Gunita Zariņa

THE SOCIAL STATUS OF WOMEN IN LATVIA
IN THE 7TH–13TH CENTURIES, IN THE LIGHT
OF PALAEODEMOGRAPHIC DATA

This paper is intended as a contribution to the understanding of women’s social role and living conditions in the Iron Age society in Latvia. The study is based on palaeodemographic data, obtained in the analysis of osteological material from archaeological excavations of three pre-Christian cemeteries. Masculinisation index for inhumation burials was 1.2–2, and for cremation burials – about 2. The data on women shows two periods of maximum mortality – 33–40% for ages 15–24, and 28–37% for ages 30–39. Adult life expectancy $e_0^{20}$ on average was 21.8 years for males, only 15.3 years for females.

The anthropological material from the 10th–13th century cemetery of Salaspils Laukskola permits a comparison of the demographic figures for inhumations and cremations. Adult life expectancy $e_0^{20}$ for cremated women, was 16.3 years, slightly exceeding the figure for inhumed women – 15.3 years. The main source of this difference is the proportion of females who died aged 15–24 (33% for inhumed, only 7.6% for cremated). As a result, life expectancy for cremated females is 3.4 years less than for males, while among the inhumations it is 5.6 years less. These differences in demographic statistics suggest that the cremated women may have enjoyed relatively higher social status. The historical demography data for the inhabitants of Latvia in the 18th and 19th centuries indicates that the increased mortality of females aged 20–40 decreases in the 19th century, and that at this time female life expectancy begins to exceed that of males. The mortality maximum among the population shifts from ages 40–50 to 60–80.

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Introduction

In Latvia, somewhat differently to western Europe, the Iron Age refers to the period 500 BC–1200 AD. This was a new phase of historical development. Iron axes, ploughshares, mattocks, sickles and scythes made possible the rapid development of agriculture and animal husbandry; the smelting and smithing of iron promoted the development of crafts and exchange, as well as weaponry and the art of war. This rapid economic development was accompanied by important changes in social relations, expressed in terms of social and material stratification, the emergence of leaders and the development of military retinues (Vasks et al. 1997).

Women’s social status and role in Middle and Late Iron Age society in Latvia has been analysed by researchers working in various fields. Back in 1921, historian...
Arturs Švābe, whose findings were based mainly on the study of folklore, strove to reconstruct the social structure of Early Medieval Latvia. Švābe recognises that women’s rights and duties in the kin group and family were dependent on inheritance rights, in accordance with which land could be inherited only by sons. Daughters inherited part of the father’s moveable property, most commonly a dowry in the form of money. In addition to this, the dowry provided by the mother was also important: this included livestock, clothes, furniture and ornaments (Švābe 1921). Women’s rights to property and inheritance have been studied in detail by historian Vija Stikāne, based on Germanic, Saxon, Danish, Swedish, Norwegian and Slavic common law, recorded mainly in the 9th–13th century, as well as Couronian and Latgalian common law, evidence of which is preserved in 16th–17th century records, in conjunction with folklore and ethnographic material. In accordance with these sources, women were subject to guardianship; they had no voting rights in assemblies or rights to own property. On the other hand, women also had fewer duties: they did not take part in war and did not pay dues. The woman’s property-owning guardian – the father, husband, elder brother, uncle or sons – assumed the public duties and rights connected with inheritance in her place (Stikāne 1997).

Archaeologist Andris Šnē has analysed the question of women’s social status in the societies of eastern Latvia in the 7th–12th centuries, utilising the archaeological material from pre-Christian cemeteries. Focussing mainly on the proportion of female and male burials among inhumations and cremations, and on the artefacts and ornaments found in the graves (Fig. 1), he tries to assess the opportunities open to women for playing a more important role in the society of their day (Šnē 2003).

Fig. 1. Liv women of the 11th century (reconstruction of A. Zariņa).
The objective of this paper is to provide an insight into women’s social role and living conditions in Iron Age society in Latvia, based on the palaeodemographic data obtainable from osteological material recovered in the course of cemetery excavations.

Material and methods

Palaeodemographic analysis could be undertaken on material from the cemetery of Lejasbitēni, completely excavated in 1961–1964 by V. Urtāns and dated to the 3rd–10th centuries AD. In the 3rd–5th century, the dead were buried in collective barrows, and later in flat graves around the barrows. The cemetery was used more intensively from the 7th century onwards, something that has been explained in terms of population increase (Urtāns 1965). Altogether, 459 burials were found in the territory of the cemetery. Sex and age could be determined for 188 (41%) of the 7th–10th century inhumations.

The second site chosen for study was the 10th–13th century Liv cemetery of Salaspils Laukskola, where 610 burials were excavated by V. Ģinters (1936–1937) and A. Zariņa (1967–1975). Three forms of burial were observed at the cemetery: 425 inhumations, 165 cremations and 20 symbolic burials (Zariņa 2006a). In this case, it was possible to compare demographic statistics for inhumations and cremations from the same cemetery.

The osteological material from the inhumations at Salaspils Laukskola was very poorly preserved, so the biological age could be determined for only 59 adult individuals. Of the children, the biological age of 69 individuals could be determined. Methods for determining the sex and age of cremations were applied, making it possible to utilise 111 cremation burials for palaeodemographic study.

Excavations at the 8th–11th century AD Semigallian cemeteries of Čunkāni-Drenģeri, on Drenģeri farm in Bauska Parish, have taken place under the direction of nine archaeologists, working for a total of 17 seasons and excavating 724 inhumations (Atgāzis 1994; 1996). Palaeodemographic study could be undertaken on 233 burials (32%) (Fig. 2, Table 1).

Age and sex were determined using conventional morphological methods (Ferembach et al. 1980; Ubelaker 1989; Buikstra & Ubelaker 1994; Scheuer & Black 2004). The state of preservation of the bone allowed age determination up to 70 years. Sex was determined for individuals over the age of 15.

In addition to the above methods, the sex and age of cremated individuals were determined by applying forensic science methods developed for the purpose of identifying persons from burned bones (Golubovich 1991), as well as methodological recommendations for the identification of sex and age on the basis of fragmentary bone material (Zvjagin et al. 1995) and the methods developed by Norwegian anthropologist Per Holck (1997) for studying cremation burials.

Demographic analysis was performed using standard life tables (Acsádi & Nemeskéri 1970). Population reproductive indices – potential gross reproductive
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Fig. 2. Palaeodemographically studied 7th–13th century cemeteries in Latvia.

Table 1. Number of burials

<table>
<thead>
<tr>
<th>Cemetery</th>
<th>Archaeologically investigated burials</th>
<th>Age and sex determined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inhumation</td>
<td>Cremation</td>
</tr>
<tr>
<td>Lejasbiņi</td>
<td>459</td>
<td>–</td>
</tr>
<tr>
<td>Čunkāni-Drenģeri</td>
<td>724</td>
<td>–</td>
</tr>
<tr>
<td>Laukskola</td>
<td>425</td>
<td>165</td>
</tr>
</tbody>
</table>

rate ($R_{pot}$), net reproductive rate ($R_0$) and average number of children per female ($C$) – have been calculated according to Henneberg (1976), assuming a total fertility value of 7.45. Total mortality is calculated after the formula of Acsádi & Nemeskéri (1970).

Results and discussion

One of the issues most widely discussed is the sex ratio of Iron Age burials. At the 7th–10th century cemetery of Lejasbiņi, which has been completely excavated, male burials are twice as numerous as females in the anthropological material. At Čunkāni-Drenģeri and Salaspils Laukskola, the ratio is 1 : 7. It should
be noted that among the inhumation burials at Salaspils Laukskola, the male/female ratio is 1:2, while the figure for the cremations is 2:0 (Table 2).

The age structure of the burials helps to account for the high proportion of males at Iron Age cemeteries.

28.2% of the 7th–10th century males at Lejasbitēni and 37.5% of the 10th–13th century inhumated males at Salaspils Laukskola died aged 15–30 (Fig. 3). The proportion of young males at the cemeteries is thought to reflect the occurrence of armed conflict, which can be connected with the location of these population

**Table 2.** The proportion of males and females in the anthropological material subject to study

<table>
<thead>
<tr>
<th>Cemetery</th>
<th>Date (cent. AD)</th>
<th>Form of burial</th>
<th>Children 0–14 (N)</th>
<th>Adult males (N)</th>
<th>Adult females (N)</th>
<th>Males/Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lejasbitēni</td>
<td>7th–10th</td>
<td>Inhumations</td>
<td>37</td>
<td>101</td>
<td>50</td>
<td>2.0</td>
</tr>
<tr>
<td>Čunkāni-Dreņģeri</td>
<td>8th–11th</td>
<td>Inhumations</td>
<td>62</td>
<td>108</td>
<td>63</td>
<td>1.7</td>
</tr>
<tr>
<td>Salaspils Laukskola</td>
<td>10th–13th</td>
<td>Inhumations and cremations</td>
<td>71</td>
<td>105</td>
<td>63</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inhumations</td>
<td>69</td>
<td>32</td>
<td>27</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cremations</td>
<td>2</td>
<td>73</td>
<td>36</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Fig. 3.** Comparison of adult male mortality at Lejasbitēni in the 7th–10th centuries and at Čunkāni-Dreņģeri in the 8th–11th centuries.
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centres near the Daugava waterway, where they were thus under increased threat of raiding. Neither can we exclude the possibility that population influx led to armed conflict. To some degree, this may be evidence of a struggle for spheres of influence in the area along the River Daugava and the military activities connected with this, and may reflect the consequences in the crusades in the 12th–13th centuries.

A second mortality maximum for males is observed starting from the age of 40. Thus, 46% of the inhumed males at Lejasbitēni and 48% at Salaspils Laukskola died aged 40–54. This mortality maximum coincides with mean adult life expectancy for males in Latvia in the Iron Age, which fluctuated between 40 and 44.

The predominance of adult males in the anthropological material from Čunkāni-Drenģeri could reflect migration processes in the Zemgale region in the 8th–11th centuries. Archaeologist M. Atgāzis, too, notes that even taking into consideration the flourishing economic conditions and migration processes of the 8th century, the number of graves traditionally regarded as dateable to this century is too large, and might indicate population influx (Atgāzis 1994). Looking at the structure of adult mortality in the population at Čunkāni-Drenģeri, we see that a significant increase in male mortality appears only at the age of 45–55. In contrast with the Laukskola and Lejasbitēni populations, there is no increased mortality in the age range 15–24 (Fig. 3). This could indicate that people living further from strategically important locations led more peaceful lives, with less intensive migration processes and without active military campaigning.

It may be noted that in neighbouring areas in this period, the predominance of adult males is not a common characteristic of inhumation burials. The 2nd–6th century cemeteries in Lithuania have approximately equal numbers of males and females. Exceptional in this regard are Marvele burials from 450–600 AD, among which males exceed females 1.8 times, something that in this case has been explained in terms of possible migration as well (Jankauskas 2002). In the 9th–14th century cemeteries of Sweden, the sexes are more or less equally represented among the adults, but a tendency has been observed for males to be buried in the southern part of the cemetery and closer to the walls of the church, with females in the northern part of the cemetery (Cinthio 1990). In Norway, too, this tradition was retained throughout the Christian period of the Middle Ages (Per Holck 1997).

The data on women likewise shows two periods of maximum mortality in the Iron Age in Latvia. Thus, 33–40% of the women in the cemeteries considered here died aged 15–24, and 28–37% died aged 30–39 (Fig. 4). The first period of increased mortality is thought to relate to complications at childbirth. Medical aid at childbirth was very limited. Experienced older women served as midwives, and, whenever possible, childbirth took place in the bathhouse, this being the cleanest place (Derums 1988). As is known, the first birth tends to be especially problematic, and this is why mortality among young women was so high.

Thus, in the age interval 20–40, the woman’s body was subject to the continual stress of childbirth and breast-feeding. The reproductive indices for Lejasbitēni
and Salaspils Laukskola show that women (including childless women) in the Middle and Late Iron Age had an average of 4.1–4.9 children, of whom a mean 2.3 reached reproductive age, and the net reproductive rate, or the number of descendants per individual of the parents’ generation, was not very large: a mean 1.2 individuals (Table 3).

Table 3. Palaeodemographic figures for Latvia in the 7th–13th centuries

<table>
<thead>
<tr>
<th>Cemetery, date, cent.</th>
<th>Life expectancy</th>
<th>Reproductive indices</th>
<th>Mortality %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$e_{20}$ male</td>
<td>$e_{20}$ female</td>
<td>$R_{pot}$</td>
</tr>
<tr>
<td>Lejasbičeni 7th–10th</td>
<td>21.8</td>
<td>15.9</td>
<td>0.550</td>
</tr>
<tr>
<td>Čunkāni-Dreģeri</td>
<td>23.8</td>
<td>14.0</td>
<td>0.573</td>
</tr>
<tr>
<td>Laukskola 10th–13th</td>
<td>19.8</td>
<td>15.9</td>
<td>0.657</td>
</tr>
</tbody>
</table>

Life expectancy:
$e_{20}$ M – for males at age 20,
$e_{20}$ F – for females at age 20,
$R_{pot}$ – the proportion of the total reproductive potential realised under the conditions of female mortality prevailing in the population,
$R_0$ – number of descendants per individual of the parents’ generation,
C – average number of children per female.

Fig. 4. Comparison of adult female mortality at Lejasbičeni in the 7th–10th centuries and at Čunkāni-Dreģeri in the 8th–11th centuries.
The continuous removal of calcium from the woman’s body affected the bone and dental system. Over the years, reproductive stress and inadequate nutrition weakened the female organism, which was less able to fight infections. As a result, significant differences appear in Late Iron Age demographic statistics for males and females in Latvia. In the 7th–10th centuries, the population at Lejasbitēni and the 10th–13th century population at Salaspils Laukskola, the second increase mortality began already at age 30–35 for females, but only at age 40–45 for males (Figs 3, 4). Survivorship for women at Lejasbitēni in the age range 20–45 years was 15% lower on average than that of men (Fig. 5).

As a result, differences came about in life expectancy. For males in these populations, life expectancy at age 20, $e_{20}$, varies in the range 19.8–23.8 years, on average 21.8 years, while for females the average figure is only 15.3 years, i.e. 6.5 years less than for males (Table 3). A similar tendency is observed in Europe in the 2nd–13th centuries as a whole. E.g. in Lithuania, female life expectancy was 3.9 years less than that of males (Česnys 1988; 1993; Jankauskas 2002), in Estonia 3.6 years less (Heapost 2006), in Slovenia it was 6.0 years less (Stloukal & Hanáková 1985; Seljak & Štefančič 1997).

The anthropological material from the 10th–13th century cemetery of Salaspils Laukskola permits a comparison of the demographic figures for inhumations and cremations.

Archaeologist A. Zariņa concludes that the artefact finds from the Laukskola cemetery indicate a many-sided culture, based essentially on artefact forms and burial practices characteristic of Baltic and Finnic inhabitants, with a strong influence of Scandinavian culture. In the burial practices relating to the cremations,
she sees a resemblance to the burials of the Vends of the northern part of the Kurzeme region. Among the chronologically earliest female burials, from chronological group I, where cremation and inhumation are equally represented, the cremations have produced mainly artefacts of Scandinavian origin: tortoise brooches, solid armbands, chains and pendants for the women, and weapons and other artefacts for the men. During the time of use of the Salaspils Laukskola cemetery, the proportion of cremations tends to decrease. In the period from the late 10th to the first half of the 11th century, they comprise 34% of the total number of burials, in the second half of the 11th and the first half of the 12th century they make up 25%, and in the second half of the 12th and the early 13th century they make up 18%. Thus, the practice of cremation decreased during the time of use of the cemetery, and in the later centuries was mainly used for male burials (Zariņa 2006a). Among the archaeologically identified 165 cremation burials, the age and sex could be determined on the basis of the cremated bones for 73 men, 36 women and 2 children, 67.3% of the total number of cremations. Thus, according to the bone material, the number of male cremations was twice as large as that of females, and cremations of children are exceptional.

Data on the proportions of male and female cremations in Norway, Denmark and Sweden are very variable, and in many cases are based on small numbers of individuals. In some cemeteries, a significant predominance of female burials has been observed (Rheinberg 900–600 BC, Bargstedt 800 BC–100 AD, Söderstorff 550–300 BC). This has been explained in terms of the impossibility of burying men in cases where they died far away from their communities, and for various other reasons. In part of the Nordic region, the sexes are equally represented in Iron Age cemeteries (North Spånga 500 BC–1050 AD, Vallhagar 100–600 AD, Illington 400–700 AD), as is true of practically all burial sites of the period 1100–1700 (Per Holck 1997).

At Salaspils Laukskola, out of 111 cremation burials for which age could be determined, only two were child burials. Small numbers of child cremations have also been observed in the Scandinavian countries. Child burials make up only 6.1% of the excavated cremations in Norway and 7.6% in Denmark. A similar situation has been observed throughout northern Europe (Per Holck 1997). Only 12.3% of studied Estonian 5th–13th century cremation burials contained children’s remains (Allma 2004). Probably, child cremation was incidental.

No double cremation burials of children and adults were found at Salaspils Laukskola.

Life expectancy for inhumed males at age 20 at Laukskola, $e_{x=20}$ is 20.9 years. For cremated males, this figure is slightly lower: 19.7 years. Among the male cremations, only 9.4% died aged 15–24, and starting with the age group 25–45 years, the proportion of cremations significantly exceeds the proportion of inhumations among males (Fig. 6).

Some methodological aspects need to be taken into account. Thus, sex and age could be determined for 32 male inhumations and 73 cremations. More complete information was therefore available regarding the age structure of the cremated males.
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Fig. 6. Comparison of mortality between male inhumations and cremations.

Secondly, for the inhumations, the age could generally be determined with a precision of 5 years, but for cremations only more general age ranges could be distinguished (20–40, 40–50 years). When the results are summed, the age boundaries overlap, and this gives a higher mortality figure in the largest age interval.

Thirdly, the choice of the form of burial was basically an ethnic feature. However, it is possible that the proportion of cremation burials among males aged 25–45 really did exceed the proportion of inhumation burials for this same age group. This was the period when the social role of males in society was most important. It should be borne in mind that cremation was a laborious and time-consuming process. Forensic studies have shown (Golubovich 1991) that cremation in the 10th–13th century cemetery of Laukskola generally took place at the temperature of 700–800 °C, while children and adolescents were generally cremated at 600–700 °C.

Life expectancy at age 20 for cremated women, $e_{20}^c$ is 16.3 years, slightly exceeding the figure for inhumed women, where $e_{20}^i$ is 15.3 years. This difference comes about because 33% of the inhumed females died aged 15–24, while of the cremated women, only 7.6% died in this age interval, the highest mortality being recorded at age 25–34 (43%).

7% of the cremated women died aged 50–60, while among the inhumation burials, the maximum age figure was 45–49 (Fig. 7). Survivorship at age 30 for cremated women is just as high, or even higher, than for men, and only in the age interval 35–50 years is it 14% lower than for men (Fig. 8). By comparison, for the
Fig. 7. Comparison of mortality between female inhumations and cremations.

Fig. 8. Survivorship for the cremated individuals in the 10th–13th centuries at Salaspils Laukskola.
female inhumations, this figure is 20% lower than for males (Fig. 9). As a result, life expectancy for cremated females is 3.4 years less than for males, while among the inhumations it is 5.6 years less (Table 4). These differences in demographic statistics suggest that the cremated women may have enjoyed relatively higher social status, something also indicated by the rich array of ornaments found with these burials.

It may be noted that in the cremation cemetery of North Spånga (500 BC–1050 AD) in Sweden, and among the 11th–14th century inhumations at Westerhus, no significant difference has been observed between the survivorship of females and males, while among the Iron Age inhumations in Denmark, high mortality has been observed among young women, and significantly lower survivorship for women than for men. In the Nordic countries, the demographic figures generally reflect the socio-economic situation of the particular population and are not connected with the form of burial (Sigvallius 1994).

![Fig. 9. Survivorship for the inhumed individuals in the 10th–13th centuries at Salaspils Laukskola.](image)

**Table 4.** Adult life expectancy for the individuals inhumed and cremated at Salaspils Laukskola

<table>
<thead>
<tr>
<th>Form of burial</th>
<th>Number of burials</th>
<th>$e_{20}$ males</th>
<th>$e_{20}$ females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td></td>
</tr>
<tr>
<td>Inhumation</td>
<td>32</td>
<td>27</td>
<td>20.9</td>
</tr>
<tr>
<td>Cremation</td>
<td>73</td>
<td>36</td>
<td>19.7</td>
</tr>
<tr>
<td>Inhumation and cremation</td>
<td>105</td>
<td>63</td>
<td>19.8</td>
</tr>
</tbody>
</table>
The short life span of women in the Iron Age of Latvia and the lower survivorship during the reproductive period than for men are consequences of the woman’s biological function of replacing the population. Those women who received adequate nutrition in childhood and adolescence were physically better developed, with a stronger immune system, and consequently did not suffer as much in the course of frequent childbirth. However, taking into account Latvia’s geopolitical situation, the frequent wars and the threat of raids, the social role of the male in the community was rated more highly, and in consequence girls and women often did not receive adequate nutrition and the necessary medical aid, and suffered from complications at childbirth. The significant predominance of male burials at the Iron Age cemeteries in Latvia reflects the intensity of warfare and migration, as indicated by the high proportion of burials of young males. Women were often taken prisoner, and may not always have been buried in cemeteries. Cremated females are thought to have been individuals of high social status. This form of burial has mainly been used for the burial of males. Children were cremated only in exceptional cases.

The historical demography data for the inhabitants of Latvia in the 18th and 19th centuries indicates that the increased mortality of females aged 20–40 falls in the 19th century, and that at this time female life expectancy begins to exceed that of males. The mortality maximum among the population shifts from 40–50 to 60–80.

These developments were connected with the gradual improvement in economic conditions, education and medical aid, and with the development of birth control and the reduction in the numbers of children (Zariņa 2006b; 2008).

References


Käesolev uurimus näitab ilmekalt erinevus t naiste ja meeste demograafilistes indeksites. Naiste esimene maksimaalne suremus (30–40%) on vanusevahemikus 15–24 eluaastat – peamiselt on see seotud esimese sünnitusega. Uuesti sünnitamine ja imetamisest tulenev stress, mis oli sageli seotud ema halva ja ebapiisava toitumisega, kurnas naiste organismi ning nende võimet erinevate haiguste toime tulla. See päädis teise suremuse maksimumiga vanusevahemikus 30–35 eluaastat, samal ajal kui meeste suremuse maksimum oli alles vanuses 40–45 eluaastat. Täiskasvanud naise eeldatav eluga $e_{20}$ oli ainult 15,3 aastat, see on keskmiselt 6,5 aastat vähem kui meestel – nende eeldatav eluga $e_{20}$ oli 21,8 aastat. Samasugune tendents oli levinud Euroopas 2.–13. sajandini.

Salaspils Laukšola kalmistu 10.–13. sajandi antropoloogiline aines lubab võrrelda põletus- ja laibamatuste demograafilisi indexseid. Luumaterjali toetus selgus, et meeste põletusmatuste arv on kaks korda suurem kui naiste oma ja laste põletusmatused on harukordsed.

Põletusmatuste puhul oli täiskasvanud naiste eeldatav eluga $e_{20}$ 16,3 eluaastat – see ületab veidi laibamatusega maetud naiste eeldatavat eluga, mis oli 15,3. Peamiseks erinevuse põhjustajaks on nende naiste arvu proporsioon, kes surid vanusevahemikus 15–24 eluaastat (neist 33% olid maetud laibamatu ja vaid 7,6% põletusmatustena). Selle tulemusena on naiste eeldatav eluga põletusmatuste puhul 3,4 aastat lühem kui meestel ja laibamatuste korral 5,6 aastat lühem kui meestel. Need erinevused demograafilises statistikas näitavad, et need naised, kes põletati, võisid olla kõrgemast sotsiaalsetest kihist – seda väidet toetab ka põletusmatustega kaasa pandud esemete rohkus.

Läti rauaja naiste lühikese elua, võrreldes meestega, põhjustas mitmekordne sünnitamine, sest nende õlul lasus ühiskonna järjepidevus. Naised, kes said lapse-
põlves piisavalt toitu ja olid füüsiliselt paremini arenenud ning tugevama immuunsüsteemiga, ei kannatanud seetõttu nii palju ka korduvalt sünnitades. Siiski tuleb arvestada ka Läti geopoliitilist olukorda: pidevad sõjad ja röövimisoht tõstsid mehe ühiskondlikku tähtsust, mistõttu ei saanud naised ning tüdrukud piisaval hulgal toitu ega ka vajalikku arstiabi ja kannatasid seepärast sünnitustraumade käes.


Need arengud olid seotud järkjärguliste muutustega majandustingimustes, hariduses, arstiabis, sünnituskontrollis ja laste arvu vähenemises.