
GENDER DIFFERENTIALS AND SUBJECT CHOICE IN MALTESE SECONDARY SCHOOLS

Mary Darmanin

The discussion here centres on the critical case of the production of gender differentials in Maltese secondary schooling. The Maltese secondary school system, including both the state and the private sector has always been single-sex. Mixed classes were introduced in the state primary schools in the early 1980s to facilitate the extremes of streaming (up to seven streams per year group) currently practised in Malta. Moreover all secondary schooling is selective with the state sector providing a tripartite model of grammar (Junior Lyceum), (area) secondary modern and trade schools. The private sector (catering for thirty per cent of all children) provides a grammar-oriented curriculum with some soft options for less-able pupils. In this unusual case, able girls in single-sex schools are in fact achieving on a par with boys. In some cases as, for example, when private school girls are compared to state school boys, the aspirations of the girls are higher than those of the boys. However, despite getting the results, the girls are not opting for perceived difficult subjects such as Mathematics. Since physics has become compulsory (1982) for entry into the state sixth form there has been an increase in the uptake of physical sciences by girls. Private sixth forms do not require the Physics Ordinary Level and thus entry to the University can be secured by this route. The introduction of physics as a compulsory subject in secondary schools has seen a

dramatic change in the number of girls who take physics at Ordinary and Advanced Level and who then take up scientific courses at the University. Recently, the medical courses have had a fifty per cent intake of females, but engineering remains under-subscribed by them. Kelly makes a tentative suggestion that one of the methods of ensuring that girls do not drop the physical sciences at fourteen, could be through the compulsory curriculum.¹ Whilst the compulsory curriculum, as is the case of Malta and Physics, can increase the entry of girls into scientific professions, it still remains true to say that girls have not necessarily changed their attitudes towards and within science.² In Malta, chemistry is now an area in which girls are not entering, thereby ultimately restricting their entry into the physical sciences. It will be demonstrated below that although the combination of single-sex schooling with physics as a compulsory subject for Sixth Form entry, has indeed seen a large female proportion of science candidates in the secondary schools, this pattern is reversed in Sixth Form. As Kelly finds, despite getting the grades, girls are not accepting the physical and mathematical sciences in their cluster of attributes.³ This case should serve as an indicator of the success or otherwise of implementing a compulsory curriculum.

No one factor is seen as being specially privileged in the construction of differentiation. Following Henriques et al., on the necessity of changing subjects as well as circumstances, it was felt that in order to understand the subjects some detail must also be given to the circumstances in which subject choice is made in Maltese secondary schools.⁴ Of these circumstances the actual provision of options, teachers' and guidance teachers ideologies, the gendered profession, and the packaging of curriculum material were all seen to actively construct differentiation, and as such to

¹ KELLY, A., 'Retrieving the Missing Half', in KELLY, A. (ed.), *The Missing Half, Girls and Science Education*, (Manchester University Press, Manchester 1981).

² see VENTURA, F., 'Gender and Science in Education,' in this volume.

³ KELLY, A., 'Choosing or Channelling?' in KELLY, A. (ed.), op. cit.

⁴ HENRIQUES, J. et al., *Changing the Subject: Psychology, Social Regulation and Subjectivity*, (Methuen, London 1984) p. 226.

be circumstances which required change before change in the subjects could be expected.

THE BIFURCATION OF SECONDARY SCHOOLS BY ABILITY AND SEX

Since it is only a small proportion of Maltese children who aspire to tertiary education it is useful to place the controversy surrounding female participation in the physical sciences in the wider context of provision in the secondary school.

As early as the 1920s, Dr.A.V. Laferla, the then Director of Elementary schools, in his Annual Report articulated an ableist and sexist ideology:

Intelligent and stupid children are treated alike, boys educated as girls, no distinction was made between those proceeding to a secondary education or those whose future lies in the workshop or in the field.⁵

Following the proposals of the British Hadow Report on the bifurcation of children on the grounds of ability⁶ and of the Papal Encyclical, *Divini Illius Magistri*⁷ on the segregation of pupils by sex, the Director of Elementary schools (soon to become the Director of Education) redirected the path of Maltese secondary education, which had until then catered only for grammar school pupils.⁸ Firstly, he proposed that boys in the post 11+ group could be prepared either for the Grammar school or the Technical school (at the age fourteen), while those who were less able were to remain in the elementary school to follow a vocational curriculum. Girls were to be channelled into a newly opened Housecraft school in Floriana (1930), the curriculum of which included housekeeping, cookery, table manners, home nursing and baby

⁵ LAFERLA, A.V., *Annual Report 1929-30*, (Department of Education, Malta).

⁶ *Hadow Report, The Education of the Adolescent*, Board of Education, London, H.M.S.O, 1923.

⁷ *Divinis Illius Magistri*, Pius XI, Encyclical Letter dated 3, December 1929 cited in Daly M. *The Church and the Second Sex* (1968).

⁸ ZAMMIT MANGION, J., *Landmarks in the Development of Education in Malta*, unpublished B. Educ. dissertation, (Royal University of Malta 1953).

craft. In 1932 a Handwork School for girls was to run parallel to the boys' Technical School or to the trade curricula in the final years (age 11-14) of the elementary schools. It was envisaged that working-class girls might at some point in their premarital lives have to engage in waged labour and the courses on offer in the Handwork school (design, weaving, bookbinding and upholstery) reflect the position of these girls in the lower echelons of the labour market. Moreover, the official ideology of education saw the wage labour of females as a natural extension of their domestic role in the home. According to Dr Laferla (ironically one Girls' Trade school is now named after him) the Housecraft school was opened following the complaints of parents, who found that their educated daughters 'looked down on housework and imitated such as one born in more affluent circumstances'.⁹ Domestic education in the Housecraft school was therefore a deliberate suppression of the ambitions of the working-class girls to move beyond the narrow gender and class limits of their situation.

A continuation of this ideology¹⁰ is also evident in the 1948 Vassallo Report on Primary Schools.¹¹ In advising on the possibility of introducing Trade classes in the primary schools for boys who do not aim at Secondary Grammar or Technical education, the Report suggests that a number of Trade Centres should be opened. It was envisaged that

boys will be ready and eager to turn to work of the nature of a trade if they have whilst at school, some training in the manipulation of tools and are given the choice of elements of a variety of trades ...

⁹ LAFERLA, A.V., *op. cit.*

¹⁰ For British accounts of similar histories, see PURVIS, J., 'Social Class, Education and the Ideals of Femininity in the Nineteenth Century', in ARNOT, M. & WEINER, G. (eds), *Gender and the Politics of Schooling*, (Open University Press, Milton Keynes 1987); WOLPE, A.M., 'The Official Ideology of Education for Girls', in DALE, R. et al., (eds), *Education and the State*, vol. 2, (Falmer Press, Lewes 1976) and DEEM, R., 'State Policy and Ideology in the Education of Women', in *British Journal of Sociology of Education*, vol. 2, no. 2 (1981) pp. 131-143.

¹¹ VASSALLO, J.P., *The Primary Schools*, (Government Printing Press, Malta 1948)

The variety of trades were to include that of the blacksmith, plumbing, electrical light wiring, carpentry, cabinet-making, tailoring, and basket-making. Many of these would give boys the opportunity to set up their own businesses in the trade. For girls, the Vassallo Report recommends the introduction (following the destruction of the Floriana school during the War) of housewifery courses. In this official ideology it is premised that girls will not enter the labour market but will on the contrary bear sole responsibility for domestic labour and children in the home.¹²

Indeed the training envisaged for girls is a matter of national concern: perhaps even more so than the preparation for life considered essential for boys. For whereas the latter may in many cases have the opportunities for further training in the place of work which they attend, in the case of girls they cannot hope for much further preparation in the all-important matter of managing a home and bringing up a family.¹³

Whilst some training was to be given in needlework (millinery, soft toy manufacturing) and dressmaking, as well as in cookery and housekeeping (for work as domestic servants) the dominant ideology was to stress women's domestic role for low achieving working-class girls thereby fulfilling the ideals of femininity for this class - ideals which in Malta were continued well into the twentieth century.

The changing need of the economy created a renewed interest in the Trade schools and in the 1970's five new trade schools, offering a three-year course available for students aged fourteen and over were opened. By 1974, nine such schools were functioning. It is immediately apparent, from the numbers of boys involved and from the range of courses offered to them, that in the early years at least, Trade schools were designed to cater for the needs of males. All the subjects offered here promised opportunities of skilled labour in adult life, as evident in the course description:

Courses Offered in Trade Schools for Boys: fitting; fabrication; welding; electrical installation; electrical winding; automechanics; furniture making; carpentry and joinery; plumbing and pipe-fitting; building construction; radio and T.V. servicing; pattern-making and agriculture.

¹² WOLPE, A.M., 'The Official Ideology...', *op. cit.*; DEEM, R., 'State Policy and Ideology...', *op. cit.*

¹³ VASSALLO, J.P., *op. cit.*

For girls, the trades available are either domestic oriented skills or lead to unskilled and semi-skilled labour in the textile industry. Recently a leading economic adviser to government and an industrialist, have both lamented that the training given in the girls' trade schools is not consonant with the training they need to operate industrial machinery.¹⁴ Despite the dearth of female labour in the textile and light engineering industries, the trade schools are still not preparing the girls for entry into the labour market. The absence of state of the art machinery in these schools together with the low aspirations of the girls, the narrow views of guidance teachers (see below) all contribute to the poor participation of women in the industrial sector. Interestingly the Education Department responded to the low motivation in girls' trade schools by offering Home Economics and Personal Care (since 1985) as alternative subjects.

IN THE TRADE SCHOOLS

In Maltese trade schools, despite the fact that provision was made in 1988, for girls to take up boys' trades in boys' schools, curriculum options are structured in such a way that girls are 'confined to female ghettos of inferior, low-paid jobs in feminized work sectors such as industrial sew machinists or typing clerks'.¹⁵ Two undergraduate students interviewed nineteen girls in Years 2A and 3A of St Andrews Trade School, Malta, where the curriculum includes Home Economics, Personal Care, Tailoring and Woodwork. Absenteeism was high. Hardly any formal lessons were taking place. Despite the fact that the home economics room was well-equipped only two girls were actually cooking. The woodwork room was poorly equipped. Asked in an interview and in a questionnaire what they wanted to be when they grew up, the answer was invariably 'I don't know'. Most of the girls felt that the question 'What made you choose this subject?' was superfluous since they had been channelled into the school because of their poor performance at 11+. Woodwork was not favourably looked

¹⁴ see *Sunday Times Magazine*, Sunday Times (Malta, 28th Feb. 1990).

¹⁵ WICKHAM, A., 'Gender, Division, Training and the State', in ARNOT, M. & WEINER, G., (eds), *op. cit.*, p. 292.

upon by the girls who considered it a 'boy's subject'. The girls had entered this school because they did not want to continue schooling. It represented a release from the formality of the other secondary schools. Their main aspiration, as Wallace has found in her longitudinal study of young people in Sheppey, Kent, was to enter traditionally female trades such as hairdressing or retail work, leaving early to marry.¹⁶ In St Andrews Trade School when girls were pressed by the interviewers for an alternative answer as to what they wanted to become, half of the girls answered 'hairdresser' although the school did not provide any training for this. The same two undergraduates mentioned above also interviewed thirty-seven boys at the Targa Gap School for Craftsmen (sic). Here, absenteeism was infrequent. All the boys had a clear idea of what they wanted to do in the future and their aspirations were closely related to the courses they had enrolled in. Since the 1988 innovation, girls can now attend this school. The response was, however, not surprisingly, low. With courses offered in boys' schools, girls still have to overcome the prejudices of their teachers, guidance teachers and parents besides having to confront, day in day out, the masculinity present in schools with a school population of 600 males (as is the case with Umberto Calosso). The girls attending Targa Gap School for Craftsmen (sic) dropped out soon after. The remaining two were surrounded by male pupils, and by a predominantly male staff (twenty-four out of the twenty-five instructors were male). The guidance teacher considered that the dropout rate was due to difficulty coping with the male school rather than with the subjects.

The lack of planning for separate sites for trade schools can be seen as a measure of how little value is attached to including women in what have been traditionally male spheres, and is as effective a strategy of closure as is the previous restriction on female choice of trades.¹⁷ With the current crisis of low female participation in the workforce (only thirty-one per cent of productive females work) some steps (such as public calls for

¹⁶ WALLACE, C., 'From Girls to Boys to Women and Men: The Social Reproduction of Gender', in ARNOT, M. & WEINER, G., (eds), op. cit.

¹⁷ WITZ, A., 'Patriarchy and the Labour Market: Occupational Control Strategies and the Medical Division of Labour', in KNIGHTS, D. & WILMOT, H. (eds), *Gender and the Labour Process*, (Gowes, Cambridge 1986).

applications, a year's unpaid maternity leave) have been taken to entice girls into the engineering sector in particular. It seems likely that this objective will not be achieved unless girls can see that the interest in their skills and labour are matched by the adequate planning of separate sites for training, suitably equipped with state of the art machinery. It should be remembered also that the current crisis in the Maltese economy is a constructed crisis, in as far as males are not seen as recruitable for the feminized jobs of low paid and unskilled labour. Industry requires females because it has ascribed characteristics to them (such as manual dexterity, docility, low union participation) that make them initially the preferred labour force.¹⁸

STATE GRAMMAR AND SECONDARY AREA SCHOOLS

Since the Trade schools manage to attract a large proportion of males, the Grammar and Secondary Area schools cater for a large proportion of able (in the grammar schools) and less able (in the secondary modern) girls. The academic curriculum offered reflects the aspirations of the grammar school children to University careers. In the secondary (modern) area schools a distinction is made between Group I pupils who opt for an academic curriculum and the Group II pupils who follow a more vocationally-oriented course. Both ability and sex determine the options available to pupils. Until 1988 all the pupils in these schools were offered the same compulsory courses and the same options, excluding home economics and needlework, which were previously open to girls only and technical drawing which was open to boys only. Changing the practice has had little impact in the single sex schools, since if few pupils opt for a subject, i.e., technical drawing for girls, then a teacher cannot be spared to teach the subject in the girls' school. Currently, home economics and needlework are time-tabled against the commercial (economics and accounts) and science (physics, chemistry and biology) options so that it becomes

¹⁸ see ELSON, D. & PEARSON, R., 'Third World Manufacturing', in FEMINIST REVIEW, (eds), *Waged Work: A Reader*, (Virago Press, London 1986); BEECHEY, V., 'Women and Production: A Critical Analysis of Some Sociological Theory of Women's Work' in KUHN, A. & WOLPE, A.M., *Feminism and Materialism*, (Routledge and Kegan Paul, London 1978) and DEEM, R., 'State Policy and Ideology ...', op. cit.

impossible for girls to combine their subjects in a manner that covers all aspects of their identities.¹⁹

Since physics is now compulsory in these schools, a far larger group of girls can either take the pure science course (physics, chemistry and biology) or the applied science course (any two from biology, needlework and home economics). On paper, and the table below gives the total amount of girls opting for the pure science option in 1987/89, it seems that Maltese girls now choose the science options in a larger proportion than do their British counterparts.²⁰ The sample includes all pupils registered in Maltese state grammar and area secondary schools in 1987/88.

TABLE I				
PUPILS CHOOSING PURE SCIENCE IN STATE SCHOOLS				
PHYSICS CHEMISTRY AND BIOLOGY				
	GIRLS		BOYS	
Form 3	431	(32% of girls)	398	(54% of boys)
Form 4	363	(30% of girls)	449	(63% of boys)
Form 5	329	(35% of girls)	384	(43% of boys)
	1,123		1,212	

In absolute terms girls seem to be roughly equal to boys in their choice. However if one considers what proportion of girls do make this choice as opposed to the boys (many of whom have entered a trade school, thus depressing the total number in the grammar and secondary sector), it will still be true to say that Maltese boys choose sciences more frequently than do Maltese girls. Turning to pupils' subject choice at Form 3, (in 1989), a clear pattern was to emerge with a proportionately (to their own population) larger number of boys taking the pure rather than the applied science option. Biology, in particular, was combined with the compulsory physics and either needlework or home economics to provide girls with a feminized 'soft' option.

¹⁹ A new curriculum for secondary schools has just been issued (July 1989) and since it has not yet been implemented, it is not discussed here. A preliminary examination shows that gender bias is still evident in the offering of subjects for choice in Year III.

²⁰ see KELLY, A., 'Choosing or Channelling?' in KELLY, A., (ed.), op. cit., and HARDING, J., 'Sex Differences in Science Examinations' in KELLY, A. (ed.), op. cit.

Total Form 3 Population	GIRLS (1341)	BOYS (723)
% taking Biology	18.9 (253)	19.3 (139)
% taking Chemistry	13.3 (178)	34.4 (249)
% taking Pure Science	13.3 (178)	19.3 (139)
% taking Applied Science	5.6 (175)	15.1 (109)

As Omerod²¹ has argued, to make physical science compulsory for girls up to the age of sixteen could be disastrous without the revision of the syllabus, in terms of its level of difficulty and of its masculinized²² curriculum content. So far there has been no ethnographic interview research in Maltese state secondary schools to explain, as have Measor, Ebbutt and Stanworth²³, these choices from the pupils' viewpoint. However, some evidence exists which suggests that the experience of differential capacities and identities in the primary school²⁴ are carried over and rigidified by the packaging of curriculum materials, the guidance of teachers, and the roles mirrored in the gendered profession. Before turning to these questions, it is relevant to note that discontinuity in girls' choice of Mathematics and science that takes place in the

²¹ ORMEROD, M.B., 'Factors Affecting the Science Subject Preferences Choices and Attitudes of Girls and Boys' in KELLY, A. (ed.) op. cit., p. 111.

²² KELLY, A. (ed.), op. cit.

²³ MEASOR, L.C., 'Gender and the Sciences: Pupil's Gender-based Conceptions of School Subjects' in HAMMERSLEY, M. and HARGREAVES, A. (eds), *Curriculum Practice*, (Falmer Press, Lewes 1983); EBBUTT, D., 'Girls' Science; Boys' Science Revisited' in KELLY, A. (ed.), op. cit.; STANWORTH, M., *Gender and Schooling: A Study of Sexual Divisions in the Classroom*, (Hutchinson, London 1981).

²⁴ DARMANIN, M., 'Gender Identities in the Primary School', (unpublished mimeo, University of Malta 1990).

secondary school in Britain and America²⁵ is postponed in Malta until entry into Sixth Form. Single-sex schooling and the compulsory physics could be possible reasons for the delay, but more research is necessary before conclusions can be reached.

Research into the trends in entry to the state Sixth Form, covering the intake for 1985, 1986, 1987 and 1988 revealed a differential take-up of subjects at this level. Within this four year period, gender-related achievement in Mathematics and Physics at Ordinary Level was also researched. As regards areas of study, five fields were defined which for any particular applicant would be determined according to the subjects chosen for pursuit at Advanced Level:

Sciences: defined by the choice of at least two from Biology, Chemistry and Physics.

Mathematics: defined by the choice of combinations involving either Mathematics with Physics, or Applied Mathematics with Pure Mathematics with Engineering Drawing

Business: defined by the choice of at least two from Accounting, Commerce, Economics and Mathematics.

Languages: defined by the choice of at least two languages.

Arts: defined by the choice of two from Philosophy, Art, Home Economics and Geography.

For each of the four years we can note a difference in the number of males and females seeking entry into the New Lyceum Sixth Form. These figures remind us that though a larger proportion of girls are now being prepared for Sixth Form entry in the state schools, less girls are being prepared in the private Schools.²⁶ Other factors could be contributing to this differential entry figure, such as the offering of option packages in which physics is missing, as is the case with two of the most popular private girls' schools researched for this paper. Within this differential entry (Table III) it is important to note the different

²⁵ see WALDEN, R. & WALKERDINE, V., *Girls and Mathematics - The Early Years*, (Bedford Way Papers No. 8, Institute of Education, London 1982); FENNEMA, E., 'Success in Mathematics' in MARLAND, M.(ed.), *Sex Differentiation and Schooling*, (Heinemann, London 1983).

²⁶ see VENTURA, F., op. cit.

subjects which are actually taken up for study at Advanced Level (Table IV).

YEAR	MALES	FEMALES	TOTAL	%MALES	%FEMALES
1985	344	269	613	56	44
1986	373	349	722	52	48
1987	379	338	717	53	47
1988	487	461	948	51	49

Table IV shows the percentages of each gender group of each intake, opting for particular subject areas. Mathematics is consistently undersubscribed by girls, whilst conversely languages are oversubscribed. Sciences are now taken in near equal proportions by both sexes, and the difference between science and Mathematics is evident at University level where medicine and pharmacy and related courses are well attended by females, but engineering remains a male domain.

Subject	1985		1986		1987		1988	
	F	M	F	M	F	M	F	M
Sciences	24	22	23	27	24	23	22	22
Mathematics	9	40	11	36	10	40	12	46
Business	32	21	32	22	32	22	29	16
Languages	36	16	30	13	30	13	33	15
Arts	0	0	4	2	4	1	4	1

Perhaps the most significant finding is that which supports Kelly's thesis that despite achieving well in Mathematics and Physical Sciences at Ordinary Level, girls are reluctant to choose these subjects, especially Mathematics in the case of Maltese students, at higher levels.²⁷ In examining the percentage distributions of Ordinary Level grades in Mathematics and

²⁷ KELLY, A., 'Choosing or Channelling?', in KELLY, A. (ed.), op. cit.

Physics of the New Lyceum entrants over the four year period under review, it appears that girls are obtaining very similar results in these subjects to boys and yet are failing to take up further studies in these fields. Table V records the percentages of females and males obtaining either grade A or B in Mathematics in each intake.

It is interesting to notice that girls are less successful than boys in the Physics Ordinary Level, yet the New Lyceum entry figures show that they choose physics and the physical science more frequently than they choose the Mathematics option, despite a high success rate in Mathematics Ordinary Level.

	1985	1986	1987	1988
Males %	84	85	83	81
Females %	86	85	80	81

In summary, it appears that the physical sciences have now become relatively popular with Maltese girls, who achieve on a par with boys in these subjects. Mathematics has become the main domain in which girls are not presenting themselves and the literature points to a variety of possible causes, including those rehearsed above as the curriculum packaging of the subject, classroom interaction and the opportunity to learn, attitudes and anxiety in girls due to socialization into learned helplessness and

	1985	1986	1987	1988
Males %	57	56	61	71
Females %	46	53	54	57

others.²⁸ Languages, and of late Business courses which lead to

²⁸ see WEINER, G., 'Sex Differences in Mathematical Performance' in DEEM, R.(ed.), *Schooling for Women's Work*, (Routledge and Kegan Paul, London

gender-specific employment in the commercial and secretarial field²⁹ attract girls into the female sector of the labour market, thereby indicating that identification with adult roles as constructed throughout schooling may be more significant determinants of subject choice in entry to sixth form.

THE PRIVATE SCHOOLS: GENDER AND SUBJECT CHOICE PROJECT

In order to gain a more comprehensive view of subject choice in Maltese secondary schools, it was considered useful to look at the issue also in the private schools, since they educate over thirty per cent of the market. Six popular private schools were asked to participate in a survey on pupils' choice of subject in either Form 3 or Form 4 (depending on the year in which choice was made). An interview was held with all the Heads and following the completion of the questionnaire two pupils from each option group in each school were interviewed briefly by undergraduate data collectors who undertook this part of the research project. In all forty-three (seven per cent) out of the 579 respondents were interviewed. The survey covered twenty-five per cent of Form 3 private school secondary pupils, and since it was intended only to sample the Form 3 or 4 pupils, this is a representative sample of private school secondary pupils.

Out of the six schools that took part in this project, the three boys' schools had larger intakes than the girls' schools, often with four or five classes per year. Girls accounted for forty per cent (n.225) of the respondents, and boys accounted for sixty per cent (n.351). Out of a possible 602 respondents, 579 completed the

1980); SCOTT, M., 'Teach Her a Lesson: Sexist Curriculum in Patriarchal Education', in SPENDER, D. & SARAH, E. (eds), *Learning to Lose: Sexism and Education*, (The Women's Press, London 1980); KELLY, 'Choosing or Channelling?', in KELLY, A. (ed.), op.cit; SUTHERLAND, M., 'Anxiety, Aspirations and the Curriculum' in MARLAND, M. (ed.) op. cit.; FENNEMA, E., 'Success in Mathematics', op. cit.; LICHT, B. & DWECK, C., 'Sex Differences in Achievement Orientations: Consequences for Academic Choices and Attainments' in MARLAND, M. (ed.) op. cit.; MEASOR, L.C., 'Gender and the Sciences', op. cit.

²⁹ MORGALL, J., 'New Office Technology' in FEMINIST REVIEW (eds), op. cit.

self-reported questionnaire, giving a ninety-six per cent response. So as to simplify comparison between the girls and boys, all tables give raw numbers as well as percentages.

Since they are not bound by central Government policy as to what subjects can be offered in each school, it was envisaged that the private schools would offer a variety of options and these options would be gender biased. Whilst all the schools demonstrated an expected amount of homogeneity as regards the compulsory subjects (and Table VII will show this) an interesting difference appeared even in this category, with two of the girls' school dropping physics (compulsory for those who aspire to State post-secondary education) from their 'soft' option (see Table VIII). All the boys were obliged to take physics, reflecting their schools' expectation that they would continue into higher education.³⁰ The actual number of girls dropping physics (fifty-five, that is 9.4 per cent of the sample) is perhaps low, but it is significant nevertheless that it is girls and girls only who have dropped this subject which is now compulsory for entry to the New Lyceum Sixth Form.

TABLE VII
COMPULSORY SUBJECTS IN SAMPLE SCHOOLS

Subjects	CSH	SDC	SMC	DLSC	SAC	SMC
Religion	✓	✓	✓	✓	✓	✓
Mathematics	✓	✓	✓	✓	✓	✓
English Language	✓	✓	✓	✓	✓	✓
Maltese	✓	✓	✓	✓	✓	✓
Italian	✓	✓	✓	✓	✓	either
P.E.	✓	✓	✓	✓	✓	✓
French	✓	✓	✓	or German or		
Computer Studies	Form 4 only	✓				✓
Media Studies					✓	
Physics				✓	✓	✓
Life Skills						✓

KEY: CSH=Convent of the Sacred Heart (Girls); SDC=St Dorothy's Convent (Girls); SMC=St Monica's Convent (Girls); DLSC=De La Salle College (Boys); SAC=St Aloysius College (Boys); SMC=Stella Maris College (Boys).

³⁰ KELLY, A., 'Choosing or Channelling?' in KELLY, A. (ed.) op. cit.

All six schools offered a Physical Science option which was sometimes taught (see Table VIII) in combination with other subjects, such as history, computer studies, or French (as a fourth language). From the interviews with the Heads, it is evident that the science course is designed specifically for the most able pupils. In the girls' schools one head stated categorically that in order to choose the science option a pupil has to get 'at least an average of seventy per cent in Mathematics, English, and General Science', and another that 'three quarters of the girls are completely unsuited for the science class', this, despite the fact that thirty-nine per cent of his pupils had chosen the option. This particular Head contradicted himself when referring to the compulsory curriculum. He found it 'scandalous' that so few of his pupils wanted to take biology, and hoped that one day 'we may develop enough backbone to say to parents, for example, Biology across the border'. At the same time he held that the compulsory physics requirement is 'illegal and inefficient'. What is consistent in this ideology is that biology is considered an appropriate compulsory subject for girls, whilst physics is not. Biology has long been seen as a 'soft' science option open to girls.³¹ With the introduction of compulsory physics, girls can now resist the channelling into the soft option. Because they are technically able and aspire to further education, the school is now obliged to offer the hard science course to its female students. The same pattern of ability allocation to the science option was evident in the boys' schools. One head comments that the problem in assigning pupils to appropriate subjects is linked to students choosing a subject in which they have not previously performed well. Attainment is the main factor considered by teachers in advising pupils and their parents. In another of the boys' schools, examination marks are also the major determining factor in allowing boys to choose an option. However the school tries to balance these criteria with others, including an Aptitude Test and gives the possibility of taking supplementary exams in the summer so as to maximize the opportunity of taking a subject option. A counsellor is available to help the students. The school tries to 'consider each individual singly', yet the policy is directed here, as in all the private schools

³¹ KELLY, A., 'Choosing or Channelling?' in KELLY, A. (ed.), *op. cit.*

towards the division of pupils by ability. The relatively high percentage of girls opting for the science option or the accounts / economics / physics option, indicates that in single-sex schools, ability replaces sex as the differentiating factor, and attracts able girls into what would otherwise be a male domain.³² Less able girls are however channeled into typically female (in terms of future job opportunities) subjects. Thus, whilst the boys' schools offer an Accounts/Economics/Physics option, the girls' schools link accounts with shorthand and typing, or Commerce and Accounts with history and geography (but not physics). Invariably shorthand and typing are offered only in the girls' schools. Even when coupled with accounts or computing, the tendency is for girls to be prepared for the lower echelons of the labour market as secretaries³³ or clerical workers.³⁴ In the one boys' school where European languages, history, geography and art are given some space physics is also a compulsory subject, here since many of these boys hope to become lawyers, for which occupation, languages are compulsory at University level. There is a marked absence of subjects like Home Economics and Needlework in private schools with just eleven girls taking these subjects which were being offered in only one girls' school. The academic orientation of the private secondary schools is a mitigating factor which reduces the presence of these subjects, commonly associated with low ability females.³⁵

Table VIII sets out the different options offered in each school and the raw numbers and percentages from each school that opt for the different subject areas.

³² KELLY, A., 'Choosing or Channelling?', in KELLY, A. (ed.), op. cit.

³³ VALLI, L., "All the Big Bosses are Men, All the Secretaries are Females." Schooling Women Office Workers', in ARNOT, M. & WEINER, G. (eds), op. cit.

³⁴ MORGALL, J., 'New Office Technology' in FEMINIST REVIEW (eds), op. cit.

³⁵ see GRAFTON, T., et al., 'Gender and Curriculum Choice: A Case Study', in HAMMERSLEY, M. & HARGREAVES, A. (eds) op. cit.; and DELAMONT, S., *Academic Conformity Observed: Studies in the Classroom*, (Unpublished Ph.D. Thesis, University of Edinburgh, 1973).

TABLE VIII
SUBJECT OPTIONS IN PRIVATE SCHOOLS

Options	GIRLS			BOYS		
	CSH n.79	SDC n.70	SMC n.79	DLSC n.153	SAC n.120	SMC n.78
Pure Science						
Che/Phys/Bio	31/39%		33/41%			
with French				29/18%		
with Computer Studies		27/33%		29/18%		29/37%
with History					59/48%	
Accounts/Economics (Physics Compulsory)						
with French				33/21%		
with Computer Studies		30/36%		61/39%		22/28% (Ital.) 27/35% (French)
Commerce /Accnts/Physics	27/34%				39/32%	
Arts/History					22/18%	
Geography/Physics						
Shorthand/Typing/Phys.			25/31%			
No Physics						
Commerce/Accnts/ History/Geography	21/26%					
Accounts/Typing/ Shorthand		2/9%	21/26%			
Shorthand/Typing/ H.E./Needlework		11/22%				
	100%	100%	100%	100%	100%	100%

Difference between the options actually on offer in the schools is reflected in different patterns of choice. For example, fifty-nine girls currently take shorthand and typing (ten per cent of all respondents) but since these subjects are offered to girls only, it is difficult to determine whether the girls have freely chosen this option, or whether they have been channeled into this 'feminized' area by the demands of the manifest curriculum and by their schools' definition of their ability. Both in the questionnaires and in the interviews many of these girls complained that this would not have been their choice had they been completely free to choose as they pleased. In one girls's school, the pupils studying Home

Economics reported that the Headteacher had a significant influence on their choice, using such words as 'encouraged' and 'imposed' to describe the pressure. Comments such as 'I don't like the subjects I have. I don't like cooking and stuff - I won't get anywhere with cooking' and 'I would like to become a Beauty Therapist. It is impossible now as I don't have Biology' evoke the feeling of helplessness these girls have. One pupil has specifically chosen the Social Studies/Art option in order to succeed in this area rather than fail in the 'difficult' physics.

E.G. My parents wanted me to take physics but I know I'd fail. I prefer doing well in one class than being hopeless in another. My friends are mostly in this class. Anyway, I would have wanted to take the Physics class. I probably would not have been able to and I don't really like physics because it is very difficult, especially since you have to take the exam. I might have private lessons though since you need it for the Sixth Form. Art is my favourite subject. My subjects are not job-related. I don't know what I'm going to do when I grow up.

For comparability with Kelly's Scottish school leavers³⁶, who when asked the reasons for continuing or dropping sciences showed certain gendered patterns for their choices, question 4 of the Malta private school project asked 'Why have you chosen these subjects?' and a ten item list was provided for the pupils to choose from. In Kelly's survey it was found that boys and girls gave remarkably similar reasons for dropping or continuing science and Kelly found that boys liked science more than girls.³⁷ Moreover perceived usefulness for jobs and further education was again mentioned more by boys than by girls. Boys were encouraged to continue science because of their previous success in it. Kelly

³⁶ KELLY, A., 'Choosing or Channelling?', in KELLY, A. (ed.), op. cit.

³⁷ *ibid*, p.131.

concludes however that the differences in response were minor when compared to sex differences in science enrolments.³⁸

In the preliminary analysis of the Malta private school project, it was found that in terms of enrolment for science, a similar percentage of girls and boys were taking up the science option. When asked the reason for the choice of subjects, and some difference with Kelly's data³⁹ might appear here because all the pupils (not only the science-oriented group) were asked to answer this question, the Maltese pupils showed remarkably similar responses to the Scottish school leavers. From Table IX it is possible to find that a larger percentage of girls give 'I liked the subject' as a reason for their choice, whilst more boys felt they

	GIRLS		BOYS		TOTAL	
a. I liked the subject.	197	87%	290	82%	487	84%
b. I am good at these subjects.	92	40%	198	56%	290	50%
c. My parents wanted me to choose them.	21	9%	49	14%	70	12%
d. My sister/brother chose them.	8	3.5%	32	9%	40	7%
e. I like the teacher	28	8%	37	1%	55	9%
f. My teacher encouraged me.	10	4%	31	9%	41	7%
g. My counsellor encouraged me.	5	2%	47	13%	52	9%
h. My friends chose them.	9	4%	32	9%	41	7%
i. They are related to the job I want.	188	83%	301	86%	489	84%
j. Other.	52	23%	24	7%	76	13%

³⁸ KELLY, A., 'Choosing or Channelling?', in KELLY, A. (ed.), op. cit.

³⁹ *ibid.*

were good at the subject than girls (fifty-six per cent boys as opposed to forty per cent girls).⁴⁰ A slight difference can be noted in the response to answer (1) that is, 'they are related to the course/job I would like to take up in the future'. If taken across all options, the reasons for choice are, in Malta as in Scotland, remarkably similar. The fifty-five girls (twenty-three per cent of girls) who have other reasons for choice frequently referred to parents (twenty-two of them) as being the main pressure group here, which would account for the rather different percentage apparent in answer (c). Role models through siblings also seem to be more relevant to boys than to girls, with only three per cent of the girls giving this as a reason for uptake as contrasted with nine per cent of the boys.

OCCUPATIONAL ASPIRATIONS IN PRIVATE AND STATE SCHOOLS

Analysis of the answers to question 8 'What occupation do you intend entering when you leave school?' shows that Private school pupils presented a range of differentiated and often highly specialized areas of interest, such as for example doctor, surgeon, virologist, psychiatrist, pathologist, or engineer, electrical engineer, computer engineering, interior decorator, art restorer and graphic artist amongst others. Both boys and girls aspire to top managerial or professional occupations associated with Service Class A and Intermediate Class B and C (non-manual).⁴¹ Despite an overall trend to these middle-class jobs, private school girls (see Table X) still seem to have lower aspirations than private school boys (see Tables X and XI). Thus, for girls, becoming a secretary was the most popular occupation out of the thirty-eight possible occupations cited by them.

⁴⁰ see FENNEMA, E., 'Success in Mathematics', in MARLAND, M. (ed.), op. cit.

⁴¹ HALSEY, A.H., et al., *Origins and Destinations, Family, Class and Education in Modern Britain*, (Clarendon Press, Oxford 1980).

As can be seen in Table X, to be a teacher or chemist tie at sixteen per cent (both now graduate professions), closely followed by accountant (fourteen per cent) and medical doctor (eight per cent). It is indicative of the limiting aspirations of girls that only

The most sought after occupations	Total	%
1. Secretary	43	19
2. Chemist	37	16
3. Teacher	35	16
4. Accountant	32	14
5. Doctor/Surgeon	19	8
6. Vet/Zoologist	12	5
7. Air Hostess	11	5
8. Lawyer	8	4
9. Businessperson	7	3
10. Receptionist	4	2
	208	92

thirty-eight possible occupations were cited as compared to the boys' sixty. In the Leicester study of fifty girls and fifty boys, Furlong also found that girls list a narrow range of occupations. Furlong considers that the girls' knowledge of the current opportunity structures as well as parental influence are more significant than schooling.⁴² The Malta private school study finds that school is a stronger determiner than Furlong accepts. For example the large percentage of girls who chose secretarial work had been channeled into typing or accounts and commercial subjects by the school. Again, those opting for graduate professions were taking the physics class in school. In this sense the introduction of physics as a compulsory subject is operating as an intervention curriculum in these schools.⁴³

⁴² FURLONG, A., 'Schools and the Structure of Female Occupational Aspirations', in *British Journal of the Sociology of Education*, vol.7, no.4. (1986) pp. 367-377.

⁴³ CHISHOLM, L. & HOLLAND, J., 'Girls and Occupational Choice: Anti-sexism in Action in a Curriculum Development Project', in *The British Journal of Sociology of Education*, vol.7, no.4 (1986), pp. 353-366.

When looking at the boys' aspirations (Table XI) we find a large variety of choice indicative of the actual openings available for boys. Whilst boys have higher aspirations than girls, and differences can be noted such as the relatively low amount of boys

The most sought after occupations		Total	%
1.	Accountant	58	17
2.	Doctor/Surgeon	26	7
3.	Pilate	25	7
4.	Businessperson	21	6
5.	Lawyer	15	4
6.	Architect	14	4
7.	Teacher	13	4
8.	Engineer	13	4
9.	Manager	12	3
10.	Electrical Engineer	10	3
		192	54

opting for teaching or secretarial work, professional areas such as medicine or accountancy or law are subscribed to in very similar proportions by both sexes.

The trend for girls to academic and social conformity has already been noted elsewhere.⁴⁴ Despite a movement towards prestigious occupations the acceptance of traditional female work such as teaching or secretarial jobs, matched with the conforming of girls to ten preferred occupations (ninety-two per cent) is indeed disquieting. On the other hand twenty boys as compared with only three girls had not thought of a career. Arnot finds that private school boys and girls have different but equally privileged educations⁴⁵, and whilst that also appears to be the case in Malta, as we will find when examining the aspirations of state school

⁴⁴ DELAMONT, S., 'Academic Conformity Observed...', op. cit.

⁴⁵ ARNOT, M., 'A Cloud Over Co-education: An Analysis of the Forms of Transmission of Class and Gender Relations', in WALKER, S. & BARTON, L. (eds), *Gender, Class and Education*, (Falmer Press, Lewes 1983).

pupils, the results of private school girls show that we have no cause for complacency. Table XII demonstrates a complex

		G	B	n. 579	%
1.	Accountant	32	58	90	17
2.	Teacher	35	13	48	8
3.	Secretary	43	3	46	8
4.	Doctor/Surgeon	19	26	45	8
5.	Chemist	37	6	43	7
6.	Businessperson	7	21	28	5
7.	Pilot		25	25	4
8.	Lawyer	8	15	23	4
9.	Vet/Zoologist	12	7	19	3
10.	Architect	1	14	15	2
				382	66

gendered pattern of aspirations of private school pupils, whose intentions seem to coincide most closely with the traditional professions (such as medicine) associated with Service Class A or Intermediate Class B families.

Despite the supposed privilege, private school girls are still limiting their aspirations for future capacities and though Arnot's plea to consider class as well as sex as a differentiating factor between pupils⁴⁶ is endorsed here and borne out in the comparison of state with private school pupils, in both cases girls constitute a potential underclass of low grade and low skilled workers.

In turning to the results of a survey⁴⁷ carried out on career preferences of 1557 Year II state school pupils, some cautions must be made before comparison can take place with the private school data. It is not possible to make reliable statistical analysis between the two populations since the state school survey

⁴⁶ ARNOT, M., 'A Cloud Over ...', in WALKER, S. & BARTON, L. (eds), *op. cit.*

⁴⁷ 'Career Preference Survey', mimeo, Education Department (Malta 1987)

questioned Form II pupils, whilst the private school project used Form III and IV pupils. Moreover, the state school study excluded the low stream pupils of Area Secondary Schools as well as all the pupils in Trade Schools. The private school project sampled only twenty-five per cent of the relevant age group in private schools. However it is still useful to make some rough and ready comparisons that point to differences and similarities between the two sectors.

State school pupils were given the choice of a hundred occupations from which to identify their three most preferred occupations. On the other hand Private school pupils were given an open-ended question (question 8). Thus when state school girls make sixty different choices as contrasted to thirty-eight from private school girls, and state school boys eighty-eight choices as compared to the sixty of private school boys, we should remember that the homogeneity of private schools might appear stronger than it is, when contrasted with the hundred options suggested to the state school pupils. Even so, we can still note (Table XI and XIII) that in both cases, girls tend to conform to a narrower variety of occupations, possibly reflecting their awareness of the limited range of occupations open to adult women.⁴⁸

TABLE XIII
STATE SCHOOL GIRLS: Ten most preferred occupations

	Total	%
Clerk	146	15.2
Teacher	143	14.9
Secretary	98	10.2
Air/Ground Hostess	77	8.0
Kindegarten Assistant	50	5.2
Hairdresser	44	4.6
Bank Clerk	42	4.3
Nurse	37	3.8
Doctor	35	3.6
Chemist	32	3.2
	703	73

Source: Education Department, 1987.

⁴⁸ FURLONG, A., 'Schools and the Structure of Female Occupational Aspirations', op. cit.

Arnot's emphasis on class divisions in education⁴⁹ is vindicated by the Maltese data, for it must be considered that even when private school girls cite secretarial work as the most preferred occupation, in the schools themselves this option (typing) was combined with commercial subjects or computing. It could therefore be envisaged that even within a largely feminized sector, these private school girls would more likely occupy higher positions in the occupation than their peers in the state schools. In comparing the aspirations of private school girls (Table X) with those of state school boys (Table XIV), Arnot's contention that some gender research ignores class inequalities in education⁵⁰ is seen to be of prime importance here. The aspirations of state school boys remain consistently lower than those of private school girls.

TABLE XIV
STATE SCHOOL BOYS: Ten most preferred occupations

	Total	%
Teacher	49	8.1
Mecchanic	45	7.4
Computer Programmer	34	5.6
Clerk	33	5.4
Architect	32	5.3
Doctor	32	5.3
Pilot	26	4.3
Carpenter	20	3.3
Draughtsman	20	3.3
Electrical Engineer	17	2.8
	259	50.8

Source: Education Department, 1987.

Although class is an important determinant of aspiration, it is also true to say that when comparing girls with their male

⁴⁹ ARNOT, M., 'Cloud over Co-Education...', op. cit.

⁵⁰ *ibid.*

counterparts in the different sectors, gender is a classifying factor in aspiration for a future occupation.

THE GENDERED PROFESSION

Despite the fact that there have often been more male teachers in Malta than females, and this statistic in itself might indicate a different trend in our system than in others, in which teaching (in terms of numbers) is a predominantly female profession⁵¹, the same pattern of differential allocation of teachers to sectors, subjects and pupils is evident in the Maltese case as Acker has found it to be in Britain.⁵² One reason why men are found in a higher percentage in the state sector is that a marriage bar on females operated until 1981. When we take the proportions of state teachers with those in the private schools a different proportion results. For the purposes of this chapter, I have taken 1982/83 as a base year since it was in 1981 that the final stages of the amalgamation of the previously single-sex primary schools into mixed sex schools was finally achieved. Moreover, whereas before all female staff in a single-sex girls' school had relatively good chances of promotion, as well as the opportunity to teach the older and more prestigious preparatory classes for the Grammar Schools, the amalgamation has produced a more damaging gendered allocation for female teachers and headteachers. From Table XV it will be clear that whilst there are more males overall, females are concentrated in the Primary schools, which are still associated, especially in the early years with a more 'maternal' atmosphere in which female teachers are seen to fit (even if they are childless).

⁵¹ see DEEM, R., *Women and Schooling*, (Routledge and Kegan Paul, London 1978); and ACKER, S., 'Women and Teaching: A Semi-detached Sociology of a Semi-profession', in WALKER, S. & BARTON, L., (eds), op. cit.

⁵² ACKER, S., 'Women and Teaching...', op. cit.

TABLE XV TEACHING STAFF 1982/83			
	MALES	FEMALES	TOTAL
STATE SCHOOLS			
Primary	413 (24%)	847 (61%)	1260
Secondary	929 (55%)	459 (33%)	1388
Trade/Tech.	347 (21%)	78 (6%)	425
All State Schools	1689 (55%)	1384 (45%)	3073
PRIVATE SCHOOLS			
	258 (26%)	704 (74%)	962
TOTAL ALL SCHOOLS	1947 (48%)	2088 (52%)	4035

In the years preceding the amalgamation although female teachers in the Primary schools had a better chance of promotion to Headships than they now have, since the Girls only, Infants only and Infants/Girls school headships were open only to them, even in this period we can note patterns of closure operating on female teachers for promotion opportunities. Male teachers could aspire to headship in the large Infant/Boys/Girls schools, or Boys only schools. If we look at Table XVI we can see that whilst there were more female Headships in the seventies, the distribution of the places were structured in such a way as to keep female teachers in the lower status Infant area.

TABLE XVI PRIMARY HEADSHIPS 1978-79									
Boys/Girls/ Infants		Boys		Girls		Girls/Infants		Infants	
M	F	M	F	M	F	M	F	M	F
22 (65%)	12 (33%)	12 (35%)	0	0	8 (22%)	0	9 (25%)	0	7 (19%)

It should be evident that although there are thirty-six female heads as opposed to thirty-four male heads, there are also far more female teachers competing for the same posts. Opening up the post to both sexes as has happened with the mixed sex schooling has not been advantageous to women as can be seen in Table XVII.

TABLE XVII
PRIMARY HEADSHIPS 1982/83

Kindergarten and School 'A'		School 'B'		Mixed School (All Years)	
M	F	M	F	M	F
4 (11%)	17 (61%)	17 (47%)	3 (11%)	15 (42%)	8 (29%)

Thus of a total of sixty-four Headships in 1982/83, thirty-six (fifty-six per cent) have gone to males, who represent only twenty-four per cent of the total staff in primary schools, whilst females, who constitute sixty-one per cent of the primary sector only hold forty-four per cent of the headships. Those females who have interrupted their career for marriage and childbearing have until 1989, been automatically classified as Grade I teachers on re-entering and can never aspire to headships in the present seniority system of promotion. The latest statistics available (1986-87) show that ninety-eight per cent of Grade I teachers are female. Qualifications were not taken into consideration here, and these teachers re-enter the profession often at a lower level than they had entered as beginning teachers. The 1989 reorganisation has done away with the distinction between Grade I and Grade II teachers. However a similar process to that operating previously is evident. Married women who remain out of teaching for longer than the one year unpaid special leave now have to resign. On re-entering, they find that they are at the bottom of the seniority scale. This has reverberations on their promotion prospects. In 1989 although females comprised seventy per cent of the primary sector, they only held forty-six per cent of the Headships and fifty-one per cent of the Assistant Headships. At primary school level children already witnessed the phenomenon whereby 'women teach and men manage'.⁵³

Turning to the secondary school, a case study of the 125 Maltese science teachers vindicates Acker's contention that men and women typically teach different subjects to different groups of children.⁵⁴ Data collected from the Department of Education on the science staff complement was followed by a questionnaire sent

⁵³ STROBER & TYACK cited in ACKER, S., 'Women and Teaching...', op. cit., p. 123.

⁵⁴ ACKER, S., op. cit.

to all science teachers in all state secondary schools. Of the 125 possible respondents, thirty-one (twenty-five per cent) returned the questionnaire. In girls' schools we find that out of seventy-seven science teachers, forty-eight (sixty-two per cent) are males. Moreover, the majority of the female teachers (eighty-two per cent) are concentrated in the Integrated Science courses, of Group II pupils. The male teachers in girls' schools were over-represented in Physics only, or in Physics and Integrated science. Thus out of twenty-five physics teachers, twenty-three (ninety-two per cent) are males. Even where female teachers are present in the Form I and II Integrated science courses, at the time when female adolescents are preparing to make subject choices, there still remain a substantial number of male teachers (forty-one per cent) here.

Apart from the often sexist views of these teachers, one can understand that girls would find difficulty identifying with science, if science teaching itself is seen as a predominantly male preserve.⁵⁵ With female teachers teaching the Integrated Science course to Forms I and II and Group II (those who do not intend to pursue an academic career) the identification of females with 'general soft' science and males with subject specialization in Physics and Chemistry is easily made.

The questionnaire on science teachers conducted in 1986, sought to examine the distribution of sex and status amongst science teachers, the types of teacher training they had received, subject specialization, appointments throughout their career, working relationships amongst teachers. Only part of this data will be discussed here, though a system of gendered differentiation was evident for every item examined. Of the thirty-one respondents, twenty-two were male (twenty-three per cent of all science teachers) and nine were female (thirty per cent of all female science teachers). Interestingly, despite the high percentage of males teaching the science specializations, there was no comparable linkage between these males and their possible

⁵⁵ KELLY, A. (ed.), *op. cit.*, p. 235.

University qualifications. Indeed, a larger percentage of women had had University training.

TABLE XVIII QUESTIONNAIRE: SCIENCE TEACHERS QUALIFICATIONS n. 31				
	College	University	In-Service	Other
Females	5 (45%)	4 (36%)	2 (80%)	
Males	14 (43%)	9 (29%)	8 (23%)	2 (6%)

There is some indication that discriminatory planning policies work against female science teachers, who are themselves channeled into the Integrated Science for Forms I and II, or Group II pupils. The results of the questionnaire show that female teachers are more likely than males not to be teaching their main subject specialization.

TABLE XIX TEACHERS TEACHING SUBJECT SPECIALIZATION		
	Teaching Main Subject	Not Teaching Main Subject
Males	86%	14%
Females	67%	33%

That science teachers have differential perceptions of their male and female pupils was demonstrated in response to the question on teaching preference for girls or boys. All the female teachers said they preferred to teach girls because they had always taught them. The male teachers were divided as to their preference. Amongst the reasons given for preferring girls, male teachers mentioned the following:

1. Spent many years teaching girls
2. Have no experience of boys
3. Better work is given. More attentive during lessons, but girls in the upper secondary forms get lower marks in exams especially in Chemistry, Physics and Biology
4. Girls are generally better behaved and less troublesome, but they might be less motivated for science than boys

These male teachers preferred girls, yet it was their non-scientific attributes that were valued rather than girls' scientific capabilities. Indeed teachers had a perception of girls as 'not motivated', for science, despite the trend noted earlier in this chapter, that increasing numbers of Maltese girls are indeed entering the physical sciences. Whether the teachers' perceptions have been transmitted to their pupils cannot be ascertained here. It is apt to remember however, that teacher expectation of pupil performance⁵⁶ can have a significant effect on outcome.

Many of the male teachers identified strongly (sic) with their male pupils, giving such reasons for preferring to teach boys as 'being aggressive, a male teacher prefers to teach boys whom he considers as aggressive'. Masculinity is a virtue in itself. What happens to the girls who are taught by these 'aggressive' males is yet to be investigated in the Maltese case, but British pupils have told their stories of emargination by male teachers, and given the attitudes of Maltese teachers it seems likely that Maltese girls would have a similar story to tell, if they were asked.

At the opposite extreme of the science case is the Home Economics section of the profession. Home Economics forms part of the core curriculum for all girls in state secondary schools. As from 1988/89 boys could also take this subject, but there has been little or no interest from boys in this regard. Home Economics can be seen to be a feminized area with a total of forty-five female staff out of a possible forty-six Home Economics teachers. The one male is significantly placed at Head Office in Gozo.

⁵⁶ NASH, R., *Classrooms Observed: The Teacher's Perception and The Pupil's Performance*, (Routledge and Kegan Paul, London 1973).

GUIDANCE AND COUNSELLING

In state schools, the complex decisions regarding subject choice and transfer to (in some cases) upper secondary schools are usually made with a considerable input from guidance teachers.

Here again we find an allocation of teachers which keeps female guidance teachers with girls only, male counsellors and male guidance officers can be found in both boys' and girls' schools. The seniority system makes it difficult for female teachers Grade II to become Counsellors or Guidance Officers especially if these have interrupted their careers. Married women (Grade I) teachers can never aspire to these posts which are open only to Grade II teachers. Currently there are thirty-nine male Guidance teachers and thirty-two females. Males occupy the senior post of Guidance Officer. Whilst female guidance teachers are considered only to guide females, male guidance teachers are sent to mixed schools such as the Targa Gap School for Craftsmen (sic), the Industrial Tailoring School and the New Lyceum Complex. The innovation of mixing pupils in what were hitherto male subject areas, should have made planners more sensitive to the needs of the girls in an alien environment and offered them the support of same sex guidance teachers. This is not to say that female guidance teachers are free of stereotypical perspectives, but that their presence could at least indicate that this is also female space.

HELPING OR HINDERING?

Guidance teachers are in part constrained in the type of guidance they can offer to pupils by the already determined allocation of state school pupils to schools on the basis of their ability. Since the Junior Lyceum's (grammar), Area Secondaries (Modern) and Trade schools differ in the subjects that they offer to pupils, the guidance teachers in these schools have of necessity to guide pupils to these subject areas. Moreover, Guidance Officers prepare a list of orientation visits for pupils to places of work which are differentiated both by sex and ability. For example, any girl desiring to become an engineer would not find help to visit the Drydocks or the Marsa Shipbuilding. Orientation visits structure the career options for pupils' and the stereotyping is further reinforced by the attitudes and construction of pupils' gender identities by guidance teachers. That individual pupils often resist

the channeling is evident in some of the remarks made by these teachers, as well as their indication that they often have to help pupils 'adjust' to the subjects they have chosen. The comments below are taken from one of a series of interviews (quoted verbatim) with three guidance teachers, who hold very similar perspectives on 'appropriate' gender roles.

Interviewer: Do boys and girls differ in their career aspirations?

Teacher: Yes, I would say they do. For I already told you and you may of course understand, being a female, that boys are pressed to find jobs more than girls. Here, although these girls are bright and not like in the secondary - remember at Hamrun? Things were different - but still although they like to have a job and a career for their studies to be completed they all have boyfriends and like to dream about them. So in the end they will be bound to get married and then even leave the job. But men are different - that is the way society is arranged the men always have to remain in their job they do not need to leave it when they are married and have children. Anzi, all the more they have to remain in their job.

I: How do you deal with cases that deviate from the norm?

T: I try to convince them that they are wrong and it is only their imagination which hinders them from seeing the real situation at the place of work. Once I had a very bright student who wanted very much to work in the Drydocks and become an engineer. I told her that it was not possible to arrange for her alone to take her to the Drydocks and then she... and I think... wanted to take technical drawing. I told her that again there was no such subject offered to girls in school. I told her that for a girl it would be much better to take up a teacher's career or a pharmacy course. You have to persuade them to see the real situation as they are bound to encounter difficulties otherwise in the place of work - imagine a girl in the dockyard.

In this view the actual constraints of the system, that technical drawing was not then available for girls, reinforces the guidance teacher's commonsense assumptions about appropriate gender roles and occupations and she acts as a powerful source of discouragement for the girls in her care.

Now that, since 1989, it is legal though not always possible in practice, for girls to take up what were previously boys' subjects, there has been a shift in the ideological assumptions of the profession. More recent (1990) interviews carried out by student teachers with an Education Officer and with guidance teachers in both boys' and girls' schools show a marked change in the official policy that these espouse. The Government's policy of avoiding gender discrimination in guidance is reflected in the official ideology of teachers.

E.O.: We make no distinction between boys and girls.

I: In nothing? Even in engineering and this type of thing?

E.O.: For us a girl can be an engineer just as much as a boy ... this is our policy, the policy of the department that we do not make a distinction between...we do not only train boys, not in the least, on the contrary...It is the policy of the department, of the government, that there must not be a difference between the sexes.

As the student teachers who conducted the interviews comment 'this policy is transmitted to guidance teachers, who in turn receive it and try to transmit it to their students'. In line with this policy, Education Department Circulars now avoid sexist language and Guidance Teachers seem to endorse the policy and show satisfaction that some girls have enrolled at the Fellenberg and Technical Institute as well as in other courses.

E.O.: We've introduced the Radio and T.V. course in girls' schools and these have been successful.

G.T: Even in the Technical Institute and Engineering at the University. And with Air Malta there are female engineers, something that was taboo till five years ago.

The interviewers note however, that despite that aura of achievement, guidance teachers (in particular the women) find that the pace of change is too slow.

Several explanations were put forward for this. Amongst the most commonly referred to, the role of the parents, the general cultural climate, the difficulty of transmitting ideas to pupils and the belief that girls are less likely to take risks than boys were considered by the guidance teachers to be hindering progress.

G.T. [Female]: For me the thing [obstacle] that girls have vis-a-vis boys, low job opportunity, they have low expectations, it is cultural. It is in the families that girls 'oh, yes, we can arrange [things for them]' and 'if she spends some time as a clerk or in a factory for a short time before she marries, it's enough'.

Aware of these problems, the female teachers realize that they are partly responsible for not encouraging girls enough. They feel that as a profession, many teachers still hold stereotyped expectations of their pupils. One female guidance teacher located the problem in the mentality of the male pupils, and recognized the difficulties presented in trying to change this in the face of a dominant patriarchal culture. None of the male guidance teachers felt that reform was necessary beyond the offering of 'male' subjects to girls. These teachers objected to the idea that 'feminized' jobs such as hairdressing should be offered to boys. Indeed, despite the official line, the original list of Orientation Visits is still organized on criteria of gender and ability. A process of cooling out was found in Area Secondary Schools, where the non-academically oriented girls prepared for work in factories or as salesgirls. Accepting the low-achievement of these pupils, guidance teachers find it difficult to promote alternative aspirations and routes to higher status and skilled occupations. For some of the guidance teachers the contradictions inherent in their work were becoming almost impossible to surmount.

G.T. [Female]: In spite of the time I have spent preaching about certain technical jobs, the answers show us clearly that the Technical Institute came last ... it's like saying, when you have a stone, you hit and hit and hit, years hitting so it will

break. But one fine day someone comes along and gives it a small knock and it breaks. At least this is what I expect, that this [policy] will work.

One solution to the dilemma which the guidance teachers put forward was the possibility of using role models for girls. A change in perspective has accompanied the new non-sexist policy, but the teachers themselves indicate that in itself, this policy is unlikely to have effect. In their view, the entire guidance programme requires further thought, especially where it links guidance with careers counselling. Teachers themselves need to find more effective ways of encouraging their clients and overcoming the reluctance of girls to break away from traditional occupations. Their job will only be made more difficult if the closure for females into male occupations continues to dominate the labour market.

CURRICULUM MATTERS

It has been widely accepted⁵⁷ that curriculum content is socially produced and transmitted and resonates with the ideology of dominant groups. Anyon put it simply thus 'Textbooks are social products that can be examined in the context of their time, place and function'.⁵⁸ In the analysis of the gendered content of textbooks⁵⁹ and also in the examination of the centrality of

⁵⁷ see ANYON, J., 'Social Class and the Hidden Curriculum of Work' in *Journal of Education*, (1980); ANYON, J., 'Intersections of Gender and Class: Accommodation and Resistance by Working Class and Affluent Females to Contradictory Sex Role Ideologies', in WALKER, S. & BARTON, L. (eds), op. cit.; WEINER, G., 'Sex Differences...', op. cit.; SCOTT, M., 'Teach Her a Lesson...', op. cit.; APPLE, M., *Teachers and Texts*, (Routledge and Kegan Paul, London 1986).

⁵⁸ ANYON, J., 'Ideology and United States History Textbooks', in DALE et al. (eds), *Politics, Patriarchy and Practice*, (Falmer Press, Lewes 1981). p. 21.

⁵⁹ see SCOTT, M., op. cit.; LOBBAN, G., 'Sexism in Reading Schemes' in CHILDREN'S RIGHTS WORKSHOP (eds), *Sexism In Children's Books: Facts, Figures And Guidelines*, (Writers and Readers Publishing Cooperative, London 1976); and STANWORTH, M., op. cit.

textbooks to learning of any type,⁶⁰ including discovery learning we are constantly reminded that

textbooks provide an important means of students acquiring knowledge within the context of learning at school.⁶¹

Anyon's study of history textbooks⁶² provides a model for the reading of curriculum content and demonstrates the ideological support for powerful social groups that can be found in schoolbooks. Similarly Scott's comprehensive discussion of fifty-six history, social studies, geography, physics, chemistry and mathematics schoolbooks⁶³ reveals a sexist curriculum in which

1. the derogation of women
2. the invisible woman
3. the insignificance of women

are structuring principles.

In the various texts reviewed women are either not present or put down by demeaning images and references. When they do feature they are generally presented as insignificant contributors to society. This picture is similar to that found by MacDonald when she examined the 'vital centre', the content of school subjects.⁶⁴ MacDonald finds that a recontextualization of class based definitions of masculinity and femininity is embedded in the classification of school knowledge.⁶⁵

⁶⁰ see HARDY, J., 'Textbooks and Classroom Knowledge: The Politics of Explanation and Description', in WHITTY, G. & YOUNG, M. (eds), *Explorations in the Politics of School Knowledge*, (Nafferton Books, Driffield 1976); and APPLE, M., op. cit.

⁶¹ HARDY, J., 'Textbooks and Classroom Knowledge...', op. cit., p.87.

⁶² ANYON, 'Ideology and United States History Textbooks', in DALE, R., et al (eds), op. cit.

⁶³ SCOTT, M., 'Teach Her a Lesson...', op. cit.

⁶⁴ MACDONALD, M., 'Socio-cultural Reproduction and Women's Education' in DEEM, R., (ed.), *Schooling for Women's Work*, op. cit., p. 29.

⁶⁵ MACDONALD, M., op. cit.

The notion of appropriate behaviours for each sex is converted into the appropriate academic disciplines.

Not only are boys and girls channelled into separate subjects but the content of common or core curriculum is overtly sexist. School texts are particularly influential because they are characterized as 'apolitical' and used in a situation in which the dominant teacher refers to them in an authoritative manner.⁶⁶ Reviewing studies of school and University texts, MacDonald finds a persistent theme, that

there is a consistent distorted model of woman which not merely misrepresents her activities in social life but does nothing to correct the social patterns of discrimination.⁶⁷

The persistence of the invisible woman syndrome, in which girls or women hardly feature in school texts, is so strong that in 1981 Stanworth was to write that 'textbooks are written with an apparently male readership in mind'.⁶⁸ More recently Walker and Barton have found it disquieting that the interest in content analysis has not been matched by an understanding of 'what pupils in school do with these images, messages and representations'.⁶⁹ They call on researchers to keep interpretations of the definitions of experience represented in school texts which are developed by researchers separate from those developed by participants. The distinction between member and analyst interpretation is indeed important, and despite some preliminary work in this line such as Vulliamy on school music,⁷⁰

⁶⁶ HAMMERSLEY, M., 'School Learning: The Cultural Resources Required by Pupils to Answer a Teacher's Question' in WOODS, P. & HAMMERSLEY, M.(eds), *School Experience*, (Croom Helm, London 1977).

⁶⁷ MACDONALD, M., *op. cit.*, p.41.

⁶⁸ STANWORTH, M., *op. cit.*, p.19.

⁶⁹ WALKER, S. & BARTON, L., 'Gender, Class and Education; A Personal View', in WALKER & BARTON (eds), *op. cit.*, p. 11.

⁷⁰ VULLIAMY, G., 'What Counts as School Music?' in WHITTY, G. and YOUNG M., *Exploration in the Politics of School Knowledge*, (Nafferton Books, Driffield, U.K. 1976).

Hardy on science textbooks,⁷¹ some of the GIST material⁷² and Kelly's discussion of masculine science⁷³, there still remains a dearth of research which looks to the pupils' response to curriculum content. Notable exceptions are Measor's and Ebbutt's work on girls and the science curriculum⁷⁴ and Whitbread cites research in which experiments show that children who have listened to a story about an achieving girl were more inclined to see a girl as an achiever in another story where she is less central.⁷⁵

In the context of Maltese curriculum packaging it has also been difficult to find relevant research on the pupils' experience of the curriculum. Despite the absence of research in this field, it is still important to look at curriculum content from an analyst point of view. There seems to be consensus from a variety of sources that the curriculum is male dominated in content and organization,⁷⁶ whoever it is taught by. Moreover in recent psychoanalytic or socio-psychological analysis of the subject-individual,⁷⁷ the internalization of cultural values as represented in various media including textbooks is a significant element of the construction of habitus, distinction and indeed of subjectivity itself.

⁷¹ HARDY, J., 'Textbooks and Classroom Knowledge...', op. cit.

⁷² WHYTE, J., *Girls into Science and Technology*, (Routledge and Kegan Paul, London 1986).

⁷³ KELLY, A., 'The Construction of Masculine Science' in ARNOT & WEINER, op. cit.

⁷⁴ see MEASOR, L.C., 'Gender and the Sciences...', op. cit., and EBBUTT, D., 'Girls' Science; Boy's Science Revisited...', op. cit.

⁷⁵ WHITBREAD, N., 'Gender in Primary Schooling' in LOWE, R.(ed.), *The Changing Primary School*, (Falmer Press, Lewes 1987).

⁷⁶ see APPLE, M., op. cit., and WEINER, G., 'Feminist Education and Equal Opportunities: Unity or Discord' in *British Journal of Sociology of Education*, vol.7, no. 3 (1986) pp. 265-274.

⁷⁷ see HENRIQUES et al., op. cit., and LEONARD, P., *Personality and Ideology, Towards a Materialist Understanding of the Individual*, (Macmillan Press, London 1984).

Rose's study of Peter Pan,⁷⁸ which was significantly incorporated into the elementary school syllabus in 1915 vividly constructs the potency of language as a means to identity and self-recognition. Applying Rose's theory to current textbooks in use in Maltese schools, we would find that girls are also asked to identify with inadequate or domesticated women. Often we find that in their invisibility they cannot even recognize that which they are to be. It is to these texts that we must now turn.

Together with Faculty of Education students following the Gender Differentials in Education Unit, I have for some years now been carrying out content analysis of textbooks used in Maltese schools. To take a few examples from this work, we find that in the Economics and Science books used in Forms 1, 2, and 3 (all published after the 1975 Sex Discrimination Act in Britain) there still persisted stereotyped images of sex roles.

In the Economics introductory course, out of forty-two illustrations, twenty-four portray males, eight portray men and women together and only two portray women alone. In addition to invisibility we find the use of the male generic to refer to both female and male persons in twenty-seven instances. The concept of work is represented by a harvest scene in which active males work and a female carrying a basket (possibly carrying food for the male workers) looks on in the background. The wage earner is persistently represented as male as with illustrations of male mechanics, a male manager and three male apprentices. Whilst one woman figures amongst five members in the Union Democratic Structure, there is no evidence of women in other illustrations which include the District Committee, Executive Comdex, General Secretary, District officials and members. The sections dealing with international trade, export merchants, the stockmarket, business and so on are portrayed as male spheres. Moreover, the picture of a bank cashier and a customer can be seen to completely misrepresent real life, for here again both are male.

Women appear in isolated cases and always in subsidiary roles such as housewives, consumers, salesgirls or typists. The general impression given is that the business world is a male dominated

⁷⁸ ROSE, J., *The Case of Peter Pan or the Impossibility of Children's Fiction*, (Macmillan, London 1984).

world. The fact that a growing number of women are entering business and banking careers has made no impact on the producers of this text. Another Economics text in use in Maltese schools, *Economics in Action* also uses the male generic to refer to people of both sexes. Roles commonly held by both men and women such as head of school or spokesperson, are referred to in the male form e.g. headmaster, chairman. The illustrations and examples from the business world give the overt message that management, entrepreneurship and trading are male domains. In addition to a almost total invisibility, the derogation of women is also evident here. When appearing at all females are in roles of total passivity usually dependent on a male wage earner, as is the wife of Mr. Wyman who works in the aircraft industry. Mrs. Wyman spends most of her time playing whist with her neighbours (other unwaged women). Perhaps the most serious insult to domestic labourers is when they are called 'ordinary housewives' falling to a nadir of defamation. A final blow to those girls who might seek to recognize a role for themselves in business activity through textbook learning is the message that whilst men are competent in all spheres, woman have some competency (though not always) in domestic activities only.

Turning to the Home Economics textbooks which form part of Maltese girls' core curriculum in state secondary schools, we find that here females are so placed as to present the view that home management, including all domestic and child-care activities is solely a female domain. Girls are visible, but their very appearance and the absence of males in this context, reinforce the view that this is the one space in which women remain uncontested occupiers. Since many of the texts in use are British publications, post the 1975 Sex Discrimination Act, there is less sexism than is apparent in the Maltese Home Economics syllabus⁷⁹ and exam papers. Some examples from the 1985 and 1986 Form 1 Annual Exam should illustrate the way in which girls are cast into the parental role and are expected to have sole responsibility for children.

⁷⁹ Education Department, *Home Economics Syllabus*, (Education Department, Malta 1981).

q.10 What advice would you give to a mother of a toddler, to help avoid accidents in the kitchen ?

q.5 The girl who set the tray forgot two things. Can you point them out?

CONCLUSION

These are but some of the insidious ways in which girls are faced with damaging images with which to identify. Even when resistance to the images is possible, the possibility of constructing new identities or individual capacity has already been so severely curtailed throughout the years of schooling in a discriminatory system, that it seems that far too few girls are surviving these obstacles intact. Where girls do make it through the process of acquiring both a gender identity and an individual capacity to a potentially fulfilling life it is often at great personal cost and this is not having an effect on sufficient number of girls. We still need to find effective ways of eliminating all forms of differentials between girls and boys in our schools. As Henriques et al., theorize, a politics of change should 'combine two unfortunately separate struggles: the changing of subjects and the changing of circumstances'.⁸⁰ In placing the issue of subject choice in the wider domain of the construction of gender identities in school, this chapter has sought to demonstrate the impact of circumstances on pupils and the possible routes these pupils may take, given the circumstances.

Acknowledgements

I would like to thank those Faculty of Education, University of Malta students who have allowed me to use data collected by them as part of their credited assignment for the course Gender Differentials in Education. I have benefited also from their insights in discussion in the seminar programme of the course. The interpretation of the data remains my own.

⁸⁰ HENRIQUES et al., *op. cit.*, p. 226.