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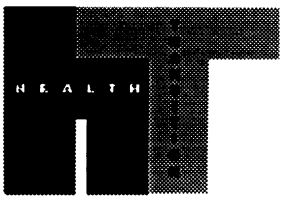
The first generation with mass schooling and the fertility transition: the case of Sri Lanka



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Abstract

This study attempts to explain the Sri Lankan fertility transition in terms of the pre-transition fertility regime and conditions leading to its destabilization. This study therefore deviates from previous studies of fertility in Sri Lanka which have largely focused upon the post-transitional fertility differentials. From the first formulation of demographic transition theory, education has been used as a significant factor relating to the fertility transition, but Caldwell's 'mass education-fertility transition' thesis can be regarded as the major attempt to explain the relationship between education and the onset of the fertility transition, with education a central explanatory factor in fertility transition theory. My analysis uses existing fertility theory to explain the education-fertility transition relationship, systematically tests that theory and suggests some modification to the theory on the basis of the Sri Lankan experience. The availability of relevant information in Sri Lanka has provided the opportunity to analyse the generations which contributed to the onset of the fertility transition and the continuance of that transition.

Caldwell's (1982) thesis of the relationship between the onset of mass education and the onset of the fertility transition certainly deserves respect for bringing education into the centre stage of the transition theory. Caldwell showed that there are mechanisms that can directly relate schooling to the onset of the fertility transition. He argued that these mechanisms were not identical in the contemporary developing world and in nineteenth-century European society. Although the evidence is scattered, he attempted to show that there was a substantial Westernizing influence in developing-world schooling and suggested that this was a potent force for change in the area of family relations. These arguments attracted my attention since Sri Lanka's educational system was heavily influenced by the British education system and the commencement of mass education occurred just 15 years before the onset of the fertility transition.

Although past studies of fertility in Sri Lanka considered education as one of the significant variables in explaining either fertility change or cross-sectional variations of fertility in the country, they failed to concentrate on the onset of the fertility transition but mainly centred on the examination of post-transitional fertility differentials. The analysis of post-transitional fertility differentials may be of significance for population forecasting or demonstrating the different economic demographic calculuses used in the various social classes but such analyses contribute little to unravelling the nature of a change that has already affected all social classes. The present study concentrates on the onset of the fertility

transition and attempts to explain this transition in terms of the pre-transition fertility regime and the conditions leading to the destabilization of this regime. Hence, this study carries out a historical rather than a cross-sectional analysis of fertility in order to understand the fertility transition in its time dimension and in terms of the series of interacting changes occurring in society.

Importance of the first generation with mass schooling

Caldwell recognizes that it takes at least one generation to complete schooling after the onset of mass education, in order to witness the effect of mass education on the family relationships, and hence on the family economy and on the direction of the net wealth flow which will ultimately determine the timing of the onset of the fertility transition (Caldwell 1982:305). It has been established that the onset of mass education and of the fertility transition in Sri Lanka began in 1945 and 1960 respectively (Dissanayake 1995). This timing shows that the first generation with mass schooling started to complete schooling from 1960. Therefore, Caldwell's thesis seems to be relevant to the Sri Lankan situation when the timing of the onset of mass education and of the fertility transition are considered.

Caldwell's thesis assigns great importance to the first generation with mass schooling. It claims that the first generation with mass schooling act differently from their parents since their schools propagate Western middle-class values while traditional family morality is disdained or regarded as irrelevant to them. Schools direct them to capitalist production activities and move away from the family production and the family morality that sustained that production. Family production activity is controlled by family morality, which provides power to the senior male and which sharply differentiates production and consumption roles by age and sex. In the system of family production, high fertility is no disadvantage but low fertility can be destructive. This family morality cannot survive in the new familial culture which is related to capitalist production activities external to the family; and once the children are trained for non-familial capitalist production activities, they become future rather than present producers. Family relationships tend to adjust to this expectation and these changes make school-children less productive and more costly. The direction of the net wealth flows begins to change and in such a situation low fertility becomes advantageous (Caldwell 1982:304-305). Therefore, it appears that the first generation with schooling is the major force which destroys the traditional family morality and creates a new familial culture. Hence the present paper examines the fertility behaviour of the first generation with schooling comparing their behaviour with that of the last generation of parents without schooling. It is hypothesized that the fertility behaviour of the first generation with schooling differed from their parents' generation at least partly because of the increased formal schooling which destroyed the traditional family morality.

Sources of data

Demographic research traditionally has been more closely associated with quantitative analyses based on censuses, vital statistics and sample surveys. However, Caldwell and his associates (Caldwell, Reddy and Caldwell 1984a, 1984b; Caldwell 1985; Caldwell et al. 1987; Caldwell, Hill and Hull 1988; Caldwell et al. 1989a, 1989b) have attempted to widen the nature of demographic inquiry by adopting demographically informed qualitative research on population issues. This has been labelled the 'micro approach' to demographic investigation and is quasi-anthropological, combining ethnographic field research with surveys and censuses of small communities in order to arrive at a holistic understanding of

demographic behaviour and change in a broad historical and sociological context (Caldwell 1985:51-57). My aim is to combine both the quantitative and qualitative approaches in order to provide a more comprehensive picture than could be obtained from relying upon either type of research alone. In this regard both national sample demographic surveys that provide quantitative information and micro-level information gathered in small-area sample surveys are used. A list of these surveys with their related characteristics is presented in Table 1. In addition, other sources such as historical and contemporary literature and official statistics are introduced within the scope of the study.

The persons who were born during the period 1940-54 are defined as the first generation with mass schooling. A majority of persons in this generation were able to enter formal schooling with the onset of mass education, but before the onset of the fertility transition. When the growth in school enrolment rates from 1901 to 1960 is examined, the selection of this cohort as the first generation with mass schooling seems to be valid, because there was a 32.4 per cent increase, from 52.1 per cent in 1945 to 84.5 per cent in 1960, in the school enrolment rate during the 15-year period, compared to only a 27.9 per cent increase from 25.2 per cent to 52.1 per cent in the enrolment rate during the whole 44-year period from 1901 to 1945. The first generation with mass schooling was observed in the age groups 20-34, 30-44 and 32-46 by the SLFS of 1975, the SLDCP of 1985 and the SLDHS of 1987 respectively.

Why did the first generation with mass schooling act differently ?

Schooling hastened cultural change and created a new culture

Historical evidence suggests that Sinhalese society was proud of its own culture (Grossholtz 1984:98) and did not accept European culture at the beginning of European rule. It also seems that the Sinhalese were tolerant of other religions, but were happy with their own religion (Tennent 1850:281-282). However, the older traditional structures of Sinhalese society could not survive under the economic and political demands of colonial capitalism. Colonial rule transformed Sri Lanka from a feudal, monarchical, village-oriented subsistence economy to a capitalist, parliamentary, plantation-dominated export economy.

The educational system introduced by the British was one of the major supports of the capitalist economy:

> The reform and reorganization of the government in 1833-34 signalled an important change in the orientation of the British. The government was being organized to fit the requirements of a British-run plantation economy. The role of the government in this new economy was to make British investment secure and profitable. Military power had secured control of the island and its population, but to continue to rule and to assure British investors of protection, the government needed some measure of support from the local population. To rule through political, as opposed to military, power meant to persuade some substantial portion of the population that the colonial government was legitimate or at least inevitable. The education system, by holding out rewards to those who would seek their fortune through learning the English language, customs and religion, was a means of spreading support for British ideology and economic policies (Grossholtz 1984:103).

Table 1
Surveys used in the study

Name	Year	Sample coverage	Sample size	Persons investigated	Methodology	Institutions involved
1. Sri Lanka Fertility Survey (SLFS)						
	1975	National	6812	Ever-married women	Survey	Department of Census and Statistics, Sri Lanka; Interantional Statistical Institute, the Netherlands
2. Sri Lanka Demographic and Health Survey (SLDHS)						
	1987	National excluding Northern and Eastern Provinces	5865	Ever-married women	Survey	Department of Census and Statistics, Institute for Resource Development/ Westinghouse Maryland
3. Sri Lanka Demographic Change Project (SLDCP)						
	1985	South-west low land areas	10964	All persons	Micro-Approach[a] and Survey	Department of Demography, Australian National Unviersity; Demographic Training and Research Unit University of Colombo
	1987	Tea Estate in Sri Lankan Highlands	1290	All persons	as above	as above

[a] Micro-approach refers to an anthropological approach including participant observation

The most significant social consequence of the educational system was the emergence of a new class:

> Almost all of them had enjoyed an English education, though at different levels. They were proficient in the use of English language, which had opened to them the new world of Western learning and ideas. Both consciously and unconsciously, they had adopted the scientific, rational outlook on life which now influenced their attitude to the society in which they moved. More concretely, they had adopted European dress and modes of

> living. This progressive and forward-looking class became the focus of developments in twentieth century Ceylon (Arasaratnam 1964:164-165).

Pre-colonial traditional education was pyramidal in structure. At the top of the pyramid, there were only a few people, mostly monks and noblemen, who had an advanced level of education. Therefore, traditional education was more religious in content than formal Western education. At the base of the pyramid there were the masses who obtained little more than the rudiments of reading and writing and training in crafts and trades (Rahula 1956:301-302; Ruberu 1962:9-13). It is discernible that pre-colonial schools were not representative of the entire society; rather they were designed to serve the needs of a class within that society.

Schools that emerged in Ceylon during the British rule reflected the power and the educational needs of the British. Both the missionaries and the colonizers saw education as a means for accomplishing their own ends. They aimed at

> promulgating Western culture, the Christian religion and a more formal, impersonal type of education. Indigenous practices and traditional Buddhist culture were shunted aside and downgraded in prestige and privilege. Village and temple 'schools' persisted but fared poorly in competition until they wasted away or adopted Western, government approved educational procedures (Ames 1967:25-26).

Missionaries and colonial administrators did not consult the local population in determining the scope and content of schooling. Schools never held out the prospect of integration into the indigenous culture of those who attended them even until the late 1960s (Ames 1967:33). The British established schools to fit the Sri Lankan people into a world different from the one in which they were born and in which their parents lived and worked. 'English schools were started in Ceylon to provide recruits for government service' (Mendis 1944:37). 'Yet, to return to his village without white collar employment would be unthinkable to a student; better to have no secondary education than to be an educated peasant' (Ryan 1961:473). The educationist Jayasuriya mentioned that the school system and its curriculum during the late 1950s were not aimed at fitting children for life in the community (Jayasuriya 1960:24). It appears that the school system exposed to the first generation with mass schooling had little to do with the society and indigenous culture and served as a mechanism whereby the schooled would gain a new social place and a new culture rather than be prepared to work within the context of indigenous culture.

Schools a major instrument for propagating Western middle-class values

The intention of the British colonial rulers was to create a new class committed to the culture and ideology of the British through English education. Fredrick North, the first governor, recognized the importance of creating a new class of native elite which could assist in disseminating British values (Jayaweera 1979:153). In this regard, the Colebrook-Cameron report has this interesting passage:

> The peculiar circumstances of Ceylon, both physical and moral, seem to point it out to the British Government as the fittest spot in our Eastern dominions in which to plant the germ of European civilization, whence we may not unreasonably hope that it will hereafter spread over the whole of these vast territories (cited in Mendis 1956, vol. 1:182).

Therefore the school system was directed towards promoting new moralities. It has been observed that

> no attempt was made to incorporate traditional elements of local education in school teaching. Little account was taken of sociological factors and environmental conditions. Children learnt out of books which were prepared for children elsewhere. ..... English heroes and English history and English outlook were substituted. It was thought moral education could best be given through English classics and through the Christian scriptures... (Corea 1969:158).

It is evident that an alien culture was imported into Sri Lankan society through the education system.

In addition, even in the 1940s, it was observed that 'all children irrespective of religious conscience attended any school but the Buddhist and Hindu religionists outnumbered the others even in Christian schools. The results were denationalization, conversion and acculturation with loss to national culture' (Wijesekera 1949:110). Buddhist and Hindu children brought this new value system back home to their families.

It is important to note that although the 'free education policy' was established in 1945, Western education played the major role until the late 1960s. 'The preponderance .... of Western curriculum over Buddhist schools and traditional Buddhist curriculum has continued down to the present [1967]' (Ames 1967:33). Christian-managed schools received twice the amount of Government grants given to Buddhist-managed schools during the 1958-59 period (Kearney 1964:130). English still continues as a compulsory second language. All government activities were carried out in the English language until 1956 and it was a mandatory prerequisite to enter the political elite (Singer 1964:71-73). 'Practically all schools today [1967], including most Buddhist temple schools, are at least ideally committed to a modern, Westernized curriculum' (Ames 1967:33). Therefore, it appears that the majority of children began to be exposed to Western middle-class values after the onset of mass schooling in 1945.

In sum, the school system trained children for capitalist production activities rather than family production activities. The traditional family morality that sustained family production was moving away from families as school-age children were being trained for a new social place in a new culture. The first generation of children with mass schooling were learning mostly British middle-class values since the schools adopted a British curriculum until the late 1960s.

Improvement in female education

The onset of mass schooling in 1945 was not a sudden phenomenon but the end result of a series of significant events (Dissanayake 1995). Colonial governments took various steps to improve the education system before 1945 and parents were also motivated to send more of their children to school from 1945. Expansion of the school system has long been one of the popular political priorities and once governments were elected based on popular votes after 1948, with the introduction of political parties, each government had to provide educational facilities for the masses in order to secure its political power (De Silva and De Silva 1990:13-21). Therefore, Government education policy became a major focus of debate not only in Parliament but also during elections. In addition, a dramatic increase of the population after 1946 forced governments to build more schools, to recruit more teachers and to purchase more equipment in order to maintain the existing education system (Wijemanne 1976:212). As a result, expenditure on education rose from 85 million rupees in 1950 to 270.4 million in 1960 and 1388.2 million in 1980 (United Nations 1986:103).

The literacy level of the population also increased dramatically after 1946. The most noticeable characteristic during this time was an increase in the female literacy level. In 1946, the female literacy level was 43.8 per cent compared to 70.1 per cent for males. By 1981, the female literacy rate had doubled to 82.4 per cent to approach the male rate which had increased to 90.5 per cent. School enrolment data indicate that boys and girls participated equally in the educational process (Jayaweera 1979:168). In 1970, 72.7 per cent of children aged 5-14 years received primary and secondary education. School enrolment for boys was 74.6 and for girls 70.8 per cent.

The change in women's attitudes and behaviour from a traditional to a modern state is generally considered the basis of their status enhancement and an essential prerequisite to the reduction of fertility (Stycos 1979; Nag 1983; Kasarda, Billy and West 1986; Indiradevi 1987). It is believed that women's education is a crucial factor in this transition which requires a shedding of older values and beliefs; increased involvement of women in institutions of the larger society; improvement in the position of women within the household and the community; and greater autonomy of women to shape their biological and social destinies (Freedman 1963; Inkeles 1974; Dixon 1975; Caldwell 1978, 1980; Cochrane 1979, 1983; Graff 1979; Wolfe 1980; Chaudhury 1982; Curtin 1982; Kasarda et al. 1986).

Before the onset of mass education, most of the children either helped in domestic work or engaged in familial production activities. This phenomenon is confirmed by women of age 55 years and over who were interviewed in the Sri Lanka Demographic Change Project in Welisara and Loluwagoda localities. About 88 per cent of these women said that boys used to be engaged in domestic work or family production activities while 99 per cent of them indicated that girls used to be engaged in familial work. When these women were asked what had changed in Sri Lanka since they were young, the major three answers were: girls have education (37.8 %); girls have jobs (18.5%); and an increase in economic problems (14.8%). This indicates that the major change that was noticed compared with the past, especially by the women who were born before the onset of mass education, was the increase in female education.

Employment expectation and increased unemployment

A majority of the last generation of parents without mass schooling valued their children's schooling, as they expected that their children could get better employment outside of the home than had been available to them. This is evident from the SLDCP data, which show that 60 per cent of the last generation of parents without mass schooling wanted their children to be educated in order to get employment outside the home. However the children who found employment for the first time had to wait an average of 3.8 years after completing their schooling before obtaining their first job.

The censuses of 1963 and 1971 indicate that employment opportunities available for the first generation with mass schooling were not satisfactory. In 1963, 30.5 per cent and in 1971, 36.3 per cent of persons aged 15-24 were unemployed (Wilson 1975:134; Department of Census and Statistics 1986:178). In 1969, the group who had passed the General Certificate Examination (Ordinary Level) formed 36.4 per cent of those members of the work force who were unemployed. In addition, there were 10,000 university graduates among the unemployed (Politicus 1972:261). This indicates that unemployment was high among the educated. It has been pointed out that educated unemployment was a result of the education system which mainly trained persons for white-collar jobs and the inability of the economy to absorb workers trained only for white-collar employment (Jayaweera 1979:142; United Nations 1986:61).

Delayed marriage

It is evident that the better-educated women of the first generation with mass schooling have postponed their marriage by 1.3 years compared to the last generation of parents without mass schooling. They postponed their marriage mainly because of economic reasons: unemployment or under-employment. The women of the previous generation married at an earlier age because most of them did not have any formal schooling. In addition, parents wished to be free of the responsibility of keeping their daughters at home. About 62 per cent of the women aged 55 years and over interviewed in Welisara and Loluwagoda mentioned the above factors as the major causes of the earlier age at marriage in their generation. Therefore, it is evident that the increased educational level and the overall increase in both male and female unemployment[1] caused marriage delay among the first generation with mass schooling. In addition, their education gave them greater independence to select their own partners in marriage, which possibly contributed further to the delay.

Early first birth

The present analysis finds that 11.3 per cent of the first generation with mass schooling have had premarital conceptions compared to 8 per cent in the previous generation. The higher incidence of premarital conceptions among the better-educated women in the first generation with mass schooling is another indication of their increased independence. Since there was a higher incidence of premarital conceptions, we can expect a shorter interval between marriage and the first birth among the better-educated women compared to their mothers. The evidence shows that they did indeed have their first births relatively early, but the relatively small incidence of premarital conceptions suggests there should be other reasons for the shorter interval between marriage and the first birth in this generation. There is a claim that the increase in formal education at the initial stages may first serve to raise fertility by improving health conditions with the diffusion of improved knowledge with regard to personal hygiene, food care, environmental dangers and so on (Bjork 1971; Easterlin and Crimmins 1985). Some of the relatively early start to childbearing by the first generation with mass schooling may be attributed to these changes.

It also seems that women of the first generation with mass schooling who delayed marriage wanted to have their first birth relatively early, as this could be regarded as a kind of compensation for the marriage delay caused by the need for increased educational attainment and a longer waiting time to obtain employment. Also an early first birth may result in an early breaking away from one's parents. Although evidence suggests that the parents of the first generation with mass schooling placed more emphasis on their children's academic success than on their help in their old age (Straus 1955:155), the family tradition which has dominated Sri Lankan society has been that of taking care of parents in their old age (Leach 1961:104-116; Yalman 1967:101-107). According to the Welisara and Loluwagoda surveys, about 44 per cent of women aged 55 years and over mentioned that young people did not help aged parents as much as formerly, while 28 per cent said that some children did help their parents in their old age. They also said that the economic problems of the children prevented them from helping their parents. Once a couple who have more independence become a family at a relatively early stage with their first child, the chances of them helping their parents, especially economically, may decrease with their own increased economic problems as evident in Welisara and Loluwagoda. Under such

[1] Age at marriage of the women is dependent on the employment opportunities of males as well.

circumstances, the wealth that has been already flowing away from the parents to children with their schooling will continue to flow further in the same direction when children begin separate families.

Fertility decision making

It was concluded earlier in this paper that the family size changes in Sri Lanka involved strategies related to decision making throughout the reproductive time span. Fertility decision making has been discussed in many theories of fertility (Becker 1960; Fishbein 1972; Hoffman and Hoffman 1973; Hass 1974; Willis 1974; Easterlin 1978). The investigations have been usually made about the nature of the family as an entity, the types of relationships among its members and the associations between the family and society. Decision making with regard to familial activities can be regarded as the central activity of every family throughout its life cycle. The locus of the power in a family is directly related to the persons who make such decisions (i.e. the marital authority pattern) (Hill 1965:127). Therefore, the family transition depends at least partly on the person who decides the familial activities. The increased autonomy among women is considered one of the important elements in most family transitions (Goode 1982:183-186). Education of the wife is frequently mentioned as one of the variables which influences the marital power structure in the family as it ensures a greater participation in family decision making by the wife (Goode 1982:84; Sud 1991:43). It has also been claimed that modern education with its accompanying 'Western middle class values' can destroy the traditional family morality by weakening the authority of the husband over the wife (Caldwell 1982:322-323).

When the power of the traditional extended family system decreases with economic development and social modernization, the authority exercised by others over the roles and status of women and over their decisions will also decline. According to the SLDCP, only 41 per cent of the first generation with mass schooling lived in extended families, compared with 53 per cent in the last generation of parents without mass schooling. Although uneducated or less-educated people in the previous generation were more likely to live in extended families, people in the first generation with mass schooling had more nuclear family structures irrespective of their educational status.

In addition, most of the people in the last generation of parents without mass schooling were engaged in familial activities, in contrast to the first generation with mass schooling which consisted of more non-familial wage earners. According to detailed occupational structures gathered in seven localities in the SLDCP, 54 per cent of the previous generation engaged in familial work compared with just 35 per cent of the next generation. The better-educated people in both generations have always been more likely to live in nuclear family structures. The proportion of nuclear families among the better-educated people in the previous generation was 53 per cent; in the next generation it was 62 per cent. Among them, 52 per cent in the previous generation and 59 per cent in the next generation were engaged in non-familial wage employment. Uneducated or less-educated people in the last generation were more likely to live in extended families (70%) but were more likely to live in nuclear families (61%) in the first generation with mass schooling. When uneducated or less-educated persons are classified into two categories: wage employment and non-wage employment, the proportion of nuclear families among the wage-earners and non-wage earners rose from 37.9 and 27.2 per cent respectively in the last generation of parents without mass schooling to 62.1 and 58.1 per cent respectively in the first generation with mass schooling. This higher incidence of nuclear families irrespective of education and occupation is perhaps an indication of the effect of mass schooling on the whole society.

Since the educated group forms the majority of the first generation with mass schooling, we can expect that the uneducated or less-educated minority group imitated the majority group's behaviour and started to move away from the traditional extended family structure. It is therefore, reasonable to accept that pressure from the kin group on family decisions in the first generation with mass schooling was relatively low and this perhaps strengthened the bonds in the husband-wife relationship. Once kin group influence is weakened, the relative influence of the husband and wife becomes important in family decision making. Although the husband usually derives a measure of assertiveness from the social norms which exist in a patriarchal system like Sri Lankan society, variations can still be observed among individual couples with respect to the power each spouse has in decision making. This is due to some comparative resources that the husband and wife each bring into the marriage in the form of higher education, a well placed family background, financial resources, a job at the time of marriage (Blood and Woolfe 1960; Safilios-Rothschild 1982). In the case of the first generation with mass schooling, the resources that they commonly brought which the previous generations did not possess, were higher educational qualifications and associated wage-occupations.

As family planning decisions are taken throughout the wife's reproductive time span, they can be regarded as providing some of the best insights into indicators of the family decision making process. Family planning decisions are among the most rational and conscious decisions (Coale 1973; Caldwell 1982; Coale and Treadway 1986) that a family makes as they involve awareness of the possibility of planning and the selection of the most suitable means to achieve that rationally-perceived goal.

The investigation made in Welisara in the SLDCP provides a unique opportunity to examine the family planning decision-making process in the first generation with mass schooling in comparison with the previous generation. The evidence available from the Welisara survey shows that a higher proportion of family planning decisions were made by wives alone[2] compared with husbands' decisions in both generations. The corresponding proportions were 62 per cent for the previous generation and 50 per cent for the next generation. This indicates that the wives have taken the major responsibility in making family planning decisions. Among these women in the first generation with mass schooling, 86.9 per cent were uneducated or less-educated compared with 50 per cent in the last generation of parents without mass schooling. The relatively low proportion of decisions made by the wives of the first generation with mass schooling was due to a corresponding increase in the husband's decision making alone and a rise in the proportion of joint decisions by both husband and wife. About 11 per cent of the husbands alone and 15 per cent of both husband and wife jointly made family planning decisions in the last generation of parents without mass schooling in contrast to 19 per cent and 23 per cent in the first generation with mass schooling.

The increased participation of husbands and a rise in the joint contribution by both husband and wife in making family planning decisions is probably a reflection of the increased educational level of both spouses in the first generation with mass schooling. Therefore, we find that about 57 per cent of the family planning decisions have been made either jointly or by the husband alone in such couples, compared with just 25 per cent of the decisions made by the couples or the husbands alone in the last generation of parents without mass schooling. This suggests that a higher proportion of better-educated husbands

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[2] The question, 'Who makes family decisions?', had seven possible answers: 1. wife alone, 2. husband alone, 3. both husband and wife, 4. both husband and wife with other family members, 5. (wife or husband absent/dead) other family members, 6. (living with in-laws) other family members, 7. no response.

were also taking responsibility for making family planning decisions because of the increasing pressure from their educated wives. This can be a reflection of a more egalitarian marital power structure in the families of the first generation with mass schooling. A study on a small town in India has shown that there is a close relationship between the increase in educational levels of both husband and wife and equality in the marital power structure in the family (Sud 1991:43).

It has been shown that the most common method of fertility regulation practised before the 1960s in Sri Lanka was rhythm (Caldwell et al. 1987:13). It seems that the relatively high incidence of wives' decision making in family planning observed in the last generation of parents without mass schooling was a result of the use of the rhythm method which is a traditional female method, by a relatively large proportion of women in that generation. In Welisara, about 45 per cent of the women have used the rhythm method alone to plan their fertility. They preferred rhythm to the other methods as they considered it a natural and convenient method which does not have any harmful effects on health. The proportion of women to have ever used the rhythm method in Welisara dropped to 34 per cent among the first generation with mass schooling as a result of an increase in the use of sterilization to stop childbearing.

Although modern methods of contraception were available from the mid-1960s, the Government family planning program emphasis was mainly on sterilization with the introduction of a cash incentive payment to its acceptors in 1980 (De Silva 1992:42). The first generation with mass schooling was the first group exposed to these services as they were aged 25-39 in 1980. Among the women in that cohort who used female sterilization in Welisara, about 79 per cent were better-educated women. They considered sterilization the most effective way of controlling childbearing. It is evident that most of the first generation with mass schooling used traditional methods to space children and then switched to sterilization to stop childbearing after having achieved their desired number of children. The SLDHS data show that 87 per cent of the uneducated or less educated and 90 per cent of the better-educated women, in the first generation with mass schooling, used sterilization to control fertility after having achieved their desired family size.

According to the SLDHS, 12 per cent of the couples in the first generation with mass schooling used sterilization without having achieved their desired family size. It appears that a substantial minority of the total population controlled their fertility without having realized that their reduced fertility is advantageous. It has been argued that government can make 'fertility limitation seem — or indeed truly — advantageous to individuals and families according to the system of rewards and punishments it establishes' (Caldwell 1993:311).

Influence of the government

Population planning has been included in all development planning in Sri Lanka from 1959 in order to aid economic development (Government of Ceylon 1959:16; Ceylon 1971:21; Dangalle 1989:313). The government elected in 1977 declared its population policy thus:

> (a) The government is concerned with the rate of population growth and its policy is to take all meaningful steps to curb unplanned growth of population;
>
> (b) Enhanced family planning services will be provided by the State and financial incentives with a view to controlling the population explosion will be given to individuals who practise family planning;

> (c) In the field of family planning emphasis of the government will be in the field of service-oriented programmes to enable motivated couples and individuals to receive family planning services and to undergo sterilization voluntarily (Dangalle 1989:308).

In 1977, the national population and family planning program was decentralized by establishing the District Population Committees. In 1979, the Population Division was established within the Ministry of Plan Implementation in order to co-ordinate the entire population program and its family planning service activities. In the preliminary stage, the program attempted to educate people by organizing village-level seminars. The messages conveyed were that high fertility would be disadvantageous to individuals, to families and to the whole country; and also that high fertility could be controlled by using modern contraception, especially surgical contraception.

In 1980, the government introduced a payment scheme to the service providers and acceptors of surgical contraception. According to this scheme, a medical team was paid Rs.65 for a tubectomy and Rs.35 for a vasectomy. At the introduction of this scheme, an acceptor was paid Rs.100 but later this was increased to Rs.500. The payment for acceptors was regarded as reimbursement for expenses borne by the person undergoing surgical contraception (Dangalle 1989:310).

Some writers stated that the rapid increase in sterilization was mainly due to the introduction and the subsequent increase in the payment to acceptors (Williams 1982; Thapa, Abeywickrema and Wilkens 1987; Basnayake 1988). On the other hand, some claimed that the increase in sterilization was due to the readily available services through the government and also non-governmental programs (Dias and Dias 1988; Hapugalle et al. 1989).

Although there are several views about the acceptor payments, it seems that the payment to medical teams (doctor, nurse, midwife, health worker) had some significant effect on the increase in sterilization, as health teams were more ready to motivate their patients in favour of surgical contraception. According to Welisara survey data, 58 per cent of the women who used surgical contraception were encouraged to do so by health teams. It is also evident that the health team pressure had more effect on the uneducated or less educated women of the first generation with mass schooling. In Welisara, 73 per cent of the uneducated or less-educated women and 50 per cent of the better-educated women were encouraged to use surgical contraception by health teams. This suggests that a relatively high proportion of better-educated people voluntarily decided to adopt surgical contraception compared with the uneducated or less-educated women.

The available evidence therefore, proposes that the strong national family planning program launched by the government after 1979 was also influential in determining fertility, especially the stopping behaviour of the first generation with mass schooling. The government made low fertility seem advantageous to individuals and to the family by providing rewards not only to the acceptors but also to the service providers. The government also created an appropriate infrastructure in order to provide effective techniques for fertility reduction. Although the government emphasized that fertility control should be left to individual choice, a substantial minority controlled their fertility without conscious choice because of elements like the cash payment to the service providers. However, it was also observed that the government's focus was less on the better-educated than the uneducated or less-educated people.

Summary

It was found that education was one of the major factors that contributed to the reduction in fertility of the first generation with mass schooling. The first generation with mass schooling differed from the last generation without mass schooling according to exposure to English middle-class culture, education of females, employment, children's educational levels and family structure. Accordingly, the present study found that education was the major factor responsible for such differences observed between these two generations.

The improved educational attainment of the first generation with mass schooling pulled them away from traditional family-based work and directed them toward public sector non-manual employment. However, the economy during the 1960-69 period was not capable of absorbing all of these better-educated young people and the result was a relatively high unemployment rate both among males and females. These young people had to wait a considerable time to obtain what they considered to be suitable employment. As a result, they postponed their marriage longer than did their parents; this reduced the potential reproductive time available to them. The postponement of marriage was possible because of the reduced parental pressure on this generation. In addition, the greater independence that they obtained through Western-type education encouraged them to select their own marriage partners unlike their parents' generation. Once they were married, they moved away from the traditional family home and started a separate nuclear family unit. This behaviour was part of the middle-class culture they had acquired in their schooling and upbringing.

Although their marriage was delayed, the first generation with mass schooling had their first birth early in order to compensate for the marriage delay necessitated by the need for increased educational attainment and the longer waiting time required to find suitable employment and also to assign a separate identity to their newly formed family. The first generation with mass schooling sent more of their children to school because they highly valued children's education and recognized it as a part of their culture. Therefore, the net wealth flow from parents to children which began with the onset of mass schooling (Dissanayake 1995) continued and indeed the balance shifted more in favour of children. Hence, the first generation with mass schooling realized that low fertility was advantageous to them. The strong national family planning program launched by the government after 1977 created an appropriate infrastructure in order to provide effective techniques for fertility reduction. In addition, the first generation with mass schooling could make decisions to reduce family size with less interference from kin groups since they were living as nuclear families. This strengthened the bonds in the husband-wife relationship. The increased educational levels of husbands and the greater power acquired by wives within the family with their higher educational qualifications and associated wage occupations, encouraged them to make joint decisions regarding family planning.

A synthesis

The present study is completely in agreement with the Caldwell thesis which recognizes that the first generation with mass schooling is the major force which destroys the traditional family morality and thus the basic morality of the society and creates a new familial culture. Education of the first generation with mass schooling induces changes in the familial relationship for the following reasons: (a) schooling speeds up cultural change and creates a new culture; (b) schools serve as a major instrument for propagating Western middle-class values. These are the major factors which restructure family morality and have the most effect in changing family economies from a situation in which high fertility is worthwhile to

one in which it is disadvantageous. According to Caldwell (1982:303-305), these are the last two of five mechanisms through which education influences fertility. In countries where Westernized education systems prevail, the education to which the first generation with mass schooling is exposed has little do with indigenous society and culture. Education serves as a mechanism which enables the schooled to gain a new social position and a new culture rather than to be prepared to work within the context of indigenous culture. Hence the first generation with mass schooling becomes the first major group exposed to a new familial culture through schools. Their schooling induces economic change since they are trained for capitalist production activities but not for traditional familial production activities. In fact, their parents' generation expect them to engage in capitalist production activities when they start to send more of their children to school (Dissanayake 1995).

The last generation of parents without mass schooling had the power to control the activities of the first generation with mass schooling, but they lost that power when the children completed their schooling because parents (and the society as a whole) recognize that the children possess valuable resources that their parents do not have. The first generation with mass schooling do not want to respect the traditional family morality which sustains family production because capitalist production is becoming the dominant mode of production. This reduces the parental and kin pressure on this generation and they become more independent. Once they are married, they leave their traditional homes and establish separate family units because they are no longer considered part of traditional familial culture, but as part of the middle-class culture that they acquired from school.

When capitalism becomes the dominant mode of production, the first generation with mass schooling need to send their children to school in order to train them for such activities. Educating a child becomes a critical part of their culture. At this stage, it is obvious that increased schooling of their children (i.e. the second generation with mass schooling) influences them for the following reasons: first, it reduces the child's potential to work inside and outside the home; second, schooling increases the cost of children; third, schooling creates dependency, both within the family and within the society.

With schooling, the society regards the child as a future rather than present producer and it expects the family to protect the society's investment in the child for that future. These changes make school children less productive and more costly both to the family and to the society. These are the three mechanisms through which children's schooling has its effect on their parents (Dissanayake 1995). In the case of the last generation of parents without mass schooling, it was claimed that

> When more children start to attend school, schooling becomes a short term economic burden on the family economy since school children are not regarded as present producers in familial production activities. The majority of the children of the family are unable to contribute to family income as a consequence of their schooling. In such a situation the intergenerational net wealth flow begins to reverse and starts to flow from parents to children. In this way many of the last generation of parents without mass schooling realise that a large family is a burden to the family's present economic survival. Eventually, a substantial minority of the couples in the last generation of parents without mass schooling (both better-educated and lesser-educated) control their fertility by the time that their children complete their schooling, which must be at least 15 years after the onset of mass education. This incidence of fertility control is at least sufficient for a country to signal the initiation of its marital fertility transition (Dissanayake 1995:310-311).

In the case of the first generation with mass schooling, the increased schooling of their children (i.e. the second generation with mass schooling) influences in the same way that it

affected their parents' generation as discussed above. In such a situation, the net intergenerational wealth flow continues from the parents to children and it becomes irreversible. The first generation with mass schooling realize that low fertility is advantageous in order to sustain the capitalist production. At this stage fertility control behaviour is not a new phenomenon to the society because it has been already initiated by the last generation of parents without mass schooling. The availability of the means of fertility is of great importance when the majority of the society realize that high fertility is disadvantageous. In such a situation, a national family planning program can create an appropriate infrastructure to provide techniques of fertility reduction.

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