Pearls, a Girl's best friend?
Sri Lankan women's status at the beginning of the 20th century as the roots of their current position

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This is work in progress, please do not cite.

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Note to seminar session readers: The goal of this paper hasn't been fully attained as I do not yet have the data coded for regional India. The eventual goal is to use a dataset on 1901, 1911, 1921, and 1931 India and Sri Lanka to explore the same set of issues as are elaborated upon below. Please keep this in mind when reading the following. I look forward to your input, suggestions, and comments.

Introduction:

This paper sets out to explore whether, Sri Lanka, "a pearl upon the brow of India" has historically been a good place to be a woman, within its geographical and developmental context. [1] In the 2006, Global Gender Gap rankings Sri Lanka placed 13th in the ranking of 134 countries. This is one place behind the Netherlands, and one above Canada.[2] In a 1977 piece, Indrani Pieris and Bruce Caldwell explore the impressive achievements of Sri Lanka in terms of life-expectancy improvements which made the country a front-runner in survival chances of its population relative to its South Asian neighbours.[3] The 1978 Sri Lankan constitution embodied gender equality while in 1981 Sri Lanka became one of the first Asian countries to ratify the Convention on Equality and Discrimination Against Women (CEDAW) without qualification[4]. These facts all point towards Sri Lanka being a country with an impressive track record in terms of achievements geared towards achieving female equality.[5] Where do the long term roots of this relatively high gender equality lie? And how has Sri Lanka emerged as a country that, within the context of South Asia, out performs its neighbours on various indicators of female empowerment, and does as well as countries which are far more economically developed on some indicators of female empowerment but not on others? Were there crucial areas in which Sri

[1] Sri Lanka is sometimes referred to as a pearl upon the brow of India in reference to its elongated egg shape (Denham, 1912). Other, less romantic writers, have described it is as having the shape of an egg, while one author is of the opinion that it rather resembles a Westphalia ham (Denham 1912)

[2] In 2007 it holds 15th place, 12th in 2008, 16th in 2009 and 16th in 2010.

[3] Piersis, I. And Caldwell, B., 1977

[4] Therborn, 2004

[5] As opposed to in the GGG in the Gender Inequality Index for 2008 Sri Lanka comes in in 72nd place. In the GGG Sri Lanka does very well on the health and survival indicator and on the political empowerment indicator (joint 1st with over 30 other countries on health and survival and 6th position for political empowerment). It does not perform as well on economic participation and opportunity or educational attainment (ranked 89th for the economic participation variable and 57th for educational attainment). However the high rankings in the other two aspects outweigh its performance in these last two. In the GII, Sri Lanka, with its 72nd place out performs its human development index ranking of 91st place. It does poorly however (if comparing to other countries with similar Human Development Indices) on the indicators of seats in parliament held by women (5.8%) and labour force participation of women (38.5%). It is striking that Sri Lanka does so well in the GGG ranking for political participation while it does so poorly on the GII ranking. This is because the GGG ranking includes two other measures of female political participation besides that of % of seats in parliament, namely women at ministerial level divided by men at ministerial level and number of years with a female head of state or government in the last fifty years over the same value for male head of state. Sri Lanka does well in this last variable due to Sirimavo Ratwatte Dias Bandaranaike who held the position of prime minister from 1960 until 1965, from 1972 until 1977, and from 1994 until 2000. The position of Sri Lankan president was also held by a woman for over 10 years, Chandrika Kumaratunga from 1994 until 2005. Although the fact that women hold such a very small percentage of parliamentary seats is a worrying sign the fact that two women have held such high-ranking positions is a positive for gender equality in the country. One aspect to note here is that Chandrika Kumaratunga was the daughter of two Prime Ministers (her mother was Sirimavo Ratwatte Dias Bandaranaike) while Sirimavo was the widow of a previous Sri Lankan prime minister. This suggests that much like Indian or Pakistani politics Sri Lankan politics is amendable to the presence of dynasties amongst its elite. (possibly an indicator of corruption/nepotism?)

Lankan women were held back from contributing to the economy and therefore did not reach their full potential? And can we observe these in the historical record? This paper will explore these issues by looking at the position of women in Sri Lanka at the beginning of the 20th century using marriage patterns, sex ratios and family systems classification, attempting to tease out what factors might influence these indicators of female empowerment, and to paint a picture of the position of women in Sri Lanka in the early 20th century.[6]

When looking at the role of empowerment in development there is one important concept which appears in the literature, that of agency, closely linked to Amartya Sen and his book *Development as Freedom*. He argues that development should not be seen purely as a process of increasing GDP per capita but rather as a process of evolution by which the ability of people to make meaningful decisions about their lives is increased. Sen mentions Sri Lanka as one of the economies where support-led (as opposed to growth-mediated) development has led to expansion of social services, rapid reductions in mortality rates and improved living conditions without much economic growth, all of which lead to what he terms increased agency without this necessarily being coupled to economic development.[7] In order to illustrate his point he compares Sri Lanka to Namibia, Brazil, South Africa and Gabon and points out that Sri Lanka had much higher life expectancy at birth (almost 74 years) while its GDP was less than half (Namibia had a life expectancy of just under 60, Brazil and South African 65, while Gabon, with more than 3 times Sri Lanka's GDP per capita had a life expectancy of only just over 54).[8] The capacity to live a long and healthy life is a component of Sen's concept of agency. In this perspective, Kerala (one of India's southern provinces) and Sri Lanka stand out in South Asia for performing well on various indicators of (female) agency given their level of economic development. Kerala returns frequently in Sen's work as an example of a region of India which outperforms the rest of the country in terms of increased (female) agency when measured with such variables as the occurrence of the phenomenon of missing women and availability of micro-credit.

One question that needs addressed is why we should be interested in the agency of women in the first place. Norman Ryder explains why we should be interested in the timing of family formation for its impact on fertility: "Temporary freedom from procreation is necessary to provide the young woman with the opportunity to enlarge her personal horizon and acquire sources of satisfaction alternative to motherhood. The future of developing societies may be much more bound up with the future of their young women that that of their young men."[9]. For this paper it is particularly female agency as it is determined and played out within the family/household that we are interested in. In the context of agency and economic development, women are important for a number of reasons, both intrinsic and instrumental. On the intrinsic side there is the Senian perspective of agency being important for wellbeing and if we are interested in the wellbeing of women then any

[6] Eventually in a later draft Sri Lanka will be compared to developments in India at a regional level.
[7] Sen, 1999
[8] Sen, 1999
[9] Ryder, 1976

disadvantage women experience is an important topic of study. Additionally gender equality may be a development goal in its own right. This motive can be observed in the widespread ratification of the Convention for the Elimination of All Forms of Discrimination against Women (CEDAW). On the instrumental side gender inequality may have an instrumental effect on other development goals and economic growth. Gender inequality in terms of women receiving less education than men has an impact on child mortality, on the fertility of women and (possibly most importantly) on the human capital formation of the next generation. As gender inequality disadvantages half of all potentially economically active workers, substantial inequalities between men and women are likely to lower the growth potential of a country. In as far as economic growth promotes well-being it is in the development community's interests to pursue economic growth policies which take into consideration effects on gender inequality. This is a well-recognised fact. Recently, the UN's Food and Agriculture Organisation, in a report released on the 7th of March 2011, argued that increasing gender equality in access to agricultural resources could reduce world hunger by as much as 17 percent.[10] Similarly, US based consultancy McKinsey attributes 25% of current US GDP to the increased role of women in the world of formal work but goes on to argue that women are still an underutilised resource[11].

Despite the influence of the ideas that Sen brings forward (they were instrumental in the establishment of the Human Development Index) he never examines the historical antecedents of the patterns he observes. This paper aims to make a small contribution to taking Sen's theories and observations to the historical record and see how and when at least one of the regions he describes pulls ahead in terms of achievements in female agency? Are these differences visible already at an earlier stage in time? If so what are the possible causes of these differences? But first, more fundamentally. how can we measure these differences in agency in a historical context? This last question will be addressed in the next section on the model of female agency to be used.

The rest of this paper shall proceed as follows. Section 3 will make a brief comparison between various measures of female performance between India and Sri Lanka, while section 4 will discuss the data on Sri Lanka to be used. Section 5 will then turn its attention to the analysis of the 1901 and to a limited extent 1911 Sri Lankan census data that is currently available to look at regional differences and those between ethnic groups. Where possible data from other sources on India will be used to allow for comparison. Section 6 will conclude.

Section 2: Model and Measurement

In answer to the question of how to measure differences in agency in a historical context a number of options present themselves. One of these is that of marriage patterns, as these reflect both relationships between generations and between genders. Recent work has shown that a variety of gender indices (the Gender-related

[10] FAO, 2011 - For a summary see: http://www.fao.org/news/story/en/item/52011/icode/
[11] McKinsey, 2011

Development Index, the Gender Gap Index and the Gender Inequality Index) have a strong correlation with female SMAM (Singulate Mean Age at Marriage, a measure devised by John Hajnal to calculate marriage ages when breakdowns of the population by age and civil status are available) and a stronger correlation with the Girlpower-Index.[12] Based on this research and other studies it seems to be the case that countries where women are married off young to men many years their senior are countries where women's abilities to take meaningful decisions about their lives are curtailed. Additionally the measure of spousal age gap will be used. This indicator is indicative of the power balance within a household between husband and wife. Both these measures will be tested separately.

In the case of Sri Lankan, and more generally South Asian, marriage patterns we run into the phenomenon of childbrides and pre-pubescent marriages. Here the issue arises as to whether these are comparable with marriages that take place after women have attained puberty. On the one hand child marriages are unlikely to involve sexual relations and/or cohabitation. The marriage of infants can more accurately be seen as a contractual agreement between families.[13] However this in itself can give us a very important insight into the nature of marriages in a given society. Early marriage in this sense can be taken as a measure of the degree of power that the older generation can exercise over the younger generation. Various measures of female empowerment include statistics which reflect age at marriage. The SIGI (the OECDs Social Institutions and Gender Index) for instance looks at the percentage of girls married between the ages of 15 and 19. Irene van Staveren in a paper on how agency affects access to resources shows that early marriage has a significant impact on a number of different measures of women's access to resources (namely education and employment).[14]

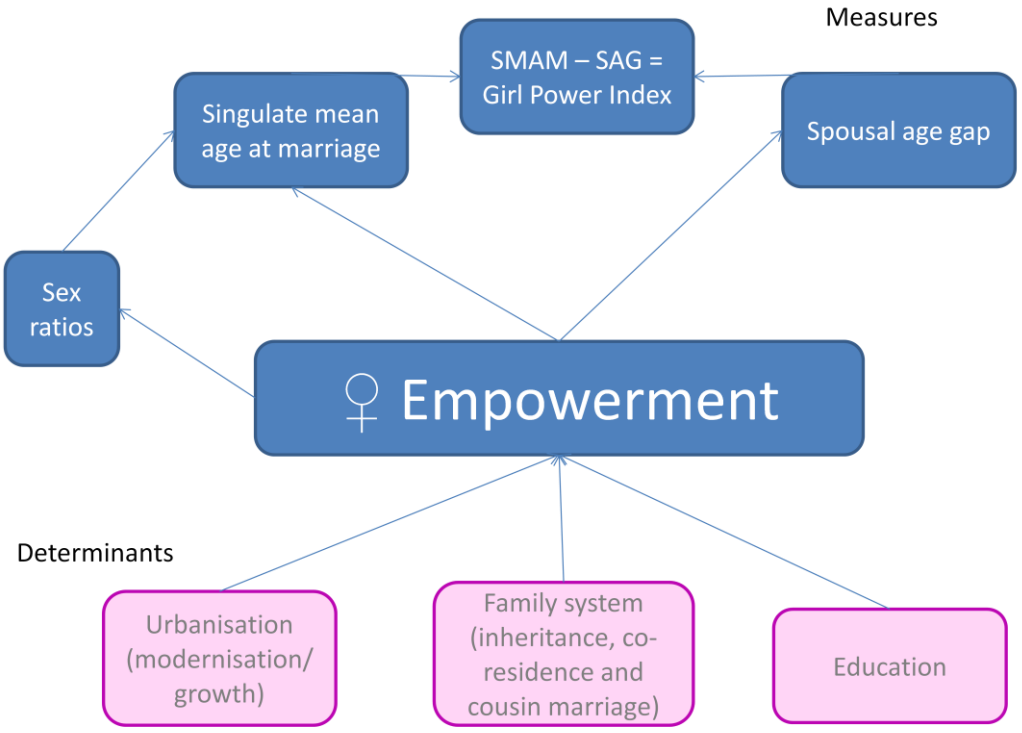
In a world perspective Asia and particularly South Asia have historically exhibited low ages at marriage and almost universal marriage of women.[15] This is often attributed to the more pronounced role of the family in the lives of individuals.[16] In large parts of Europe (most noticeably North-Western Europe) it has historically been the case that individuals had to be economically self-sufficient to get married.[17] This is closely tied to the practice of neolocal household formation. In South Asia by contrast the family is intimately involved with the decision to marry because it will directly influence their own circumstances. This puts the rights and desires of the individuals involved behind those of parents and grandparents thus resulting in limited agency. Therefore it can be argued that the female age at marriage is a reflection of the power balance between the generations.

[12] Carmichael, De Moor and Van Zanden, 2011. The Girlpower index, devised by De Moor and van Zanden, 2010 is calculated by subtracting spousal age gap from female SMAM
[13] Caldwell, p.8.
[14] Van Staveren (2009), p.15
[15] Caldwell (1999) and Smith et. Al. (1983)
[16] Caldwell, Reher, additional references
[17] De Moor and van Zanden

Another option for measuring gender empowerment, or at least attitudes to women, is that of sex ratios. These ratios reflect the preference parents may have for sons and therefore the value that is ascribed to women in a given society. In the modern literature this is a measure that is often used to describe female agency (in terms of the basic right to live a life of equal quality to that of men). It is included as the variable "son preference" in the SIGI as a measure of gender discrimination. It is also the underlying principle in the missing women debate started by Sen where it is argued that there as many as 100 million women are missing from present day society due to neglect of female mortality.[18] In a recent piece by Bishnu Gupta the worsening sex ratios of the Indian population are explored for the period 1931 to the present day. She finds that there are persistent regional differences in son preferences and concludes that this persistence points to the importance of cultural perceptions of the values of male and female infants.[19]

What then are possible determinants of female empowerment in a historical context? The possible determining factors and possible measures of empowerment are sketched in the following diagram.

Model:



When it comes to choosing variables to explain female agency, measured either by sex ratios or marriage patterns there are many options. This section will explain why specific variables were chosen, framed as hypotheses about what the suggested impact will be on marriage patterns (female SMAM and spousal age gap) and sex ratios. Firstly urbanisation will be examined, secondly the female education variable.

[18] Sen, A.
[19] Gupta, B.

2.2.1. Urbanisation:

Urbanisation is a phenomenon that is intrinsically bound up with modernisation and societies undergoing a process of development. As societies shift from agricultural to non-agricultural pursuits agglomeration in cities becomes economically efficient. The 2009 World Development Report highlights the process of urbanisation as a source of growth, integration and specialisation. The basic premise of the report is that economic density is attractive. This stems from the fact that agglomeration allows for greater scale economies. The generation and presence of scale economies in the mode of production is also a reason for the increasing importance of urban settlements over time. This is observed by one of the heavyweights in the study of political history, Charles Tilly, when he defines urbanisation as "a collective term for a set of changes which generally occur with the appearance and expansion of large-scale co-ordination activities in a society".[20]

Although one should not overemphasise the link between urbanisation and modernisation, as cities have been around since a very early stage in history, there has obviously been a massive increase in the percentage of population living in urban conurbations in the last three centuries.[21] This process is at its most advanced stage in the developed countries while it is a process that is still in an intermediate phase in many other parts of the world. The link between urbanisation and economic productivity can also be empirically underpinned.[22] As such, the inclusion of the variable urbanisation in the model specification is justified as a proxy of sorts for the larger process of "modernisation".

What, however, does theory suggest the link between urbanisation and age at first marriage partners will be? This question has two answers. Firstly it is possible that the increase in people living in cities (and it is particularly the younger population groups who migrate) creates a larger marriage market. This larger marriage market in turn increases the opportunity young people have to meet a suitable partner thereby resulting in lower ages at first marriage. A further lowering of the marital age may stem from the fact that urbanisation can significantly alter the sex ratio of cities. Often it is young males who migrate thus swinging the ratio of marriageable males to marriageable females to a situation where men outnumber women thus also depressing the age at which women in cities get married.[23] The second possible effect is that young people moving to the cities break from the traditions of their original homes and/or the sphere of parental influence. This increases their opportunities both in terms of more casual relationships and in terms of labour force participation. This effect would logically have the effect of delaying marriage and therefore higher SMAM. Overall it is hard to predict which effect will be strongest. As to the difference in age between spouses one would expect that both the larger marriage market and the break with parental authority would result in a lower age gap between spouses.

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[20] Tilly, C. (1964), *The Vendée*

[21] Jan de Vries (1990) "Measurement Description and Analysis", in van der Woude, A., Hayami, A. and de Vries, J. *Urbanization in History – A Process of Dynamic Interactions*. p.56

[22] Malanima, P. (2005) *Urbanisation and the Italian economy during the last millennium*

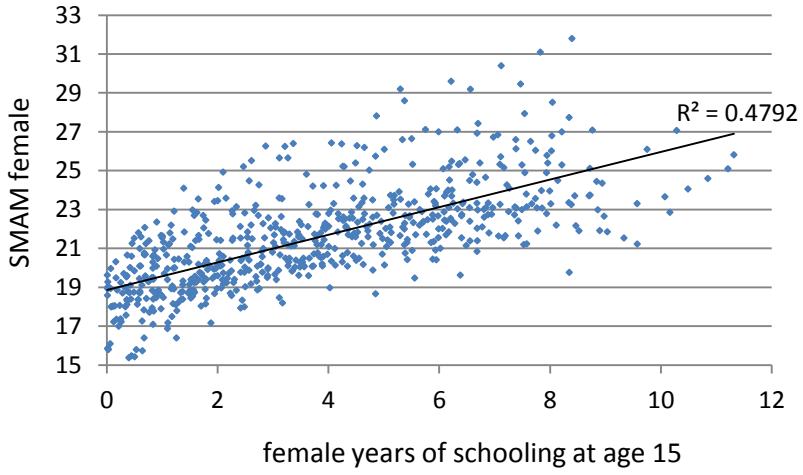
[23] Jan de Vries (1990) "Measurement Description and Analysis", p.56

In terms of the sex ratios the effect of urbanisation is also not clear cut. On the one hand development and modernisation should imply a greater role for women, and enhanced labour market opportunities as the scope for jobs outside the family increases. However it is also often so that one finds initially that sex ratios in cities are biased towards men who are possibly more able and qualified to work in the specialised economies of the city. Economic development and/or urbanisation may therefore serve to increase the value of male infants and therefore worsen sex ratios. Additionally during the early stage of development and health care improvement it is diseases that would normally kill young male infants that are most effectively combated which leads to initially worsening sex ratios as more young boys survive.[24]

2.2.2. Female Education:

In Gary Becker's analysis of marriage couples wed young and universally if they can offer each other complementary inputs.[25] This complementary nature of the union means that utility is generated by forming a household if the male wage is substantially higher than that of women. In this model wage-labour is the man's domain, leaving a division of labour whereby men work outside the house and women specialise in domestic labour. If the position of women within a society improves in such a way that their wage rates relative to that of their male counterparts increase then the gains from marriage for women are eroded.[26] One way in which women can gain a more equal footing in the job market is through increased education. This set of observations entails that increased education is likely to lead women to marry later and less universally as their benefits from marriage diminish (or rather the opportunity cost of marriage and child-bearing increases). The graph below confirms this point:

Graph 1: Global Education and Female SMAM



[24] Gupta, 2011
[25] Becker, 1974
[26] Becker, G. (1973/1974) A Theory Of Marriage Part I & II *The Journal of Political Economy*.

Graph 5 above presents female SMAM graphed against average years of schooling for females at the age of 15 as presented in the Barro and Lee dataset. One can observe a relationship of sorts between the two variables, a positive correlation is clearly present.

Female education is widely seen as being a way in which women can be empowered. In evaluating its third millenium goal, that of the promotion of gender equality, the UN uses ratios of girls to boys enrollment rates in education. These ratios constitute not only the measure of gender equality but also the tool that they recommend using in order to achieve gender equality. These observations lead to the more general point that when looking at this variable there is a problem of reciprocity. It is likely that more educated women do indeed have more agency and can therefore influence their marriage to a greater extent. However it is also the case that marrying later (and the possible greater agency this reflects) gives women time to build up their human capital. The two effects likely feed each other so any result found in the regression analysis must be interpreted keeping this in mind. In terms of spousal age gap we would expect education to have a negative impact on spousal age gap as, if education indeed has a positive influence on agency, women are more likely to be able to influence their choice of marriage partner and this is likely to mean marrying within their age cohort.

With respect to the sex ratios, education is also expected to have a negative impact, as if females are educated it suggests that they are seen as being worthwhile investing in. In family systems or regions where females are worth investing in it is less likely that female infanticide will occur in a way to significantly bias the sex rations.

In the data for Sri Lanka, the data available for education is on literacy which can act as a proxy for overall educational achievement. As we are interested in gendered differences one model uses percentage female literacy while the other model specification uses the gap in literacy between men and women.

2.2.3. Family System:

A family system, as with any system, is defined by a number of different components working together to create a given outcome. In the case of a family system one of the most succinct definitions comes from the work of Karen Mason: ""a set of beliefs and norms, common practices, and associated sanctions through which kinship and the rights and obligations of particular kin relationships are defined. Family systems typically define what it means to be related by blood, or descent, and by marriage; who should live with whom at which stages of the life course; the social, sexual, and economic rights and obligations of individuals occupying different kin positions in relation to each other; and the division of labour among kin-related individuals."[27]

As explained above in South Asian societies, it is family, rather than individual status, which is key to one's standing in society. This is particularly the case where models of

[27]Mason, Karen. "Gender and Family Systems in the Fertility Transition", *Population and development review*, 27 (2001), pp 160–176.

joint family predominate. Family can therefore play a significant role in marriage choices and the marriage ages of partners. It is a common expression in societies where joint families dominate that a woman to be wed is not concerned with who her husband will be but with the identity of her mother-in-law.[28]

Families around the world differ in their approach to marital relations and female children, intergenerational power relations, inheritance laws and co-habitation. One of the important impacts of a family system is the way in which it influences the power balance between men and women, parents and their offspring. There are a number of scholars who have worked to classify family system in ways that reflect these power balances. Emmanuel Todd in his work *Causes of Progress* marks Sri Lanka as being characterised by a matrilineal vertical family type and in his other work on the subject, *Explanations of Ideology* as anomic. Both of these systems imply a degree of empowerment for women as they can inherit and are not forced to marry cousins or live within a community household. This should be reflected in higher ages at marriage for women, lower spousal age gaps and less male biased sex ratios. However how does this classification of Sri Lankan families compare to other data we have available on how the various Sri Lankan ethnic groups chose to organise their families?

Sri Lankan Family Systems:

Todd's family systems classifications, mentioned briefly above, are based on three different variables, intergenerational co-residence, inheritance systems and whether cousin marriage is preferred or not. Although Todd classifies the whole country as adhering to one family system Sri Lanka's population is actually composed of a number of different ethnic groups, between which there are differences as to how they deal with matters of inheritance and co-residence. By far the largest ethnic group is that of the Sinhalese which in 1901 made up 64% of the total population (Kandyan and Lowland Sinhalese counted together). The Tamils with 25% make up the next largest group.[29] The other three ethnic groups on the island represent between 1 and 5% of the population. The table below shows how each of these ethnic groups is classified according to the Murdock Ethnographic Atlas for the indicators that Todd uses to define family systems.

Table 1: Sri Lankan Family Systems

Ethnic group	**Domestic Organisation**	**Cousin Marriage**	**Inheritance**	**Agency outcome**	**Dowry or BridePrice**
Tamils	Small extended	Symmetrical preference	Patrilineal equal	Detrimental	Dowry
Veddas	Small extended	Patrilateral preference	Patrilineal equal	Detrimental	Bride Price
Sinhalese	Nuclear	Matrilateral preference	Equally for both sexes	Positive	Dowry

[28] Caldwell, p.32

[29] The Narodov Mira Atlas of the 1960s records very similar percentages (68% Sinhalese and 24% Tamily)

Punjabi (equivalent to Moors?)	Small extended	Quadrilateral, matrilateral preference	Patrilineal equal	Detrimental	Dowry
Malaysians	Small extended	No preferred cousin marriage	Patrilineal equal	Slightly positive	Bride Price

The Murdock Ethnographic Atlas is a source compiled by George Murdock in 1960s and published in 29 successive issues of the journal Ethnology. Murdock's aim was to make available a data source which allowed for cross cultural comparisons of countries and ethnic groups on a whole range of variables. In order to do this he turned to the studies of anthropologists and regional specialists and for areas outside of Europe attempted to find studies which represented the countries before the start of the external influences of colonisation. This means that the characteristics of the Sri Lankan family systems sketched above should represent the historical preferences of the various ethnic groups as concerns family arrangements.

The classification of the Sinhalese as living in nuclear families is supported by the work on Sri Lankan marriage patterns by Bruce Caldwell who argues that in contrast to much of India the preference in Sri Lanka is not for joint families but rather for the eventual establishment of a separate residence for the newlywed couple, even if many young couples do initially remain resident in the parental home.[30] His book does not explore the differences between ethnic groups but as the Sinhalese are the largest ethnic group on the island it is likely that this observation is largely linked to their behaviour. This emphasis of the Sinhalese on nuclear families as the ideal is unusual in the context of Asia where, apart from Burma and the Philippines, no other country has more than 12% of its population expressing nuclear residence as the ideal for domestic organization.

The Murdock Ethnographic dataset shows Sri Lanka as having a system whereby dowries were the predominant form of marital exchange, with parents transferring capital to their daughters. According to the Murdock data this was the case in 92% of marriages. This high percentage of marriages in which the woman receives a dowry is similar to that of another country in Asia where the nuclear family type is predominant, Burma, but the high percentage sets it far apart from all its other Asian counterparts where the most common form of marital arrangement appears to be the Bride price, or wealth, transferred to the bride's family. Dowries given directly to the bride imply a system where it is not the families who directly benefit from the marriage of their children but the individuals getting married themselves. These various indicators of family systems in Sri Lanka imply that the family system of the Sinhalese majority in particular is one that is, relatively, friendly to women.

The differences between the family systems of the ethnic groups in the implied value which is placed on women are likely responsible in part for the observations made by Census Commissioner E. Denham in his report on the 1911 census. He notes that

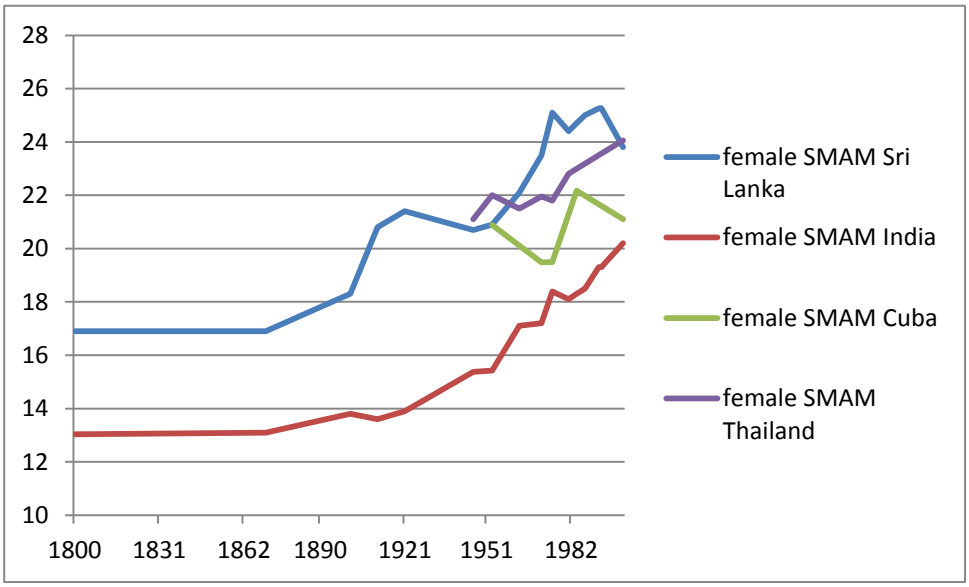
[30] Caldwell

negotiations for the marriage of Sinhalese women were expected to start immediately after puberty had been reached. In contrast to this the custom among Moorish and Tamil women was for pre-pubescent marriage.[31] Caldwell ascribes this to the different function of marriage in the different ethnic groups, with the Sinhalese leaving space for the individual to reach maturity while the Moors and the Tamils were highly concerned with the control of female sexuality and ensuring that no doubt could be on a woman's morality before she married. This means we expect to find a higher age at marriage for Sinhalese women than for Moors or Tamils, reflecting the different family system and the position of women within these family systems. For the same reasons we expect to find both a lower spousal age gap and a lower (less male biased) sex ratio.

Section 3: Sri Lanka and India compared

The graph below presents a comparison of Sri Lankan and Indian female age at marriage.

Graph 2: Marriage patterns over time



Graph 2 shows female SMAM in Sri Lanka as compared to that in India, Thailand, and Cuba. The data for the 19th century for Sri Lanka is based on anecotal evidence presented in Caldwell et. al. (1989)[32], while the data for India for the same period is based on the work of Xenos, P. and Gultiano, S. A.

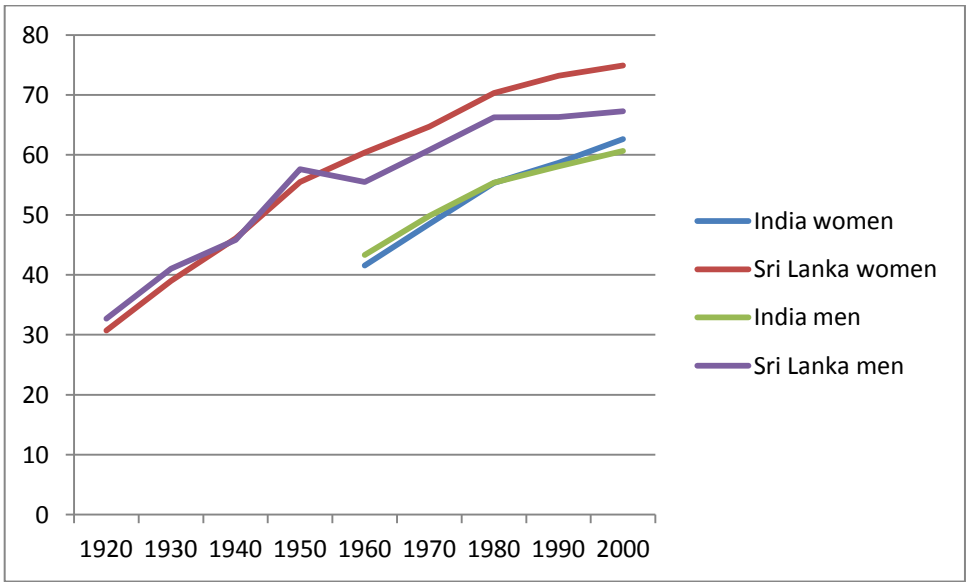
There is a clear and sustained gap between the age that women get married on average in Sri Lanka and in India. This obviously does not take into consideration regional differences within India itself but regardless points to a difference between

[31] Denham, 1912, p. 347

[32] *Is marriage delay a multiphasic response to pressures for fertility decline? The case of Sri Lanka* by Caldwell, J., Gajanayake, I., Caldwell, B. and Caldwell, P.

Sri Lanka and the general Indian pattern of marriage ages which has survived through until the present day. Combined with the evidence on family system of the majority ethnic group, the Sinhalese, this suggests that Sri Lankan women held a somewhat different position to their nearest neighbours. The average age for women to marry in India seems to have been around 13.04 during the 19th century, while that for Sri Lanka lay considerably higher at 16.9. While this age is hardly high by modern standards it suggests there was substantially less child marriage in Sri Lanka than in India. This is indicative of a stronger position of women in Sri Lanka. The graph also lets us observe Sri Lanka maintaining this 3 year advantage over India throughout the course of the 20th century when data is more abundant. Cuba has been added to the graph because it is classified as also having a matrilineal vertical family type. Thailand is included as a representative of the anomic family type which is geographically present in South-east Asia and therefore geographically relatively close to Sri Lanka. Thailand appears to have a similar marriage age to that of Sri Lanka while Cuba's marriage ages are rather volatile.

Graph 3: Life expectancy at Birth Sri Lanka and India



Entries 1920-1971 from Sri Lankan census of 1971, 1990-2009 from WHO life tables
Indian data: CLIO-INFRA life expectancy database

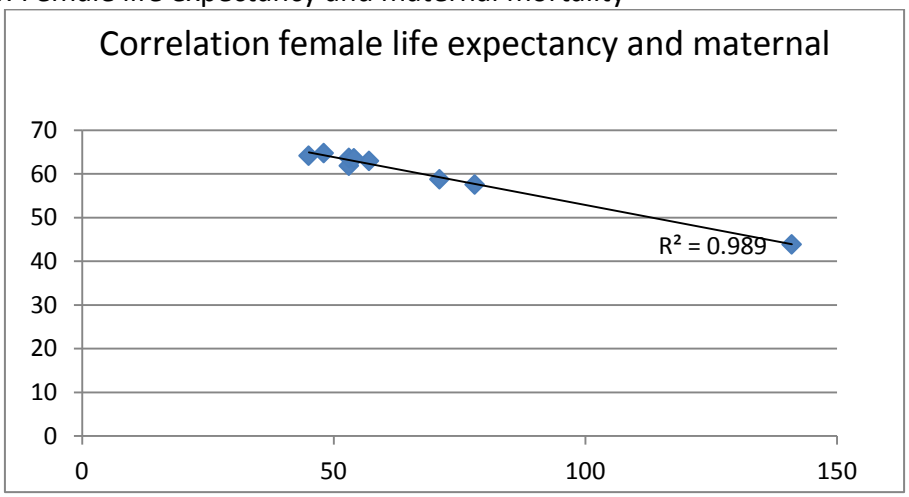
Graph 3 gives the life expectancy at birth for both men and women in Sri Lanka, from 1920 until 2000 and the equivalent Indian data from 1960 onwards. A strong gain in Sri Lankan life expectancy, which doubles for both sexes, can be observed with particular gains being made during the 1920s. Perhaps more importantly, a shift has taken place from women having lower life expectancy than men to women being expected to outlive men by almost 3 years. The UN Gender-related Development Index assumes that women outlive men by 5 years if no discrimination in survival chances is present. Sri Lanka in 1971 falls below this value but has clearly made up ground since the 1920s. The last three data points are from a different source, The World Health Organisation Life tables. There may therefore be a problem with

different methodologies however we clearly see Sri Lankan women gaining a massive (almost seven year) survival advantage over their male counterparts by 2009.

If we compare this to data for India since the 1960s, we see that Sri Lankan women outlive their Indian counterparts. Indian women live 2 years longer by the very end of the period than their male counterparts (as compared to the 7 year difference in life expectancy between Sri Lankan men and women) and in general life expectancy is consistently lower in India than in Sri Lanka with India being about twenty years behind on Sri Lankan developments in life expectancy. On this indicator of human and female agency we therefore see Sri Lanka outperforming India to some considerable extent.

The 1971 Sri Lankan census presents the data for maternal mortality as well so to do a rough check of how much of the increase in female life expectancy is related to a decrease in maternal mortality the following correlation shows that they are strongly related to one another.

Graph 4: Female life expectancy and maternal mortality

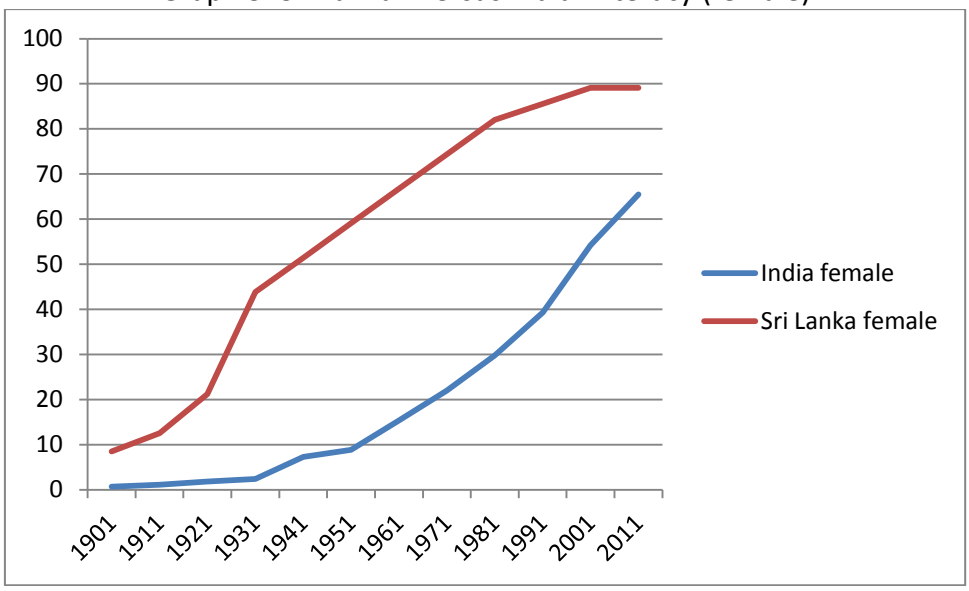


Obviously there are likely to be other factors behind this correlation like a drop in fertility, improvements in medical care generally etc. But the result is a very strong correlation. A recent Save the Children study suggests that even to this day Indian women are eight times more likely to die during pregnancy and childbirth than Sri Lankan women.[33] This again underlines the point that the position of women in Sri Lanka appears to be substantially better than that of women in India.

Lastly, below, in graph 5, a comparison of Indian versus Sri Lankan literacy of women is presented.

[33] Find exact quote

Graph 5: Sri Lankan versus Indian literacy (female)



Here again we see an early and distinct advantage of Sri Lankan over Indian women with this gap widening particularly in the early 20th century. This section has attempted to show that Sri Lanka's women are at an advantage when compared to Indian women on various indicators. Section 5 will analyse differences within Sri Lanka to try and reach an understanding of why this might be so. In the next section the data to be used for this analysis is presented.

Section 4: Data

Censuses in Sri Lanka have a long history. The Dutch were the first to conduct a census of the population living in the coastal areas over which they had control in 1779. In 1824 the first country-wide census was conducted by the British administration (Sri Lanka was fully occupied by the British in 1815) but it was not until 1871 that the first systematic countrywide census was conducted. These original censuses of Sri Lanka were mostly concerned with demographic variables (age and sex composition) along with a handful of socioeconomic characteristics.[34] Data on marriage patterns in Ceylon can be derived from the census reports of 1901 onwards. Before the 1901 the 1871 census also collected marriage data but there was uncertainty as to what constituted a legal marriage so none of the data was reported in the census summary as it was considered untrustworthy. In the run up to the 1901 census The Supreme Court of Ceylon removed this uncertainty by ruling that cohabitation and reputation was sufficient to presume a marital relationship and therefore in 1901 civil condition as a category was reintroduced into the census schedule. It is interesting to note that at this time the marriage rate was very much seen as an indicator of prosperity. The report on the census of 1901 quotes Dr Ransome when it says "The marriage rate is of importance to the statesman as showing the relative prosperity of the mass of the population in different years, but it is also of interest to the sanitarian from its relation to the subject of fecundity of

[34] Silva, K.T. http://www.ciqss.umontreal.ca/Docs/SSDE/pdf/Silva.pdf

marriage and the bearing of this factor upon the numbers of the population at different ages and their several rates of mortality." (…..) The second aspect of this quote links to another important reason that marriage patterns are often studied by historical demographers, namely that they are closely related to levels of fertility.

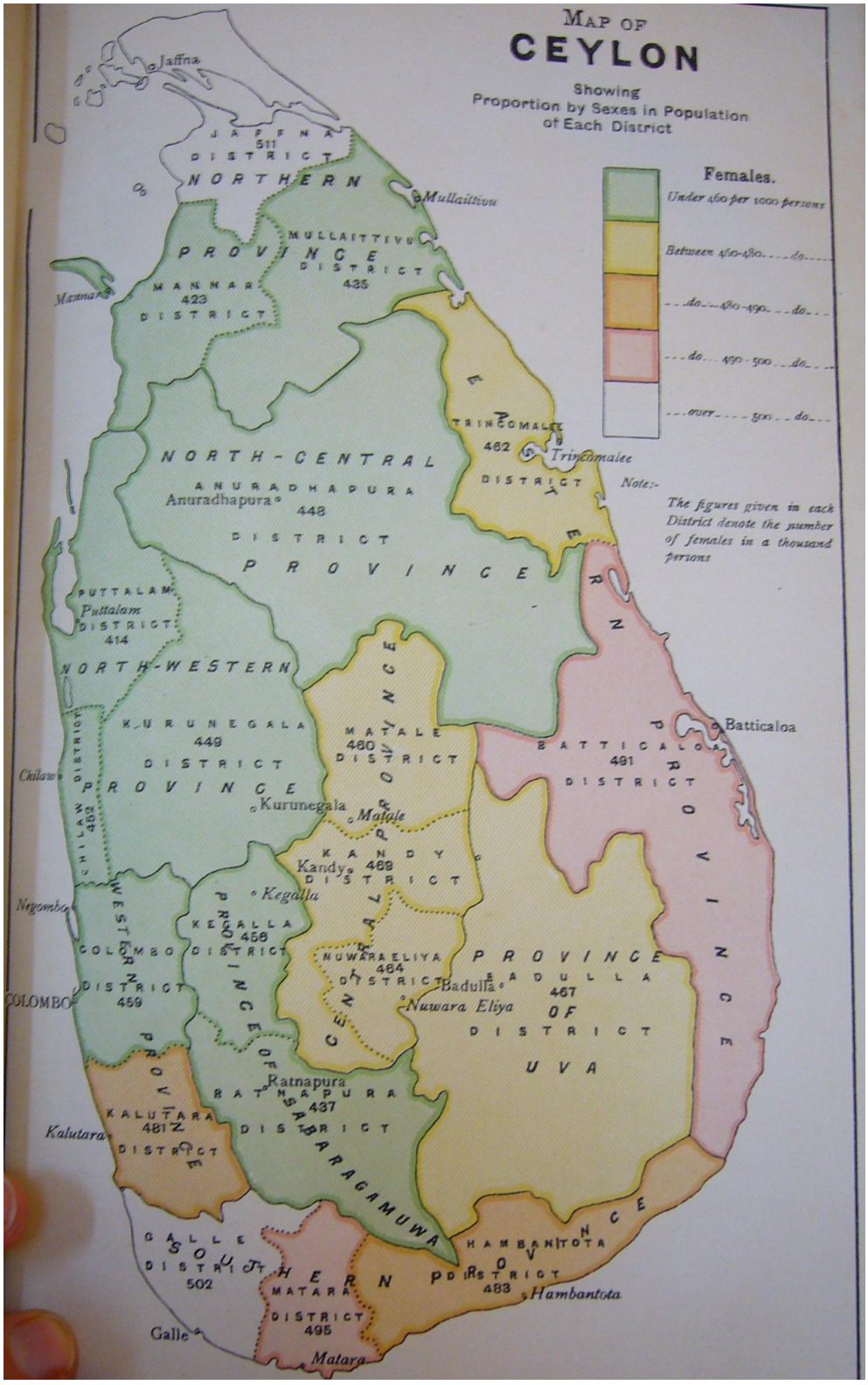
The census data for Sri Lanka for 1901, 1911, and 1921 is split according to "racial groups". The database to be used is therefore built up of observations for every ethnic group at the province level, allowing for an exploration of the determinants of female agency at the level of the different groups in the various provinces. A number of these groups originally emigrated from India, so an eventual goal of this paper (but currently not possible) will be to look at the link between these groups and the provinces that they have emigrated from.[35] This dataset should provide a unique opportunity to explore the origins of the divergence between Northern India and Southern India and Sri Lanka on the acceptability of child marriage.

The summary statistics for the whole dataset are presented in the table below:

Variable	Mean	Standard Deviation	Min	Max
Male marriage age	24.44	1.85	20.96	30.89
Female marriage age	16.94	2.13	12.46	22.44
Spousal age gap	7.50	1.53	2.54	11.64
Girl Power	9.43	3.20	2.9	19.9
Urbanisation	10.51	6.38	2.00	24.52
Ratio 0-5	1.06	0.17	0.83	2.52
Ratio 5-10	1.13	0.17	0.58	1.89
Ratio total population	1.44	0.76	0.96	6.76
% literate males	36.75	13.14	3.09	63.48
% literate females	6.21	6.39	0.15	28.19
Literacy gap	30.54	9.75	2.88	61.51

The data is split by province and the map below shows the province boundaries (the colours represent the number of women per 1000 people) as presented in E.B. Denham's 1912 publication reviewing the results of the 1911 census. The provinces coloured green and yellow represent those with a substantial gender imbalance.

[35] Immigration mostly from Southern India (van den Belt, et al. 2011) – link to Todd's hypothesis of matrilineal vertical being the predominant system in both areas. Kerala and Tamil Nadu as the two likely provinces sending immigrants to Sri Lanka – Kerala nowadays often mentioned as an area of India where women's empowerment is greater.



Source: Denham, 1912

One issue of concern with the data is that the 1911 and 1921 census are said to under-report marriage. For the 1901 census it was decided that marriages that had not been officially registered could be counted as such but according to reports on the 1911 and 1921 census the officials gathering the data tended to put unmarried

for couples who were unofficially wed. This will create an upward bias in the percentages single category. Indeed this seems to be the case with sometimes as much as 30% of the population still listed as single by age 55. However if the percentage of consensual unions is similar for all age groups then this should not bias the estimate of marriage age too much. Dixon (1971) in a paper on marriage ages in different Asian countries concludes that about 20% of unions were consensual and uses the breakdown provided by the 1951 census to recalculate the marriage ages for 1911 and 1921. Her results are, however, not substantially different from the ones presented in this paper. There are also, of course, always other difficulties with using aggregated census data ranging from the difficulties with capturing the behaviour of migrant groups to the possible under reporting of some groups compared to others. This must be kept in mind when interpreting the results.

Section 5: Analysis

This section explores the marriage patterns and sex ratios of the various regions of Sri Lanka to look at how they differed between geographical units and ethnic groups. At a later stage this section will include data on India as well but for the time being the focus is on Sri Lanka. Where possible data from articles on Indian marriage patterns and sex ratios has been included.

Marriage Patterns

"She who marries will do well, whether her husband be old or poor."

"After ten years of age a girl should be affianced, even if to a Pariah"

"She who has no husband is like sand in the bed of a river"

Tamil quotes on marriage. From Denham's report on the 1911 census reflecting the ideas on the ideal of pre-pubescent, universal marriage sketched above

In his volume on marriage patterns in Sri Lanka Bruce Caldwell says of Sri Lankan marriage patterns that, despite the aforementioned issues with the data, it is clear that age at marriage was, at the beginning of the 20th century, higher in Sri Lanka than anywhere else in South Asia, and even . This pattern may well reflect changes to the marriage behaviour that took place at an earlier point in time, or the existence of social cultural variations which would also have been in place for some time. These two points are both made by Peter Smith in a survey of Asian marriage. In this survey he observes that it seems to be the case that the difference in marriage patterns between Sri Lanka (and Burma and the Phillipines) and the rest of South Asia has long historical precedent. He puts this down to longstanding socio-cultural differences, although he does not identify what these differences might be. He does however find that the differences between Sri Lanka and large parts of the rest of South Asia on the proportions never marrying also have historical roots and suggests that this has to do with secular and religious ideologies combining to create a society

in which celibacy has a role. However within Sri Lanka there should also be different in marriage ages as different ethnic groups adhered to different ideals on when marriage should occur.

As mentioned above, in Sri Lanka the largest ethnic group is that of the Sinhalese followed by the Tamils and Moors. The Malays and Veddas are rather small groups within the total population. In the table below a breakdown of the marriage ages by ethnic group are presented.

Table 2: Average female SMAM (1901)

	Low-country Sinhalese	Kandyan Sinhalese	Ceylon Tamils	Indian Tamils	Ceylon Moors	Indian Moors	Malays	Veddas	Average
Western Province	19.32	22.44	16.94	16.94	15.58	15.58	15.27		17.44
Central Province	19.77	18	17.07	17.07	14.07	14.07	15.96		16.57
Northern Province	20	20.85	17.77	17.77	14.2	14.2			17.465
Southern Province	17.15	19.92	18.14	18.14	16.33	16.33	16.78		17.54
Eastern Province	15.02	16.35	15.07	15.07	12.46	12.46	13.84	15.51	14.47
North-Western Province	17.51	17.95	16.84	16.84	13.3	13.3			15.96
North-Central Province	16.35	16.21	16.15	16.15	14.05	14.05			15.49
Uva Province	19.59	18.37	17.39	17.39	14.22	14.22			16.86
Sabaragamuwa Province	18.87	18.6	17.23	17.23	14.56	14.56			16.84
Average	18.18	18.74	16.95	16.96	14.31	14.31	15.46	15.51	16.30

We see here clear differences between the Sinhalese on the one hand and the Moors and Veddas on the other. Both the Moors and the Veddas appear to prefer a system of child marriage with high spousal age gaps whereas the Sinhalese can clearly be observed to prefer a system of marriage of women at or after puberty. The following table gives an idea of how these ages at marriage compare to those to be observed on mainland India.

Table 3: Indian marriage patterns:

Province Census of 1921	***Age at Marriage***		***Age Difference in Year***
	Male	***Female***	
Bengal	21.16	12.83	8.33
Bombay	18.49	12.28	6.21
Punjab	21.19	15.01	6.18
UP	18.31	12.89	5.42
Karnataka	22.98	14.47	8.51

From Gupta, B. Do Cultural Values Override Incentives? Sex Ratio, Caste, and Marriage in India, July 2011 (http://www2.warwick.ac.uk/fac/soc/economics/staff/academic/gupta/wp/marriage_utrectwehc7.pdf)

Compared to these five provinces of India, Sri Lanka has substantially higher age at marriage while the spousal age gaps are comparable. Child marriage seems to have been a more significant phenomenon in this selection of Indian provinces than in Sri Lanka. Even the groups that have low ages at marriage in Sri Lanka do not exhibit such early marriage as are to be found on average in Bengal, Bombay and United Provinces.

Table 4: Spousal age gaps 1901

	Low Country Sinhalese	Kandyan Sinhalese	Tamils	Moors	Malays	Veddas	Average
Western Province	5.4	2.54	6.93	7.81	8.47		6.25
Central Province	6.53	5.13	7.29	8.29	8.04		6.63
Northern Province	7.76	10.04	5.64	8.34			5.77
Southern Province	8.2	7.52	7.18	8.9	8.15		6.35
Eastern Province	8.46	7.41	8.44	8.86	7.12	7	8.51
North-Western Province	7.23	4.48	7.21	8.6	6.75	5.29	6.41
North-Central Province	5.29	5.8	8.2	7.61			6.75
Uva Province	5.39	9.61	6.94	7.58			7.7
Average	6.17	4.75	6.95	8.59	8.6	9.93	6.54

As one would expect, Eastern Province, where the marriage ages are so low is also the region where spousal age gaps are the highest. In the average value for Sri Lanka of 6.54 years separating husband and wife we see a pattern that does not differ so drastically from that of India. This implies that is is not in the power balance between husband and wife where the differences between Sri Lanka and India can be found but rather the power balances between the generations.

Sex ratios

Turning now to the sex ratios table 5 below presents sex ratios for various groups of the population over the course of the 19th and early 20th century.

Table 5: Sex ratios for Sri Lanka as a whole:

Year	Sex ratio (M/F)	Population group
1820s	1.13	Inhabitants of Low Country and Malabar Districts
1832	1.11	Free Blacks
1836	1.10	Free blacks
1850s	1.10	1.10 (for both black and

		whites for 1850 through
1901	1.14	Total population excluding Europeans
1911	1.05	Total population excluding Europeans

Source 1820's
Source 1830's: Montgomery, Martin, p.376
Source 1850's: Statistical tables 1854, pp366-367.

We can observe something of a drop (in terms of possible excess female mortality therefore an improvement) in the sex ratios from the 1820s to the 1850s but in 1901 the sex ratios appear to have worsened in favour of men quite considerably. They have improved and surpassed the levels of the 1850s by 1911 so this may be an anomaly due to under-reporting of women, although none of the literature on the 1901 census mentions this as a possible problem.

Table 6: Provincial Level:

	1852	**1901**	**1911**
western province	1.126	1.136	1.219
north-western	1.057	1.07	
southern	1.059	1.039	
eastern	1.097	1.342	
northern	1.044	1.015	
central	1.233	1.196	1.196

Much of the regional variation may be due to male labour migration however by 1901 the Eastern Province seems to have a particularly high, male-biased, sex ratio. This and the high sex ratio in the central province are driving the high national sex ratio. Turning now to the differences by ethnic group table 7 presents sex ratios for all the groups on the island in 1911 for the total population, infants ages 0-5 and children aged 5-10.

Table 7: Sex ratios and ethnic group 1911:

Ethnic group	***Total***	***0-5***	***5-10***
Low-Country Sinhalese	1.086654	1.0860	1.051
Kandyan Sinhalese	1.110775	1.05	1.06
Ceylon Tamils	1.035755	1.019	1.018
Indian Tamils	1.312821	0.974	1.022
Ceylon Moors	1.092327	1.025	1.077
Indian Moors	4.07381	1.189	1.741
Malays	1.103	0.995	1.127
Veddas	1.10	1.06	1.037

The group of Indian Moors have such a high sex ratio likely because they are an immigrant worker group who seldom brought women with them from the Indian mainland. This figure should therefore not be taken as a sign of sex discrimination but rather as an indicator of a migrant population. The same holds for the group of Indian Tamils for whom the sex ratio is also rather uncomfortably high. The sex ratios in the age groups 0-5 and 5-10 should however be much less affected by such problems. Here we see the clearest sign of biased sex ratios again amongst the Indian Moors.

In order to get an idea of what sort of sex ratios we should compare to the following table reproduces sex ratios for a number of European countries for the same period along with a region of India where sex discrimination is clearly present in 1931.

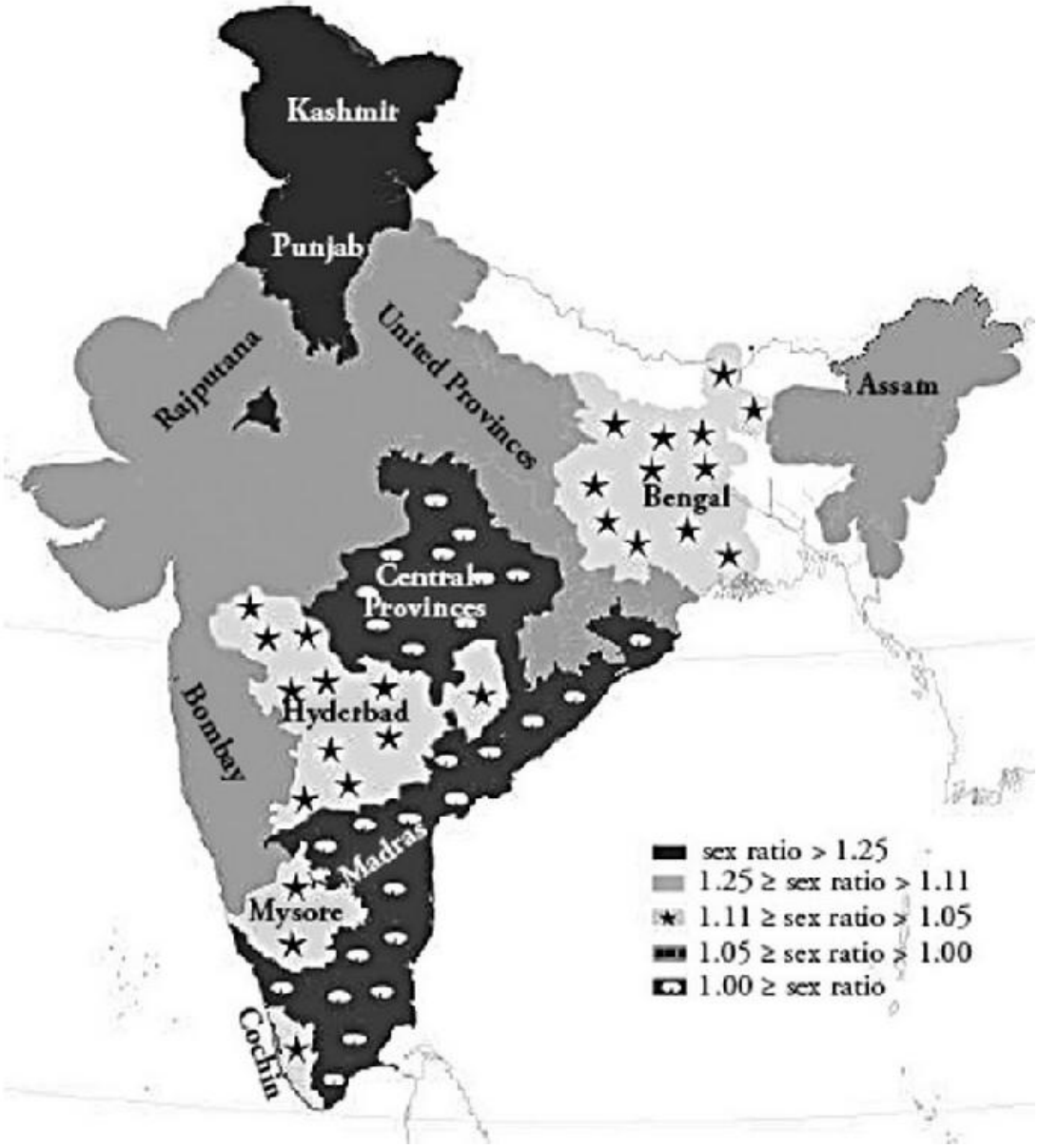
Table 8: International Comparison:

Year	***Country or region***	***Sex ratio at birth***
1901	Sweden	106.2
1901	France	104.2
1901	England and Wales	103.3
1931	Punjab (for age category 10-15)	116.4

Sex ratio of live births for the European countries, total population for Punjab.
Data: European data Charnazarian, A. Historical Trends in the Sex Ratio as Birth

The spread of values between 103 and 106 can likely be taken as representative of a "normal" sex ratio when there is little or no sex discrimination present as none of the literature suggests female infanticide was a problem in European countries at this time. From this we can observe that most of the Sri Lankan ethnic groups had biased sex ratios compared to the selection of European countries, with the Kandyan Sinhalese and the Malays representing the most gender biased, non immigrant groups. In the case of the Malays there is some debate as to their non immigrant status as they were an ethnic group brought across during the Dutch colonial period as soldiers but who settled on the island. This practice continued under British rule but soldiers are explicitly excluded from this part of the section which should mean the figures are only for the settled population and in any case should not affect the sex ratios in the age group 0-5. The sex ratios for the age group 0-5 therefore appear to suggest that there is no substantial sex selective infanticide occurring in Sri Lanka at this time apart from possibly amongst the Low-Country Sinhalese and the Indian Moors.

Sex ratios by Indian provinces 1901



Source: Chakraborty, T. and Kim, S. "Kinship Insitutions and Sex Ratios in India", Demography 2010

From the map above we can see that when looking at, especially the northern Indian sex ratios, Sri Lanka compares quite favourably. Punjab, Kashmir, Rajputana, Bombay, and United Provinces all exhibit sex ratios of over 1.11 males per female, which are above the general Sri Lankan average sex ratios for the 19th century, it looks like Sri Lankan sex ratios compare favourably to those found in India, although the differences are not large enough to conclude that there is no sex selective discrimination taking place.[36]

[36] A recent, as yet unpublished, paper by Jan Kok suggests that the reason for excess female mortality in Sri Lanka a century earlier is due to anemia caused by tape worms which effects females more than males. However this should not show up significant in the statistics for infants.

Regression:

Turning now to how the different measures and determinants of female agency relate to one another the following is a correlation matrix which shows correlations between the various marriage patterns variables, urbanisation, various literacy and ethnicity variables and the sex ratios of infants between 0 and 5.

Table 9: Correlation matrix

	1	2	3	4	5	6	7	8
2	-0.52***							
3	0.11	-0.12						
4	0.44***	-0.19	0.33**					
5	0.17	-0.22	-0.03	0.12				
6	0.53***	-0.31*	0.10	0.77***	0.27*			
7	0.40**	-0.27*	0.13	0.56***	-0.02	0.41**		
8	-0.72***	0.50***	0.06	-0.14	-0.13	-0.29*	-0.49***	
9	0.62***	-0.40**	-0.04	0.31*	0.23	0.41**	0.20	-0.51***

Table 10: Key to correlation matrix

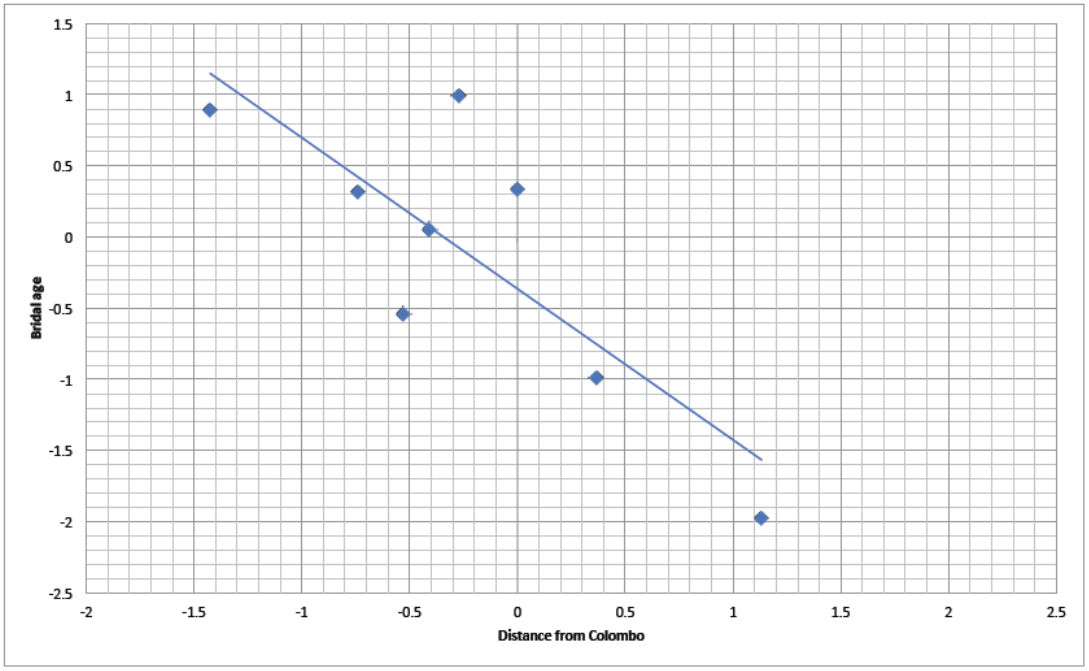
1	Average bride age
2	Age gap between spouses
3	Urbanization rate (in %)
4	Female literacy (in %)
5	Sex ration of infants (0 to 5)
6	Women able to speak English (in % of ethnic/provincial total)
7	Christian female population (in % of ethnic/provincial total)
8	Muslim female population (in % of ethnic/provincial total)
9	Belonging to the Sinhalese group (dummy)

The correlation between female age at marriage and spousal age gap is strong and has the expected sign (-0.52). Variables 4 and 6, the literacy/human capital variables have a strong positive relationship with the female SMAM variable however they have almost no relationship to the spousal age gap. Ethnicity/family systems in the sense of being Sinhalese, Muslim or Christian have a strong relationship to both of the proxies for female empowerment. This could be an economic effect but may also be a social/cultural influence. What we can observe here is that the presence of a greater number of Muslims in a province correlates negatively with age at marriage and positively with spousal age gap and that where there is a greater percentage of Sinhalese females in a province the age at marriage is higher and the spousal age gap lower. The same holds true for Christian women.

One surprisingly aspect of this table is the low and insignificant correlation between urbanisation on the marriage patterns variables. One possible explanation for this is the colonial structure of the islands economy with agricultural exports as the main source of income. Therefore it is possible that economic opportunities are focused in the countryside and that urbanisation does not represent the sort of proxy for modernisation/development it does in other parts of the world. Another way to look

at the effect of urbanisation is to look at what effect the largest city in Sri Lanka has upon marriage ages. Below, the graph of female age at marriage as a function of distance from the primate city, Colombo.

Graph 6: Female bridal age as a function of distance from Colombo (R^2 =0.806) with one outlier removed, Northern Province



The bridal age falls as one moves away from the municipality of Colombo and this relationship is when one removes the outlier of the Northern Province (which is the furthest province from Colombo, and for which this relationship appears to break down) this relationship is a strong one. There are at least two interpretations of this. The first being that the primate city is the only real example of urbanisation and it's modernising influence diminishes as one moves further from it. The other interpretation is one of the influence of colonisers or Europeans on the marriage patterns of the native population.

The regression results presented below (OLS) have to be interpreted with some caution in as the sample size is rather small. In the future the data set will be expanded to tackle this problem but for the moment these results can provide some ground for tentative analysis.

Table 11: Regression results

	♀ SMAM	SAG	Sex ratios 0-5	Sex ratios total pop	♀ SMAM	SAG	Sex ratios 0-5	Sex ratios total pop
Urban	0.05**	-0.02	-0.001	0.002	0.02	-.017	-0.001	-0.003
Nuclear	3.22***	-2.00***	0.050	0.040	2.88***	-1.96***	0.05	-0.009
Percentage literate ♀					0.10***	-0.005	0.00	0.005
Literacy gap	0.29*	-0.03*	-0.001	0.30***				
1911	1.69***	0.49	-0.03	0.28	1.47***	0.35	-0.03	0.43**
% Hindus	0.03***	-0.02***	-0.001	0.002	0.02***	-0.01***	-0.00	-0.001
Adjusted R^2	0.63	0.36	0.05	0.17	0.67	0.34	0.05	0.07
Obs.	97	97	97	97	97	97	97	97

What we see here are that for the determination of female SMAM and Spousal Age gap most variables have the expected sign and are generally speaking significant. The nuclear family variable codes for both Sinhalese groups (as well as being identical to the coding for the inheritance system) so can be seen to some extent as simply a dummy for the Sinhalese ethnic group, but in terms of how the Sinhalese view women the family system seems to be one of the key indicators differentiating this ethnic group from other groups. It has a significant effect in all the marriage patterns specifications, and also a rather substantial effect, increasing marriage age by 3.2 years and decreasing spousal age gap by 2.

The Literacy gap has a significant effect however strangely an increase in the literacy gap has a positive relationship with the female age at marriage and a negative one with the spousal age gap. This is the opposite of what we would expect. The percentage literate females has the expected and significant effect of increasing female age at marriage however the effect on spousal age gap, although it has the right sign, is insignificant. The percentage Hindus in the ethnic group population (other religious variables were excluded from the model as they had a high degree of correlation with other indicators) has a significant effect on the marriage patterns variables as well, increasing female age at marriage by a small amount and decreasing the spousal age gap.

We see here what was observed above, that urbanisation has a very small and insignificant effect in all but the first model. This may be due to some an anomaly with the nature of Sri Lankan urbanisation. Sri Lanka achieved relatively high levels of urbanisation at an early stage in its history but the past century has seen it stagnate at levels of about 15%, much lower than Pakistan and India's 25 and 30% respectively.

What is particularly noteworthy is that the variables which seem to determine marriage patterns have little or no effect on the sex ratio variables. For the total

population sex ratio variable this may be explained by the effect of migration. However for that of the age category 0-5 this does not seem a plausible explanation. This suggests that sex ratios may be determined by underlying disease patterns or cultural factors not picked up by the variables included here. Including a dummy variable for the Indian Moor group (whose sex ratio is more heavily biased than any other group possibly due to preferential migration of males) does not change this result apart from making the difference between 1901 and 1911 significant. More research remains to be done to explore the possible determinants of sex ratios.

Section 6: Conclusion:

Based on the various indicators that have been presented above Sri Lanka appears to be something of an outlier in the general pattern of Asian marriage patterns and in its family system type. This is particularly driven by the behaviour of the largest ethnic group on the island, the Sinhalese. On the indicators of marriage patterns therefore Sri Lanka appears to indeed be a female friendly country. However when we turn to the sex ratios data the picture becomes less clear-cut. It seems that sex ratios are not determined by the same model as can be used to analyse marriage patterns which is surprising as one would expect the value of female infants to be reflected at least to some extent by the variables included. Sri Lanka's sex ratios are not as heavily male biased as some parts of India (at least of the larger native ethnic groups) but it hardly qualifies as being a country without missing women. The implications of this are, that while Sri Lanka does relatively well on one set of indicators of female agency at the turn of the 20th century in other areas, namely the basic right to life, it performed less well. This is however, as mentioned above, one of the areas that Sri Lanka has outperformed many of its fellow Asian countries on over the past 50 years with female life expectancy for Sri Lankan women far surpassing that of its men.