice in the vocational courses of these schools - the new *lyceum* is an improved version of the general (academic) *lyceum*, with pre-vocational subjects at the first two grades, and theoretical vocational training at the final grade.<sup>3</sup>

The examination system itself, has been changed in many ways. In 1983, a new ‘four-track’ system was introduced, and, in 1988, the higher education entrance examinations were separated from the graduate certificate. Pupils were no longer obliged to sit the examinations in order to graduate (see diagram 3).

Those wishing to sit the examinations had - and still have - to attend one of four ‘tracks’ (see table 1):

1. The first track leads to University departments of Science and Technology and higher technological institutes, and the examined subjects are composition in Modern Greek, Mathematics, Physics and Chemistry.
2. The second track leads to medical and biological departments, and comprises the subjects of Composition in Modern Greek, Physics, Chemistry and Biology.
3. The third track offers opportunities for entrance in departments like Philosophy, Law, Modern-ancient Literature, Education. The subjects examined are Composition in Modern Greek, Ancient Greek Literature and Language, Latin and History.

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<sup>3</sup> This *lyceum*, according to recent legislation, will be incorporated into a new ‘integrated’ type of upper-secondary school, together with all the existed types.

4. The fourth track leads to departments such as Political Science, Economics, Administration, Sociology, and includes the subjects of Composition in Modern Greek, Mathematics, History and Sociology.

The new system did not wipe out examinations to tertiary level as the socialist party had promised. It, nevertheless, offered a more rational distribution of higher education and a greater variety of channels as well as the chance of limitless attempts for the candidates. It also eliminated the stress of these crucial examinations from the secondary grade of *lyceum*, since - from 1988 - in the calculation of the final score for the national examinations, the results of the first and second grade of lyceum do not have to be taken into account. In contrast, in 1983-87 these results accounted for 25% of the total score. Thus, in the University-entrance examinations (*Genikes Exetasis*, as they were named) each subject is examined on only one day of the year, and this is predetermined by the Ministry of Education. This change separated completely - at least formally, because in essence the links remained unbreakable - the performance of the students in high school and the national examinations. This caused criticism because it did not provide any incentive for better school achievement, while it exposed the whole process of the assessment in various accidental factors (psychological stress, memorisation, luck, technical problems). The justification for that decision - as the government argued - was based on the effect that the examination process had on the curriculum and its (internal) assessment within the schools. It was argued that a 'distorted' competition had been going on in the school classes between students, something that also raised questions about 'commercialisation' of the assessment system.

In the meantime, candidates competing for a place in the University schools increased three fold between 1974 and 1986. In contrast, the number of those successful in entering only doubled (see Chart 1).

The introduction in 1983 of the three-year Technological Education Institutes (TEIs) - which replaced the KATEE - has been seen, not only as an attempt at improving standards in the provision of higher technical and vocational knowledge, but also as a way of diminishing the trend for higher competition in University examinations. The reduction of chances and the high competition for University places forced the less successful applicants to turn towards the TEIs. While University has become more inaccessible for the majority of the secondary school graduates, the number of students entering TEIs kept increasing (See Chart 2).

The most important differences between TEIs and Universities derive from their - officially stated - educational objectives. The TEIs aim to "provide education in the classroom and in the 'real world' (laboratories, business, experimental fields, organisations and other public or private establishments linked with the TEIs) for technologists" (Kalamatianou *et al*, 1988, p. 273). To respond to these objectives, TEIs run programs which lead to a first degree (*ptychio*) after at least six semesters of classroom instruction, plus one or two additional semesters of practical training. In contrast, Universities offer programs which lead to a first - but not necessarily final - degree (also called *ptychio*) after eight semesters for all departments, except for engineering and dentistry which require 10 semesters, and for medicine (12 semesters).

Despite the popularity that TEIs have gained during the last decade, there are still problems of 'equitable' distribution of higher education places, because the percentage of candidates accepted has been remained low (about 18% of the total for Universities, and 17% for TEIs). Also, many people still consider University places as highly prestigious in relation to the TEIs, and the allocation of their places "is very inequitable and favours high income groups" (Psacharopoulos & Papas, 1987 and 1993).

## RESEARCH QUESTIONS

As it was stated before, so far there has not been any in-depth empirical study - except some contributions in the theoretical debate - about the association between success in entering higher education and the patterns of allocation to various disciplines.

The only organised and large-scale research attempt was carried out by the Ministry of Education, and it referred to the pre-1983 era, when the four routes of the NE system had not yet been established (Polydorides, 1985, 1995a,b and 1996). In that study, it was identified that there is a growing formulation of a new hierarchy of professions in the division of labour, with traditionally prestigious scientific disciplines being in 'decline', and concluded that "a change in the hierarchical ordering of the professions is followed by a change in the social background of students in the corresponding disciplines" (Polydorides, 1995a, chap. 2). It was also argued that certain variables, such as parental occupation or education, are 'mediated' by, and 'filtered' through other variables relating to different 'educational strategies' (e.g., duration and cost of private tuition) (Polydorides, 1996, chap.1). That study confirmed the widespread belief in the sociological research community that factors such as 'curriculum track' or 'attendance of private cramming institutes', or 'previous achievement', underline the influence that the family exercise on the choices made, on the one hand, and on the resources used for ensuring eventual success, on the other.

Taking into account these findings and the picture outlined from the evolution of the educational system, I concluded that a new attempt investigating the 'selection' character of the National Examination system should throw light on a number of unanswered questions:

1. Have the last changes (1983 and 1988) of the National Examinations' scoring-system contributed to a 'fairer' and more 'objective' system of higher-education selection? In other words, has the shift towards total reliance on the external assessment in one and only one day (three hours for each of the four subjects) decreased the inequalities nurtured by the school system?
2. What types of variables are more important in influencing graded performance, chances of access to higher education institutes and pattern of distribution across them? Has the family's socio-economic background retained its significance as an influencing factor in the chances of accessing higher education, and if not, in which 'routes of study' has its importance been diminished?
3. What is the role that TEIs have played in the allocation of higher-education places; have they offered an alternative path, or just reproduced the 'traditional' patterns of selection?
4. Are the TEIs still the hosts of low-achievers of high school?
5. What is the relationship between inequalities in access to higher education and the hierarchical division of knowledge, in a world of rapid technological developments?
6. What kind of new labour-market divisions - if any - correspond to the 'distribution' of the student population?

## **RESEARCH METHODOLOGY**

### **General considerations**

The major reason for deciding to examine a sample of the whole student population was the lack of national data that provides information about socio-economic (parents' occupation, family income) and educational (educational level of parents) indicators which are sorted by area, type of school and year of study, and are of immense importance to the research. In addition, time limits,

geographical barriers and very high financial demands, made the collection of data from the various regions of Greece enormously difficult - something that doubtless would add more validity in any future research conclusion. Thus, a decision was made, under these circumstances, to use the prefecture of Attika, which is believed to concentrate many of the characteristics of the Greek schools throughout the country. Therefore, although it could not be claimed that an absolute similarity to the national picture exists, some useful generalisations of the conclusions might be attempted.

The stratification of the sample needed to be based on a real estimate of the distribution of the school units across the Greater Athens Area (GAA), and subsequently of the school population.

Moreover, estimations should have taken into account, not only the numeric size of the school population, but also the most important socio-economic indicators of the areas in which the schools are situated.

## **Social Stratification and Educational Inequalities in Athens**

### *Education, occupation and social background*

The bulk of all economic - apart from political and administrative - activities has been, and still is in the capital, Athens. In the forty years between 1951 and 1991, while the total population increased at a rate of little more than 45%, the capital (the Greater Athens Area) more than doubled, and reached a threshold of around four million inhabitants (*National Population Census, 1991*).<sup>4</sup>

In a research study conducted in 1983 by the Social Research Institute of Greece, Pantazidis and Kasimati (1983), analysed data from the 1981 Population Census and the annual Labour Surveys of the NSSG, which pointed at some of the most characteristic elements of the capital's population. Among the main conclusions drawn from that study, was that in the period between the early 1960s and early 1980s, there had been a progressive increase in the proportion of the older people (age-range 65+) in the total population and a decrease of the proportion of the younger ones (namely age-ranges, 15-24 and 25-44).

In addition, although the number of men in the capital's - as well as the national - population was lower than that of women, as far as the economically active were concerned, the reverse happened. Men considerably outnumbered women (Pantazidis and Kassimati, 1983, p. 36). Male participation in the labour force has been reduced in relation to participation rates in the early 1960s, whereas that of females has been dramatically increased (pp. 37-40; for more recent data, NSSG, 1991-1994). However, that progress did not change at the same dramatic level the status that women have in the labour market, since they have been mainly absorbed into low-prestige jobs (Pantazidis and Kasimati, 1983, chap.3, tables 4-7).

As far as job opportunities are concerned, the Greater Athens Area (GAA) is among areas with the highest unemployment rate (12% in 1994).

It must be remembered that the aforementioned problems do not apply equally to all inhabitants of the GAA, since social differentiation is a crucial factor that determines job prospects and life standards. All the demographic and socio-economic research evidence during the last thirty years showed that there are wide deviations in the distribution of economic and cultural 'goods' in this area. A general pattern emerged from these studies, and revealed that the low-income households were concentrated in the western and south-western parts of the GAA whereas the high-income households were in the northern and north-eastern parts (see Pantazidis and Kassimati, 1983; Panagiotopoulou, 1993) (maps 1 & 2).

For example, in 1983, while for every thousand persons above the age of 14 in the northern and north-eastern areas 39 were looking for a job, the respective figure for the western areas was 71 and for the area of Pireas (the capital's port) 82 (Pantazidis and Kasimati, 1983, p. 89). Moreover,

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<sup>4</sup> A 30% of the national population are concentrated in 3.3% of the country.

while the former concentrated the 23% of the holders of a higher degree, the latter concentrate only the 7% and 7.2%, respectively (pp. 97 and 106).

The effect of family background is more noticeable among the higher education graduates (see Kasimati, 1991). The inequalities that prevail in the university-sector of higher education are considerably reduced when we deal with technical and vocational education, either at higher, or at middle (i.e., secondary and post-secondary) level.

The most profound indication of this situation is, above all, the personal evaluation - and 'valuation' at the same time - of the present qualification level or job prestige. When asked about the degree of satisfaction with the present occupation, or the degree of relevance of it with the qualifications acquired, or even the time lapsed between graduation and entrance into the labour market, the picture revealed is quite different. More specifically, students graduating from university departments of Social Sciences, Economics, Humanities, or TEI departments, express less satisfaction with their past and present job, often assess their job as irrelevant to their qualifications, and usually spend a longer period of time searching for the job, as compared to those graduating from the more prestigious university faculties (Medicine, Engineering, Law, Natural Sciences) (Kasimati, 1991, pp. 196-214 and 239-330). If we take into account the representation of various socio-economic groups in the corresponding disciplines (see Gouvias, 1998b), the picture of the relation between social stratification and educational opportunities becomes clearer.

### The 'map' of inequality

Population expansion following the post-war reconstruction era caused - and at the same time was the cause of - an uneven expansion of the housing market, which has been inextricably linked to aspirations for upward social mobility (see Tsoukalas, 1987; Maloutas, 1990).

From the 1970s onwards, there has been a notable concentration of more privileged (according to their occupation, status in this occupation and the respective economic sector) social strata on the northern and north-eastern suburbs of Athens. (see map 2)

This concentration reflects the accumulation, not only of economic, but of 'cultural capital' as well (Bourdieu & Passeron, 1976; Bourdieu, 1990), something that has been argued to represent a "middle-class model of social reproduction" and a distinct type of "cultural segregation (Maloutas & Economou, 1992, pp. 78-79).

From the occupational point of view, there is a clear over-representation of the top-managerial and scientific occupations in the northern, north-eastern and south-eastern parts of the GAA. In these parts, we also see very high concentration rates of employers of the tertiary sector of the economy (see NSSG, various years; also Maloutas and Economou, 1992, pp. 75-79). Clearly, these areas can be viewed as more 'advantaged' in relation, not only to the occupational status of their population, but to a number of variables constituting the so-called 'collective consumption'. From the existence of private-sector educational establishments with better and abundant resources to the proximity to public-transportation networks, and from the distribution of health- and welfare-service establishments to the opportunity of access to various kinds of cultural products, these geographical entities have more or less the relative advantage in contrast to those from the rest of the GAA (see Maloutas & Economou, 1992, chapters. 5-10).

In contrast, there are working-class areas (roughly the western and south-western suburbs) where the indices of 'concentration' for the salaried employees are higher than the average level in the whole GAA (Maloutas and Economou, 1992, p. 88).

The western part of the GAA mainly absorbed the flow of internal migration during and after the 1950s. These over-populated areas are inhabited by people working mainly in the service or manufacturing sectors in very low-paid jobs. The standards of living there are often described as intolerable and below the poverty line (Katsikas, 1994, pp. 88-90). This has effects, not only on the general well-being of the people living there, but on the educational provision available to their children.

For these children even access to basic education is sometimes hard to achieve. Lack of buildings, school resources and well-motivated teachers have resulted in a general degradation of the educational environment and decrease in the performance of students (Katsikas, 1994, pp. 93-103). For them success in the National Examinations for entrance to higher education is hard to achieve and, if we examine the chances of entering into a prestigious university department then it becomes almost impossible (p. 92).

Somewhere in the middle - but with a high degree of heterogeneity - there are areas on the eastern, southern, south-eastern and north-western parts of GAA which show a significant increase in the representation of middle and upper levels of the service sector, and of those who can be identified as 'self-employed' (Maloutas & Economou, 1992, pp.101-105). In those areas, the tertiary-sector economic activities seem to gradually replace the secondary-sector ones and, in conjunction to the absence of secondary-sector activities in the northern areas - apart from the use of those areas as places of living for the 'top men' of that sector - contributes to a kind of functional 'division between East and West' (Maloutas & Economou, 1992, p. 123).

### **Stratification and Random Sampling**

After extensive reading of the demographic and socio-economic characteristics of the area - the decision taken was to stratify the population of the Greater Athens Area (GAA) into eight (8) 'clusters' (more about the criteria used, will be discussed below) in order to control for socio-economic differences. The target population was not the total population but the school-units spread around the examined area (255 general upper-secondary schools in the academic year 1995-96). In each cluster, the original plan was to take a 10% sample of the total school-units. However, due to obstacles imposed by the official permission granted to the author by the Ministry of Education, the final sample was decreased to 5%, something which, however, did not affect the representativeness of the sample. In some clusters there were few schools, and as a result, 5% represented less than one school-unit. In those clusters one school was chosen as the cluster-sample. Thus, the sample contains 16 schools, with the following distribution (see map 2):

group 1: 1 school  
group 2 : 1 school  
group 3 : 1 school  
group 4 : 3 schools  
group 5 : 4 schools  
group 6 : 1 school  
group 7 : 1 school  
group 8 : 4 schools

We should point out here that private upper -secondary schools were not included in the sample for the following reasons:

- The author's main interest was the reproduction of social inequalities within the public (state-maintained) education system, since it was perceived as given and unquestionable the fact that in private schools the vast majority of pupils come from the wealthiest and/or most educated family background.<sup>5</sup>
- In addition, the dispersion of these types of schools (the number of which is still very small in comparison to the state schools) is disproportionate to the general population distribution in the GAA.

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<sup>5</sup> This does not necessarily suggest a better quality of educational provision.

- As Polydorides showed (1995b, chapter 9) the distinction between state and private schools does not play a significant role on the differentiation of performance in the NE, when parental occupation was controlled. This possibly implies that, on the one hand, it is the ‘intervention’ of the socio-economic background of students that makes the difference and not the ‘highest’ quality of private schools; on the other hand, differentiation in purely numerical terms (i.e., score in the NE) is not what it matters in the ‘educational strategies’ of the wealthier families.<sup>6</sup>
- Finally, a number of practical reasons (e.g., necessity for separate and time-consuming applications for permission to enter each private school, instead of submitting a standard application to the Ministry of Education) deterred the author from including private upper - secondary schools in the sample.

## Variable selection

Keeping that at the moment there seems to be no in depth empirical study on the association between success in entering higher education and the pattern of allocation to the various disciplines according to individual background, I believe that certain variables need to be examined. Such variables would be ‘age’, ‘gender’, ‘school location’, ‘school characteristics’ (number of students, p/t ratio, number of classes etc.), ‘socio-economic background’ (parents’ occupation), ‘high school achievement’, ‘route of study’, ‘previous achievement in school’ and ‘higher education institute’ and/or ‘department’ in which a place has been secured. Additionally, the final score achieved in the NE will be considered as a factor which: a) directly influences the allocation patterns in higher education, and b) reflects (indirect influence) the importance of other personal, educational and social factors which shape the students’ identity.

### Issues concerning the classification of occupations in Greece

The problematic nature of assigning individuals to certain class categories, according to a definite criterion, namely their position in the production sphere, has been stressed repeatedly by various theorists and researchers, especially from the 1970s onwards (Giddens, 1973; Poulantzas, 1973; for Greece, Tsoukalas, 1987).

As Tsoukalas argued (1987), the peculiarity of the Greek economic development and social formation, especially in the post-war period, allowed the creation of ‘multi-positioned’ individuals, in the sense that a complex of social activities, beliefs and systems of values make a definite categorisation of individuals into specific class groups impossible. He concluded that “the multiplicity of economic activities in combination with the multiplication of various ‘non-formal’ types of income-generation, made almost unacceptable the total dependence of the social status of an individual on her/his class, or occupational position” (Tsoukalas, 1987, pp. 188-191).

A further point that should be emphasised here about the occupations, as they have been recorded from the school archives, is that there might (possibly) exist certain discrepancies between the objective position of an individual in a given social system (i.e., occupational category, job status, employment status, sector of economic activity, educational level etc).

Gouvias (1998) resulted in a ten-group classification scheme, roughly based on the criteria used by the National Statistical Service of Greece (NSSG). However, further analysis showed that the two variables resulted from this classification process (i.e., father’s and mother’s occupation) were, either non-operational in statistical terms, or failed to produce (statistically) significant effects

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<sup>6</sup> There are alternatives for their offspring, such as studying abroad, resitting the exams for many times, or simply being employed in the family business.

(Gouvias, 1998a, chap. 8). Therefore, in this paper a 'dual' classification was used. This makes a distinction between 'more' and 'less prestigious occupations', with the former including the 'scientific, professional and top-managerial occupations', as well as the 'associate professional & technical occupations', and the latter the remaining categories.

## STATISTICAL ANALYSIS - RESULTS

Preliminary bivariate and multivariate tests distinguished certain variables which ought to be included in the subsequent analysis, namely those of 'location of school', 'gender', 'age', parental occupation, size of classes, previous achievement at school and study route followed (see Gouvias, 1998a, pp. 178-221). However, it soon became obvious that:

1. In order to assess more reliably the relationships discovered in the previous analysis and determine the strength and direction of any causal link between socio-economic and personal variables, and performance in the *lyceum* and the National Examinations, a more rigorous analysis must be carried out.
2. Inequalities inherent in the educational and social system, as reflected on the differentiation between successful and non-successful students, university and TEI students, students in large and small HE institutes, and students in more and less 'market-oriented' faculties, have never been statistically examined in any research study in Greece. The attempts so far remained mainly descriptive and focused on general patterns emerging in national level (e.g., Kasimati, 1991). Even when elaborate statistical analyses were used, either they referred to very old data sets (Meimaris & Nikolakopoulos, 1978; Polydorides, 1995b and 1996), or they used as dependent variables only the more quantitative ones such as the numerical score in the National Examinations, limiting that way their analytical and explanatory rigour to the cut-off point of the examination system, and failing to identify the differentiation picture inside the higher education system (Polydorides, 1995b and 1996).

The general patterns emerging from differentiation in performance will be examined through a (linear) regression analysis, and those concerning differentiation patterns within the higher education system will be explored through a logistic regression analysis (details appear later).

### Results of linear regression analysis

The first regression model will examine the effect of certain independent variables (i.e., gender, age, father's and mother's occupation, school size, teachers' number, location of school etc.) on the **performance in the last year of *lyceum*** (variable 'grade 3').

For the specific regression model, the 'stepwise' approach was adopted, that is, adding regressors to the equation one at a time, depending on the contribution of each variable to the explained variance (Bryman & Cramer, 1990, p.245).

\* As it is evident from table 2, it seems that performance in the last year of *lyceum* is mainly influenced by socio-economic (parent's occupation, location of school) and personal (age, gender) as well as educational (previous achievement, school size) variables. However, their strength is not great, and this becomes clearer when we separately examine students in the various routes of study, or select sub-sample of them which consists of only the successes in higher education (Universities or TEIs). Only the previous achievement in *lyceum* and the location of school - and in one case, the student's gender - have significant effects on achievement in the last year of *lyceum*.

\* The picture generated by the regression analysis (see table 3), when dependent variable is the **total score in the N.E** ('totscore'), is approximately the same to that of the previous variable, but only when the total number of candidates is examined (irrespective of success or failure in getting a place in higher education). In this case, the most significant variables are the 'grade3', gender, the effect of the school location ('cluster') and occupation of mother.

When the successful students in Universities are examined, gender and location of school - quite surprisingly - lose their significance, and are 'replaced' by the route of study. This means that for those who succeeded in getting a place in Universities, gender differences and differences based on the socio-economic environment had not played an important role in the (scoring) performance, but it was rather the degree of 'easiness' of the subjects examined in the last two routes of study that considerably affected the total score (see also Polydorides, 1995b and 1996).

When the successful students in TEIs are examined, the effect of parents' occupation loses its significance, implying this way an 'equalising' function of the higher technical education as far as the access chances are concerned, something that has been repeatedly shown in the past research findings (see also chapters 3, 4 and 6 of this thesis).

When successful students in the various routes of study were examined (no distinction between Universities and TEIs this time) 'grade3' and gender were the most important variables (both of them with positive effects). Only in route 3 it was also the location of school that showed a significant effect, suggesting that students coming from the less advantaged areas of Athens perform high in the NE, as compared to those coming from the wealthiest areas. However, in assessing the latter, it is important to note that this specific route comprises disciplines with relatively low 'prestige' in the labour market and few job prospects.

\* In the case of the **order of entrance** ('entrord'), the only (statistically) significant variable is the location of school, and it suggests, thanks to its highly significant coefficient ( $\beta = -.245$ , with  $t = -4.361$  and sig. of  $t = .0000$ ) that students from the more advantaged areas of Athens gain the higher places in the Universities and TEIs, as compared to those students from the less advantaged areas (see table 4).

## **Results of logistic regression analysis**

### *Explanation of the analysis and of its variables*

The examination of differentiated performance in the NE, requires the clarification of the importance that some personal and socio-economic variables play in the allocation of the students in the various institutions of higher education. The score that each student has achieved in the NE, does not reveal too much about, either her/his final allocation to a university - or TEI - department, or the differentiation between Universities and TEIs, and between more and less 'prestigious' departments. It is specifically through these clarifications that inequalities linked to personal and social characteristics will be elucidated and understood.

We should always keep in mind that a high score in the NE does not guarantee that: 1) the student will get a place in the institution s/he hoped for, because sometimes luck plays a highly significant role in the allocation of places; 2) even if s/he gets what s/he wants, s/he might be in a less advantaged position from someone else - in the same or other academic route - who scored considerably lower, but gained a place in a more prestigious university, or in a department that secures bright job prospects for its graduates.

Consequently, the analysis deal with mainly qualitative and discrete variables. Therefore, the general approach henceforth will deal with, what is generally called, 'logistic regression analysis'. This analysis resembles to the 'logit multiway frequency analysis', but "has no assumptions about the distribution of the predictor variables" and there is no need for normally distributed, linearly related predictors" (Tabachnick & Fidell, 1996, p. 575). The parameters

estimates are used to predict cell frequency, and they also reflect the importance of each effect to the frequency in that cell. If one of the variables is considered as the dependent one (in our case, the various variables indicating the allocation patterns in higher education will be the dependent variables), the odds that a case falls into one of its categories can be predicted from the estimates. In this way, questions about association are translated into tests of main effects (associations between the DV and the IVs) and interactions (associations between the DV and the joint effects of two or more IVs).

We will try to construct a model out of the variables which proved to be - in earlier tests - the most important ones, as far as their effects on performance are concerned. In this model, we will follow a method of 'backward elimination' of those variables that do not contribute considerably to a statistically reliable 'departure' from the equal-frequencies hypothesis, which, in turn, is the necessary condition for the existence of (statistically significant) effects of the IVs on the given DV. This is done progressively (stepwise approach) so that the IVs with the smallest contribution to the total cell variation (that is, the difference between observed and expected cell frequencies) are exempted from the model. The main goal is to reach a stage where in our model (or else, equation, since we accept one variable as dependent and regress the IVs on it) the residual left (i.e., the unexplained by the included IVs variance) is not statistically significant.

For carrying out the logistic regression, we divided the (numeric) variable 'performance in the last year of the upper-secondary school' into three sub-groups: 1) 'bad', for those scoring from 0 to 13.5; 2) 'good', for those scoring from 13.6 to 17; and 3) 'very good', for those scoring from 17.1 to 20. For the variable 'total score in the National Examinations, a division into four sub-groups was made: 1) 'bad', that is, score between 0 and 4000; 2) 'good', that is, score between 4001 and 5000; 3) 'very good', that is, score between 5001 and 6000; 4) 'excellent', that is, score between 6001 and 6400 (for more details see Gouvias, 1998a, chap. 8).

Additionally, the University faculties are grouped as following: 1) Humanities and Social Sciences, or 'less prestigious faculties'; 2) Natural Sciences, Medicine and Engineering, or 'more prestigious faculties'. This has been done on the basis of information about the labour market characteristics and the students preferences for higher education studies, as well as on the basis of the original theoretical framework, which places emphasis on the structural attributes of the inequalities in education (see Polydorides, 1985 and 1995a; Kasimati, 1991; Katsikas & Kavvadias, 1994; Kiridis, 1996; Gouvias, 1998a,b).

## Results

The logistic regression that has been carried out elucidated some issues about the pattern of inequalities emerging from the allocation of places in higher education.

\* **Success in getting a place in higher education** is mainly influenced by the score in the NE, gender of the student and previous achievement in the *lyceum* (see table 5).

- ◆ For achievement, it is noted that it is 'good' performance, rather a 'very good' or 'exceptionally high', that influences positively the chances of students. As is suggested from further analysis for this or other variables - scoring excellence does not by itself guarantees success, but interacts with other personal and social factors, and very often with luck. The factors related to achievement retain their significance when examined separately students from different study routes, with more important the score in the NE.
- ◆ The variable gender, however, loses its significance when each study route is analysed separately, except the case of the fourth study route. In any case, though, the effect of the female gender is negative, as compared to that of males.

◆ From the socio-economic variables (i.e., parents' occupation and location of school), only the occupation of father seems to cause any significant effect on chances of success<sup>7</sup>. The most interesting aspect, however, is that in the first study route (leading to university departments of Science and Technology and other higher technological institutes) the students whose fathers work in more prestigious occupations have considerably more chances of entering higher education (Universities or TEIs) than those whose fathers work in less prestigious occupations. the opposite is true in the fourth study route (departments related to Humanities and Social or Economic Studies) where students from lower socio-economic background have relatively more opportunities to enter into a high education department.

\* By examining patterns of **differentiation between successses in Universities and successses in TEIs**, the most influential IV proved the total score in the N. Examinations, except for students following study routes 2 and 3 (see table 6).

◆ More specifically, when performance in the NE was found to be the most crucial factor of differentiation, it was shown that those who performed 'bad' (score between 0 and 4000 out of 6400), or 'good' (score between 4001 and 5000 out of 6400) had considerably less chances of getting a place in a University than those who performed 'excellent' (score between 6001 and 6400 out of 6400). On the contrary, those who performed 'very good' (score between 5001 and 6000 out of 6400) had more chances - in the case of study route 1, enormously more chances - than those who performed 'excellent' (score between 6001 and 6400 out of 6400).

◆ However, in the study route 4, it is the second category of the IV 'total score in the NE (i.e., those who performed between 4001 and 5000 out of 6400) that shows the most (statistically) significant effect! In general, it could be said that (high) performance plays a significant role on the allocation patterns in higher education, but is a more crucial factor for those following Natural Sciences, Medicine and Engineering courses. On the other hand, excellent performance does not always goes in hand with success, not because it is a negative factor per se, but rather because it is a very rare phenomenon in a system with constantly deteriorating scoring standards.

◆ When the successses in the second study route are examined, the only significant IV is the occupation of father. This reinforces the credibility of the previous findings about the extent of influence of the socio-economic background in this specific study route. In the third and fourth study routes only gender and maternal occupation appear to be the most influential factors of differentiation: girls have less chances of getting a place in a University than boys, while students whose mothers work in the least prestigious occupations have more chances than students whose mothers work in the most prestigious ones. The former finding is just another reminder of the reproductive character of the school system as far as the traditional role of women in the labour market is concerned, whereas the latter stresses the over-representation of the less wealthy families in the last two (especially the 4<sup>th</sup> one) study routes.

\* When **differentiation between various University faculties is examined**,<sup>8</sup> the effect of mother's occupation is a crucial factor of differentiation between students who get a place in various Universities around the country, in contrast to previous dependent variables where it had only minor - if significant at all - influence (see table 7). More specifically, the results show that:

◆ The high and negative b-parameter for the sub-category 1 ('less prestigious occupations') suggests that inequalities in occupational status exercise a significant influence on the chances of students to get a place in faculties of Technology, Science and Medicine, as against in those of Humanities and Economic and Social Studies ( $b = -0.5102$ , log odds ratio = 0.6004). In other

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<sup>7</sup> We should keep in mind that a 'dual' classification between less and more prestigious occupations was used in our analysis.

<sup>8</sup> See their grouping in the previous page.

words, students whose mothers work in the most prestigious jobs, have more chances to follow courses leading to the most 'rewarding' occupations - in terms of esteem, financial returns and future prospects. The increasing importance of the female occupational disparities is evident here (see also Gouvias, 1998a, chap. 8) and suggests that in a labour market where female employment for older age cohorts is not a common phenomenon, the slightest occupational differentiation might result in considerable inequalities of financial wealth and, potentially, educational resource provision.

- ◆ Gender is another differentiating factor, and it seems that boys have significantly more chances of gaining a place in a prestigious University faculty, as compared to girls. This reinforces our initial assumptions about the gender stereotypes prevailing in the Greek labour market and, subsequently, in the Greek educational system.
- ◆ As far as the effect of performance in the NE is concerned, it was noticed that scoring 'excellent' (between 6001 and 6400 out of 6400), unlike the previous regressions, plays a significant and positive role in the allocation of students to the faculties of Technology, Science and Medicine. More specifically, whereas in our previous logistic regressions, scoring 'very good' (between 5001 and 6000 out of 6400) exerted a positive effect of the differentiation between 'success and failure', 'University and TEI', now its influence is negative compared to the reference category, which is 'excellent'. This suggests that for candidates wishing to follow 'applied' and 'scientific' studies, scoring excellence is a much more decisive factor, than for those who generally seek to enter higher education, or simply aim at a place in a University, or even prefer to do their studies in the larger and more 'prestigious' institutions. Although the above does not necessarily imply a unabridged difference in prestige between the different University faculties, it reveals that there is a stricter selection mechanism for entry to specific departments, which happen to coincide with occupations placed higher in the hierarchical scale of labour market demand.

\* No significant inequality pattern were found to exist in **the distribution of students in the various TEI departments**, according to personal, social and educational variables. Thus, it could be said that TEIs do not present the patterns of inequalities existed in Universities, and which became evident from previous tests. It seems that they offered an alternative, 'fairer' and 'freer' from social influences path to higher specialised studies.

## DISCUSSION

### Access and Equity

Although inequalities in access to higher education have been considerably reduced in recent years - something that became evident in the present analysis of Athens - certain patterns of social stratification still remain strong. Despite the fact that secondary schooling became (almost) universal in Greece, there are still significant obstacles for the offspring of the lowest social strata to obtain a place in a department that would secure a future career in a job considered as 'highly prestigious' in market terms.

By appearing to be an impartial and neutral 'transmitter' of the benefits of a valued culture, schools - and assessment being carried out in them - are able to promote inequality in the name of 'fairness' and 'objectivity'.

For example, the student who succeeds in getting a place in a department of Sociology, part of a small University, located in a remote semi-urban area of Greece, must feel very satisfied with her/his 'success'. S/he has been through an extremely competitive and laborious process and "s/he finally made it". S/he might even be happy, because among Greek high-school graduates "there is a strong interest in the immediate independence that student life, preferably, in another town,

represents” (Benincasa, 1998, p. 36). In case of ‘failure’ s/he would possibly accept it as her/his own ‘mistake’, ‘weakness’ or ‘bad luck’.

The most significant variables related to the scoring level in the NE, or even the distribution in higher education, are the ones representing previous achievement in the upper-secondary school. However, their significance tends to considerably diminish, in comparison to the other (independent) variables, as we move from the examinations of more quantitative dependent variables (e.g., score in the NE) to the more qualitative ones (e.g., differentiation between universities and TEIs, or distribution across faculties).

We also saw that when holding constant other personal (educational or not) and socio-economic variables, the effect of the area where each school is located is a significant factor related to the performance in the upper-secondary school and becomes less significant as we progress from secondary level towards higher education. Clearly, there is an advantage for students coming from the wealthiest suburbs of Athens. That means that - considering the stronger significance of this variable as compared to the occupational variables - not only the school environment (quality of buildings, material resources etc.), but also the general socio-economic and cultural characteristics of each area, have a more decisive influence on graded achievement than individual family differences (see research question 2 earlier). Furthermore, since the same variables indirectly affect - through the graded achievement - the differentiation of students in higher education, we could reasonably assume that individual disparities in family’s socio-economic position have substantially been diminished as a factor of unequal access to higher education in relation to other personal and environmental variables, although - as we will discuss shortly - they continue to play a crucial, but more subtle, role in the differentiation between institutions and academic disciplines.

It should be considered, however, that an investigation of the effects of the same variables on a sample that included private secondary schools in the Greater Athens Area, would probably reveal a far larger extent of inequalities attributed to occupational, as well as generally social differentiation that prevails in this area.

Nevertheless, even in the context of State education, where the inequalities of opportunity witnessed in the past appear to be less profound, as far as the concentration of ‘advantages’ and ‘disadvantages’ is concerned, one should never forget that ‘space’ cannot be treated as an optional extra, or a ‘neutral’ term. Physical space is socially constructed. ‘Locales’ (Giddens, 1984) carry social meaning and symbols which are widely accepted and which considerably affect social relation. Even though these meaning and symbols can certainly be challenged and reinterpreted, they still deeply affect how people as individuals and groups interpret their own and other people’s circumstances.

Inequality of educational level is often hard to conceal. For example, in the early nineties, the average proportion of higher education graduates in the western and south-western parts of Athens was 7-8%, whereas the corresponding figure for the north and north-eastern parts was 40-45% (Katsikas, 1994, p. 91). Furthermore, it is not a coincidence that for the last 7 years - and, presumably, earlier than this - the success rates (i.e., proportion of those gaining a place in higher education, to the total number of candidates) for students coming from the less advantaged suburbs of the Greater Athens Area (western and south-western parts) have been considerably lower, as compared to those coming from wealthiest ones (north, north-eastern and eastern parts). For the former, the range of success rates has been - with very few exceptions - between 14% and 30%, whereas for the latter the range has been between 40% and 50% (Katsikas, 1994, pp. 91-92; Rapti, 1996).

The picture emerging from the collected data showed that the wide differences of the past in success rates between less and more ‘wealthy’ areas, are progressively diminishing. However, there are still differences in the success rates between the two extremes. No matter how ‘blurred’ the picture is in those parts of Athens, which are considered as of highly ‘mixed’ socio-economic representation (see relevant discussion Gouvias, 1998a, chapter 7), there is still a noticeable ‘gap’ of around 10 percentage points between the average success rates of the north, or north-eastern suburbs and the western and south-western ones

Although the effect of gender has diminished as we shifted from performance in upper-secondary school to performance in the NE, it is evident that gender plays a highly significant differentiating role when students with the same social background, area of living and previous performance are examined. More specifically:

- Girls outperform boys in all the grades of the lyceum, albeit with a diminishing trend towards the last grade.
- Boys outperform girls in the National Examinations.
- Girls have significantly less chances of getting a place in higher education than boys.
- Girls have less chances of getting a place in a University as contrasted to a TEI, than boys, when the last two - and least prestigious - study routes are examined. When students as a whole, or those following the first two study routes, are concerned, the effect of gender does not play a (statistically) significant role.

Occupational differentiation seems to have lost the significance it once had in determining the success chances of students, either for participation in the N. Examinations or for entry into various higher education institutions. We cannot but stress the fact that - in terms of scoring achievement and when the occupational variables are statistically significant - while the sons and daughters of the wealthiest families do better during upper-secondary school years, it is those from the less wealthy families that very often score higher in the N. Examinations.

However, the effect of parental occupation has a differentiated degree of significance between various routes (that is, different subject groups). More specifically, the occupation of parents (mainly that of the father) plays a more important role on the differentiation patterns for those students who followed the first and second study routes, and a less important one on the last two.

What can we derive from the regression coefficients of the ‘logistic regression’ models produced, is the significant effect of parents’ occupation - and especially of that of the father - in the chances of entering higher education, or gaining a place at a University (rather than a TEI), when candidates for the first two routes of study are examined. These findings reinforce the possibility that the representation of a wider *spectrum* of social classes in the student population of a specific discipline leads to a progressive degradation of the importance that the corresponding profession has in the social division of labour. So, it is true that, although the ‘lower’ social strata achieved an unprecedented level of access to higher education, year after year, it is becoming evident that the only use of many of higher degrees (at Universities or TEIs) is their ‘face value’, since they do not satisfy anything else (i.e., employment, job security) than the ‘self indulgence’ of thousands of Greek parents who praise themselves for having an (unemployed) graduate in the family.

As it was claimed earlier, the TEIs seem to have offered an alternative path for many upper-secondary school graduates, and especially for the more ‘disadvantaged’ in terms of, either purely economic wealth, or cultural ‘capital’ (see research questions 3 and 4). Of course, we must be very cautious in judging that the establishment of the TEIs really challenged the ‘traditional’ patterns of selection. Someone might even argue that they have simply reproduced those patterns by absorbing the low-achievers of upper-secondary school. The establishment of new higher education departments - especially in the TEIs - has mainly been the outcome of a policy of political opportunism and resulted in a wide dispersion of them to various remote areas, with poor organisational arrangements and funding sources. The operation of different departments of the same institute at neighbouring cities in order to please voters in those areas, is a sign of an almost unplanned expansion of higher education, with many damaging consequences on the learning environment and, subsequently, the qualifications awarded.

Furthermore, in a recent field-study in a town in north-western Greece (Benincasa, 1998), there was a widespread dislike for the TEIs. Although most of the respondents admitted that “ compared with certain University institutions, TEIs offer qualifications and knowledge that are much more

useful on the labour market”, when they were asked to state their preferences they chose the University route. TEIs were seen as having “lower status” (p. 36).

On the other hand, those University departments with a large student intake each year (the so-called ‘mass-education departments’, such as Philosophy, Education, Literature, Economics, Social Studies etc.) correspond to occupations with the highest unemployment rates and the lowest labour-market prestige (see Kasimati, 1991; NSSG, 1993; Katsikas and Kavvadias, 1994; Polydorides, 1995a). Therefore, it would not be unsound to claim that the formulation of a new hierarchy of professions in the division of labour is emerging, not only between Universities and TEIs, but also among University departments. This is usually followed by a change in the social background of students in the corresponding disciplines (see also Polydorides, 1995a, chap. 2; Gouvias, 1998b).

The role of the State in these developments is often crucial, although it is, neither the primary, nor the main cause of them. In other words, the government, through its various agencies and organisations seems to ‘promote’ certain academic disciplines at the expense of others. It is obvious, for example, that, not only the funding and admission requirements for the different higher education departments are heavily influenced by the government’s own assessment of what the labour market needs, but the policy of scholarships is increasingly aligned to changing views of what constitutes ‘good’ and ‘worth-doing’ research and what does not (see research question 6).

Characteristic of this trend, is that, for the academic year 1994-95, from the 342 scholarships for post-graduate studies abroad, awarded by the State Scholarship Foundation of Greece, the 116 (34%) were related to the so-called Humanistic and Social Sciences disciplines, and if we exclude Law and Business & Economic Studies, the number falls to 72 (21%). In 1997-98, the respective figures were 29% and 17% (SSFG, 1994 and 1997).

This process neither in itself represents a linear and causal relationship between dominant mode(s) of production and school output, nor suggests that determinism rules out any interaction effect between various agents involved in the educational evolution (see also Archer, 1979). Therefore, there must be a distinction between the “requirement for the [educational] system to legitimate itself” and the “legitimation the system provides for the social structure as a whole” (Broadfoot, 1996, p. 107). In practical terms that means that, even those disciplines with few chances for future substantial financial returns or status rewards in the labour market, are not necessarily considered by the students and their parents as of little or no importance at all. Traditional academic disciplines such as Greek Literature or Philosophy are still perceived by many families as (at least) worth studying and of high educational importance for their offspring, even if this stance is not based on systematic and rational calculation of future prospects.

Additionally, given the evolution of the Greek political and educational system, the structural weaknesses of the economy, the dependent character of the country’s development and its position within the international division of labour, the present patterns of educational ‘selection’ in Greece, cannot be considered as severe as compared to other Western countries. In a country, deeply traditionalist and governed by totally ‘autarchic’ regimes until very recently, and in which political opportunism, nepotism, populism and instability have been the prevailing social features, it would have been inconceivable a few years ago for a manual worker’s son to enter a Medical School. The fact that today this is becoming more and more attainable - albeit with immensely slow pace - is something that must not be passed unnoticed (see research question 1).

Despite the optimistic picture painted by the higher education access-patterns in the Greater Athens Area, the situation at the national level is worryingly pessimistic. As it was shown in recent studies (Kiridis, 1996; Gouvias, 1998b) inequalities are much more profound in the rest of the country, rather than in the Greater Athens Area. This should not ‘comfort’ our worries with claims of nearly achieving an ‘egalitarian’ school system. On the contrary, the author’s main concern has been - and still is, as the title itself implies - the patterns of inequalities emerging in the country as a whole. Thus, the influence of socio-economic background merits further exploration at national level. The present study may have possibly revealed how important it would be to include in any

future analysis the dimension of regional differences in educational inequalities, that is, the huge differences prevailing in the relationship between ‘centre’ and ‘periphery’.

## **Hierarchisation of Knowledge**

The *de facto* categorisation of higher education, especially that between more vs. less ‘prestigious’ faculties and departments, implies a hierarchisation of knowledge, and this subsequently corresponds to specific power relations.

Instead of separating knowledge from power, an account of what the ‘new sociology of education’ proponents argued about the nature of knowledge needs to be taken (Young, 1971; Young and Whitty, 1977): what counts as knowledge in any given society, school, or social site presupposes and constitutes specific power relations.

A technocratic approach to knowledge is being progressively supported by formal schooling, and anything that is not easily measurable and quantifiable, is thought as ‘unproductive’ and ‘useless’. Although the traditional perception of higher education in Greece was that of a symbolic act, a ‘naming’ ritual, which attaches social status to graduates, progressively, the changes brought about in the division of labour and in the technological applications of scientific knowledge at national and international level, are going to considerably change or modify those perceptions.

A major assumption reinforced by these changes is that theory - and certainly educational theory - should contribute to the mastery and control of the environment through a set of deductively derived operations aimed at discovering the regularities that exist among isolated variables under study. In this ‘quest’, critical knowledge derived from the Humanitarian and Social disciplines is rather ‘unwelcome’, and that can easily be seen in labour market structures and practices. ‘Hard’ data becomes the focus of explanation and discovery, while other forms of knowledge, such as those that cannot be universalised intersubjectively, are banished to the realm of mere ‘speculative’ wisdom.<sup>9</sup> Knowledge acquired through traditionally established faculties (e.g., Medicine and Natural Sciences), or technologically orientated disciplines (e.g., Engineering courses, especially those connected to Electronics, Telecommunications and Robotics) and some new specialisations which deal with Management, Financing and other operations vital to the maintenance of global capitalism, is highly valued and rewarded.

At the same time, the old distinction between manual and non-manual work, not only remains unaffected, but is also reinforced, albeit redefined. For example, the preference - for those who ‘can’ - for technologically orientated jobs does not imply a more positive stance against manual labour. Those who graduate from prestigious University faculties - even those coming from corresponding disciplines in the less prestigious TEIs - aim at a non-manual, administrative and supervisory career. The operation of machinery and the low-level supervision is left to post-secondary vocational-college graduates and other semi- or unskilled workers.

In this sense, it is not only a hierarchisation of knowledge that takes place in every-day life, but also a continuous ‘re-distribution’ and ‘re-definition’ of it, according to the power relations existed in the global economic order. This does not necessarily suggest that formal educational systems - and in our case, the Greek system - explicitly or implicitly ‘promote’ the hierarchisation of occupations and knowledge in a direct way. Since they do not have their own ‘will’, but simply reflect the balance of power and socio-economic order - with all the contradictions and irregularities this entails - they just legitimise the inequalities prevailing in the wider social context.

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<sup>9</sup> In this respect, it is highly ironic that the most ‘speculative’ institution ever existed, the Stock Exchange, is ‘worshipped’ for its vitality and ability to sustain the global economic structure.

Therefore, the system of National Examinations does not 'define' what type of knowledge is 'higher' or 'lower', 'worth-learning' or 'not-worth-learning', nor does it 'select' for its own sake. After all, we saw that in certain conditions - when socio-economic and cultural factors allow it - it can play an 'equalising' role, as far as specific educational 'goods' are concerned. What it invariably does, however, is to legitimise the process of selection and its necessity by 'baptising' it as 'objective' and 'neutral' (see research questions 5 and 6).

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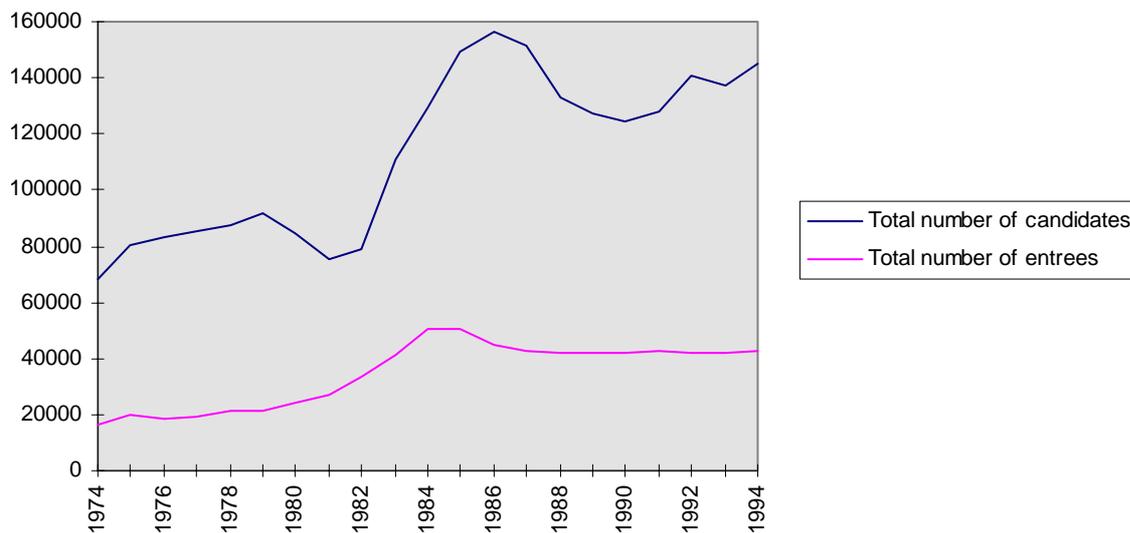
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# TABLE 1

## THE FOUR ACADEMIC TRACKS IN THE *LYCEUM* (after the 1988 examination reform)

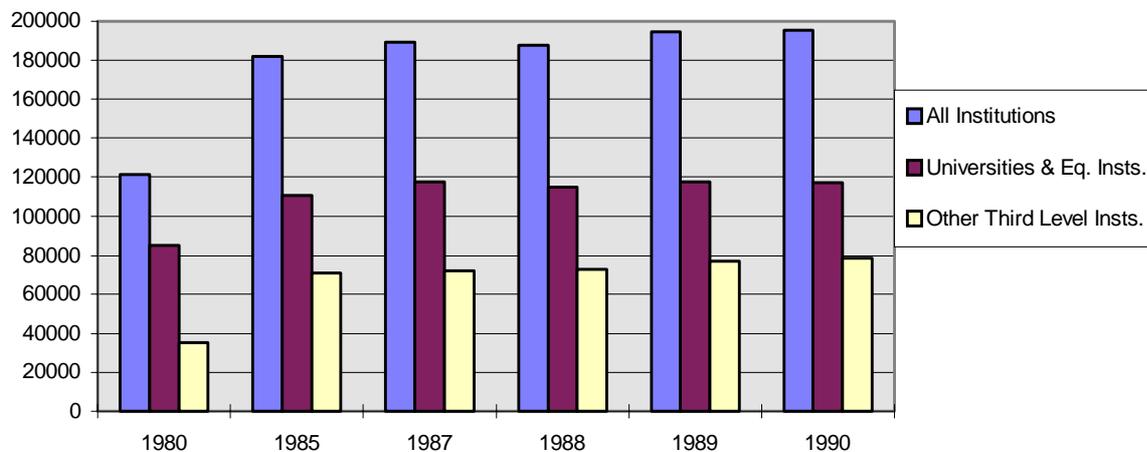
<u>DEPARTMENTS</u>	<u>SUBJECTS EXAMINED</u>
1) SCIENCE AND TECHNOLOGY	Composition in Modern Greek Mathematics Physics Chemistry
2) MEDICINE, BIOLOGY, HEALTH SERVICES	Composition in Modern Greek Physics Chemistry Biology
3) PHILOSOPHY, LAW, EDUCATION, MODERN-ANCIENT LITERATURE	Composition in Modern Greek Ancient Greek Lit. & Lang. Latin History
4) POLIT. SCIENCES, ECONOMICS, ADMINISTR., SOC. SCIENCES	Composition in Modern Greek Mathematics History Sociology (Political Economy after 1994)

**CHART 1**  
**The higher education intakes between 1974 and 1994**



Source: **Katsikas and Kavvadias**, *Inequality in Greek Education*, 1994.

**CHART 2**  
**Third-Level Enrolments in the 1980s**



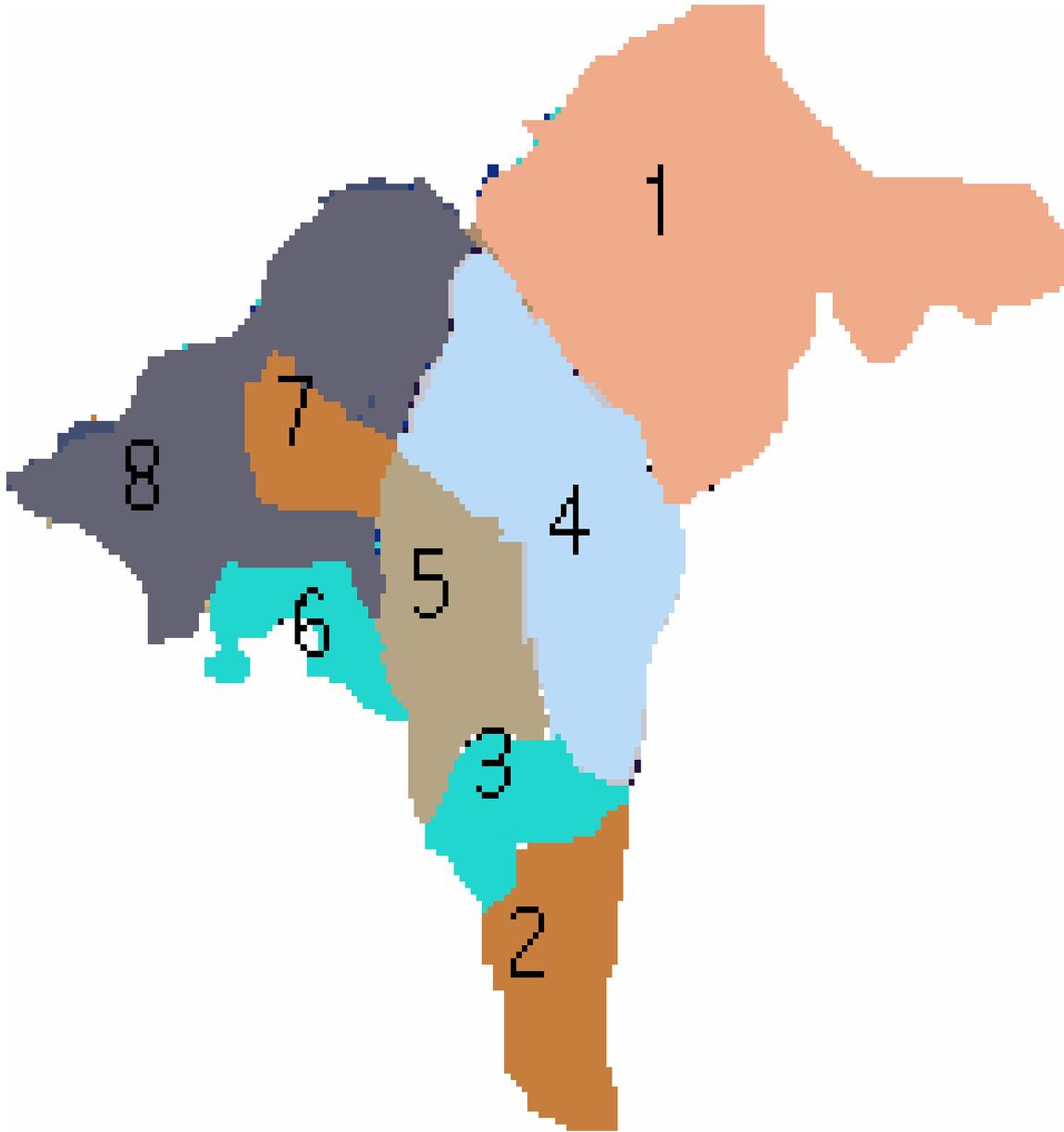
Source: **UNESCO**, *Statistical Yearbook*, 1994

**MAP 1**  
**THE PREFECTURE OF ATTIKA AND THE GREATER ATHENS AREA**



0 20 km.

**MAP 2**  
**THE DIVISION OF THE GREATER ATHENS AREA IN 8 CLUSTERS**



**TABLE 2****Beta regression coefficients, with DV the achievement in the last year of *lyceum*.**

<i>I.Variables</i>	<i>All candidates</i>	<i>Study route 1</i>	<i>Study route 2</i>	<i>Study route 3</i>	<i>Study route 4</i>	<i>Successes in TELs</i>	<i>Successes in Universities</i>
Age	-0.029*	-0.007	0.005	-0.039	-0.033	-0.123	-0.003
Cluster	-0.696*	-0.12*	-0.012*	-0.001*	-0.041*	-0.025	-0.153*
Father's occ.	0.026*	0.011	0.036	0.049	0.033	0.107	0.055
Mother's occ.	0.062	0.041	0.034	0.015	-0.02	0.053	0.034
Prev. perf. in <i>lyceum</i>	0.888*	0.884*	0.92*	0.801*	0.825*	0.852*	0.622*
School size	-0.032*	0.008	0.003	-0.12	-0.029	0.102	-0.082
Gender	-0.071*	-0.011	-0.016	-0.066	-0.068*	-0.028	-0.263
Study-route	0.153*					0.442*	0.102
<b>R<sup>2</sup></b>	0.7	0.8	0.8	0.6	0.7	0.6	0.5

Three decimal points were allowed for, therefore the coefficients have been rounded to the closest number.

\* Significant at the 0.05 level

**TABLE 3****Beta regression coefficients, with DV the total score in the N. Examinations.**

<i>I.Variables</i>	<i>All candidates</i>	<i>Study route 1</i>	<i>Study route 2</i>	<i>Study route 3</i>	<i>Study route 4</i>	<i>Successes in TEIs</i>	<i>Successes in Universities</i>
Age	-0.018	0.039	0.026	-0.03	-0.05	0.1	-0.039
Cluster	-0.471*	-0.035	-0.024	0.184*	0.019	-0.03	-0.117
Father's occ.	-0.004	-0.035	0.029	-0.001	-0.006	-0.111	-0.064
Mother's occ.	0.407*	0.06	0.028	0.019	-0.043	-0.53	0.147*
Perf. in lyceum	0.796*	0.768*	0.86*	0.803*	0.765*	0.529*	0.422*
Gender	0.065*	0.118*	0.145*	-0.035	0.108*	...	-0.036
Study-route	0.6					0.395*	0.244*
<b>R<sup>2</sup></b>	0.6	0.6	0.7	0.6	0.5	0.5	0.3

Three decimal points were allowed for, therefore the coefficients have been rounded to the closest number.

\* Significant at the 0.05 level

**TABLE 4****Beta regression coefficients, with DV the order of entry into a H.E. department.**

<i>I.Variables</i>	<i>All candidates</i>
Age	0.005
Cluster	0.245*
Father's occ.	0.025
Mother's occ.	0.055
Pref. <i>lyceum</i>	-0.048
Gender	0.015
Study-route	0.048
<b>R<sup>2</sup></b>	0.6

Three decimal points were allowed for, therefore the coefficients have been rounded to the closest number.

\* Significant at the 0.05 level

**TABLE 5**

**Most important variables and sub-categories, resulting from logistic regression, when Dependent Variable is ‘success in access to higher education’.\***

<i>I.Variables **</i>	<i>All candidates</i>	<i>Study route 1</i>	<i>Study route 2</i>	<i>Study route 3</i>	<i>Study route 4</i>
<b>Father’s occ.</b>	---		---	---	
Less Prest. Occup.		-0.416 (0.66)			0.635 (1.88)
<b>Perf. in lyceum</b>			---	---	
Bad	-1.5262 (0.217)	-1.114 (0.328)			-6.37 (0.02)
Good	0.370 (1.447)	0.1070 (1.112)			2.563 (12.98)
<b>Gender</b>		---	---	---	
Female	-0.703 (0.494)				-0.911 (0.401)
<b>Total score in NE</b>					
Bad	-4.467 (0.011)	-3.9 (0.02)	-11.891 (0)	-9.442 (0.001)	-13.9165 (0)
Good	-1.556 (0.211)	-0.435 (0.544)	-2.779 (0.062)	-9.442 (0.001)	-0.8951 (0.4)
Very Good	0.409 (1.505)	-0.311 (0.732)	2.157 (8.646)	3.9201 (50.4)	3.2665 (26.22)

\* All important variables are assessed at 0.05 significance level. However, certain sub-categories may not be significant at or below this level.

\*\* The missing sub-categories are the reference categories, against which the rest sub-categories (also called ‘dummy variables’) are regressed.

‘---’ implies non-significance

Numbers in parentheses are log. odds ratios.

**TABLE 6**

**Most important variables and sub-categories, resulting from logistic regression, when Dependent Variable is ‘differentiation between successes in Universities and successes in TEIs’.\***

<i>I.Variables</i>	<i>All candidates</i>	<i>Study route 1</i>	<i>Study route 2</i>	<i>Study route 3</i>	<i>Study route 4</i>
<b>Father’s occ.</b>	---	---		---	---
Less Prest. Occup.			-0.987 (0.373)		
<b>Mother’s occ.</b>	---	---	---	---	
Less Prest. Occup					4.408 (82.166)
<b>Gender</b>	---	---	---		
Female				-4.264 (0.014)	-0.611 (0.542)
<b>Total score in NE</b>			---	---	
Bad	-2.491 (0.083)	-6.87 (0.001)			-3.644 (0.026)
Good	-0.0674 (0.935)	-3.954 (0.193)			7.038 (1139)
Very Good	1.179 (3.253)	5.412 (224.128)			---

\* All important variables are assessed at 0.05 significance level. However, certain sub-categories may not be significant at or below this level.

\*\* The missing sub-categories are the reference categories, against which the rest sub-categories (also called ‘dummy variables’) are regressed.

‘---’ implies non-significance

Numbers in parentheses are log. odds ratios.

**TABLE 7**

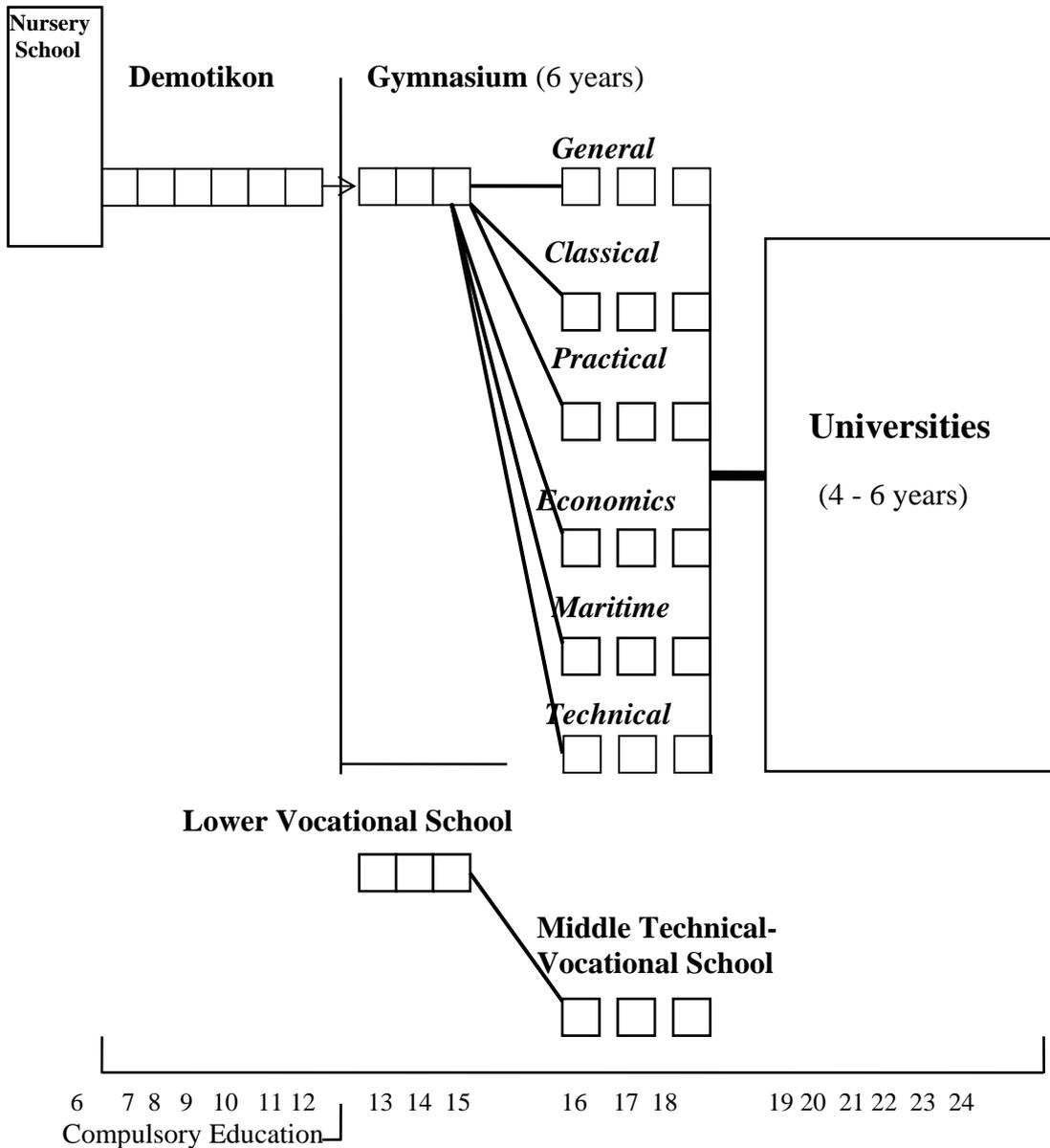
**Most important variables and sub-categories, resulting from logistic regression, when Dependent Variable is ‘differentiation between University Faculties’.\***

<i>I. Variables</i>	<i>All candidates</i>
<b>Mother’s occ.</b>	
Less Prest. Occup.	-0.51 (0.6)
<b>Gender</b>	
Females	-0.688 (0.502)
<b>Total score in NE</b>	
Bad	-0.8 (0.366)
Good	-0.147 (0.96)
Very Good	-0.762 (0.466)

\* All important variables are assessed at 0.05 significance level. However, certain sub-categories may not be significant at or below this level.

# DIAGRAM 1

## THE GREEK EDUCATIONAL SYSTEM BEFORE 1976



— Access through examinations

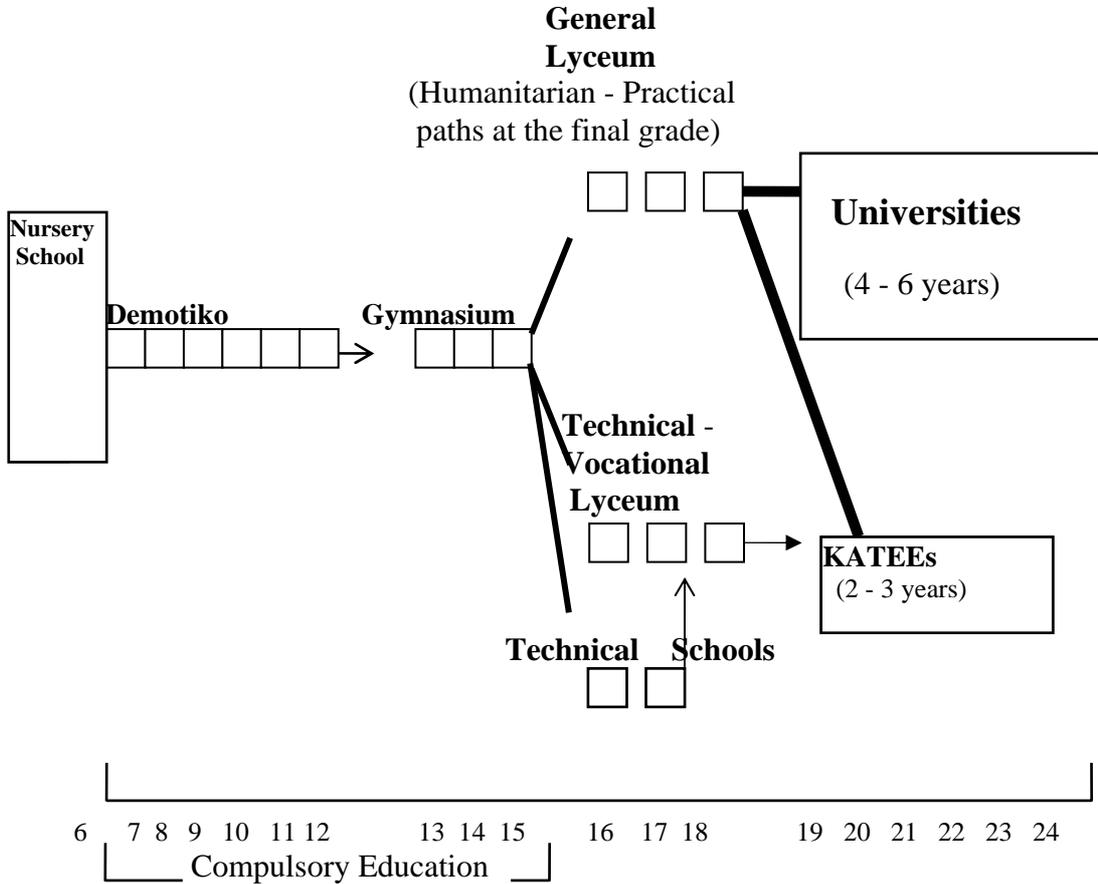
→ Free access

— Entrance after National Examinations, and allocation of places according to achievement levels in these Examinations and their relation to the number of places available each year (pre-determined by the Ministry).

\***KATEEs** are not included although they were established in 1974.

## DIAGRAM 2

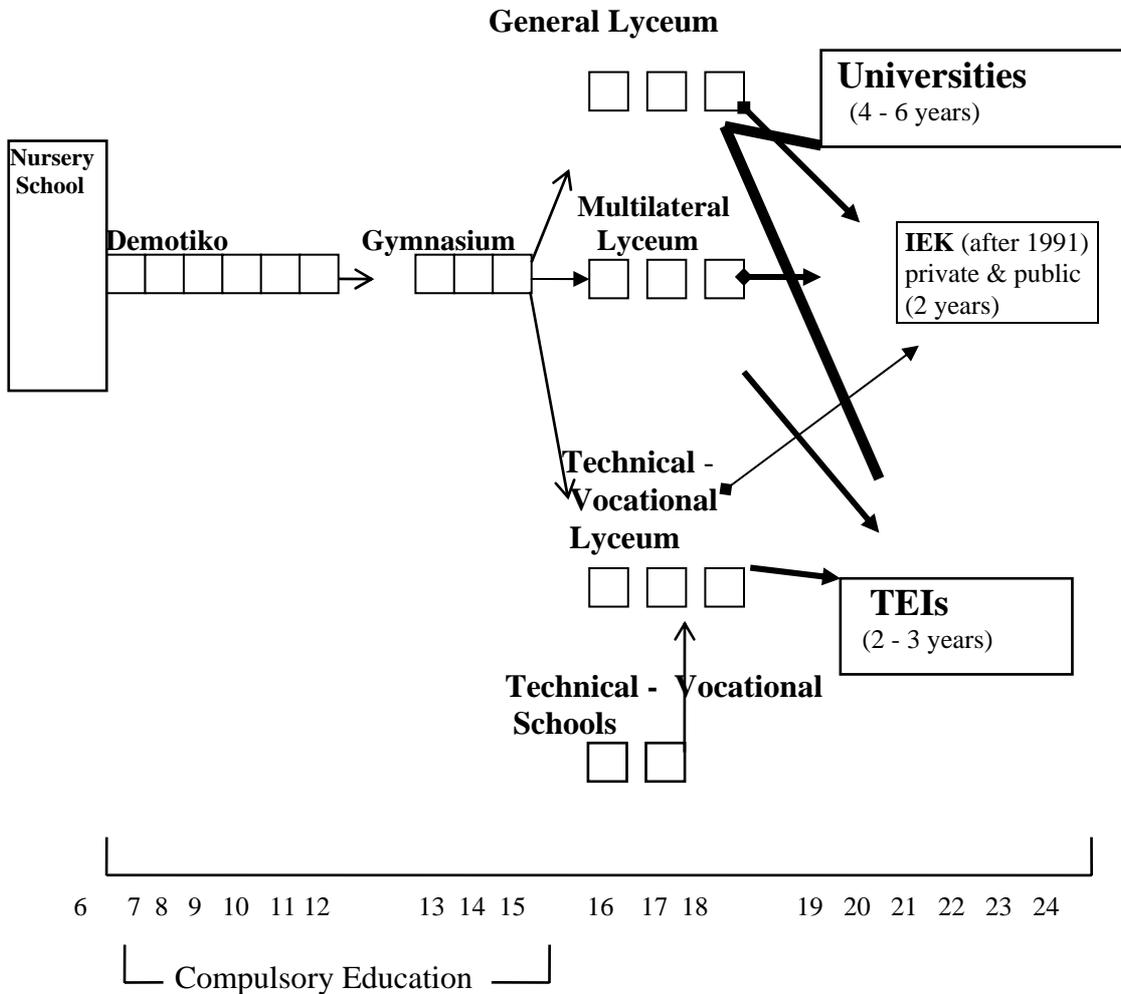
### THE GREEK EDUCATIONAL SYSTEM AFTER 1976



- Access through examinations
- Free access
- Restricted access (according to fixed quotas determined by the Ministry) as a percentage of the total places available each year, and based mainly on graduation results.
- Entrance after National Examinations, and allocation of places according to achievement levels in these Examinations and their relation to the number of places available each year (pre-determined by the Ministry).

## DIAGRAM 3

### THE GREEK EDUCATIONAL SYSTEM AFTER 1985



◆→ Free access, but beyond a certain limit, random selection through draw among the all candidates.

→ Free access

▬→ Restricted access (according to fixed quotas determined by the Ministry) as a percentage of the total places available each year, and based mainly on graduation results.

▬→ Entrance after National Examinations, and allocation of places according to achievement levels in these Examinations and their relation to the number of places available each year (pre-determined by the Ministry).