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Proposal title	Male bachelors' living conditions, sexuality and gender roles in a context of reduced availability of female partners in China
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1. EXECUTIVE SUMMARY OF THE PROPOSAL

China's population has a characteristic that is shared by very few countries, namely a higher proportion of men than women. Another specific feature is that this male majority has increased over the past decades, with China being now the country with the highest proportion of men in the world after India. Furthermore, China's numerical imbalance between the sexes is an unprecedented situation in the documented history of human populations, both in scale and its lasting impact on the number and structure of the population. But while the demographic consequences of such an imbalance between men and women are well identified and documented, the impact of a shortage of women on society and individuals remains largely unexplored.

This project will investigate the nature of the individual and social transformations brought about by a reduced availability of female partners on the marriage and sexuality markets, as well as the individual strategies and issues ensuing from it, their effects on union and family formation, gender roles and mate-selection process, and their impact on perceived gender roles and the most intimate aspect of the relation between men and women, sexuality.

The project is based on a quantitative survey that will be conducted among villagers in rural areas and rural migrants in urban areas of China on a sample of around 4,400 men (married and unmarried, aged 28 to 65 years) and on qualitative interviews. The project, which focuses on specific aspects of men's life in a context of numerical imbalance between the sexes, has four basic objectives:

- 1) To analyse from the theoretical and empirical point of view, men's propensity to change the social norms governing union and family formation and mate-selection process, by adopting behaviours that compensate the changes in the sex structure, but that do not comply with the original norms;
- 2) To understand how the reduced availability of female partners influences sexual stratification and men's perception of women status and gender roles;
- 3) To study the impact of a reduced availability of female partners on male sexual behaviours, and on men's propensity to adopt non-standard behaviours in a context of significant social control;
- 4) To analyse the living conditions of the men who remain unmarried against their will (i.e. the "enforced" male bachelors) (social networks, human and social capital, socio-economic characteristics), given that forming a family within a heterosexual marriage still appears to be a prerequisite for developing social networks and getting social recognition.

2. CONTEXT, POSITION AND OBJECTIVES OF THE PROPOSAL

2.1. CONTEXT AND POSITIONING OF THE PROPOSAL

In the past 60 years, China has undergone considerable demographic transformations. The fall in mortality since the 1950s and the sharp decline in fertility from the 1970s, led to a reversal of the age pyramid. In 2010, China's population comprised only 19% of young people aged under 15 (compared to 34% in 1950) but had a growing proportion of people aged 60 and over (12% against 7% in 1950). Over the next 40 years, the upheavals in the age structure will become even more pronounced, these percentages rising to 13% and 34% respectively (WPP 2010).

China will therefore undergo an extremely rapid demographic ageing, to the extent that by the middle of the century it will have a median age 4 years above that of Japan in 2010: 48.7 and 44.7 respectively (Japan currently being the country with the most advanced "ageing" process in the world) (WPP 2010). China's ageing population will be one of its main societal challenges (Banister et al. 2010), since it will have to provide a decent standard of living for the 440 million elderly people it will have in 2050 in a country with no widespread pension system and where intergenerational solidarity, the traditional way of caring for older people, will be increasingly difficult to implement due to the rapid increase in the dependency ratio¹ (Attané 2011).

Table 1. Indicators of sex distribution in China, India, and the rest of the world. 2010 and 2050.

In 2010	Overall sex ratio (Men for 100 women) (In 2010)	Sex ratio under 15 year-old (Boys for 100 girls) (In 2010)	Sex ratio in the age- group 20-49 (Men for 100 women) (In 2010)	Sex ratio in the age-group 20-49 years old (Men for 100 women) (In 2050)
China	104.9 ⁽¹⁾	118.0 ⁽¹⁾	103.1 ⁽¹⁾	117.7
India	106.4 ⁽²⁾	108.7	107.9	107.7
World (excl. China & India)	98.5	104.1	101.0	102.7

Note: ⁽¹⁾ PCO, 2012 ⁽²⁾ Preliminary results of the 2011 Indian census; For the remainder, calculations based on United Nations data, WPP 2010, http://esa.un.org/wpp/unpp/panel_indicators.htm.

Another major challenge for China's population is the atypical development of its sex structure. Indeed, its higher proportion of men than that of women is a characteristic shared by very few other countries in the world (Banister 2004; Croll 2000). Another of China's special feature is that unlike in India, Pakistan or Bangladesh, the male majority has not been absorbed but on the contrary has increased over the past decades. After India (106.4 men for 100 women in 2011), China has currently the highest overall sex ratio in the world, at 104.9 in 2010 (PCO 2012), whereas the world average (excluding China and India) is 98.5 in 2010 (WPP 2010) (Table 1). The sex imbalance is even more acute in some Chinese provinces. In Zhejiang and Shaanxi, for instance, there are 105.7 and 106.9 men for 100 women respectively in 2010 (PCO 2012).

Because of its scale and lasting impact, China's adverse sex ratio that has been observed for several decades and the resulting shortage of women is an unprecedented demographic situation in the documented history of human populations. Moreover, it is expected to have repercussions on the population size and structure at least until 2050 (Klasen, Wink 2002; Li et al. 2006; Guilimoto 2012). In the mid-century, there will be 117.7 men for 100 women in the population aged 20-49 years old, 15 percent above the world average (China and India excluded) (Table 1). According to Ebenstein and Jennings (2009), for cohorts born in China between 1980 and 2000, there are 22 million more men than women, who can be expected to fail to ever marry. The consequences of the shortage of women are (and will continue to be) felt in two main areas:

- 1) On the demographics. Such consequences are well identified and documented, the most immediate one being a male marriage-squeeze due to a shortage of potential spouses on the

¹ This is the proportion of dependent persons (< 15 years and ≥ 60 years) in relation to the number of adults (15-59 years).

marriage market. The 2010 census indicates that in China, the number of males in the 20-39 age-cohort exceeds that of women by 5.9 million, i.e. an average of 300,000 males in surplus in each single-year of age; among the unmarried people aged 30-64 in 2010, there are 397.2 men for 100 women (PCO 2012). This shortage of women in the marriage market is due in part to the numerical discrepancy between successive cohorts. When the number of births drops sharply over the years, as it did in China from the 1970s, cohorts of boys are more numerous than those of girls they will marry once they reach marriage market age, given the age gap between spouses (Ní Bhrolcháin 2000). Consequently, more men arrive on the marriage market as compared to the number of women a few years younger than them (Merli, Hertog 2010; Guilmoto 2012). It is also (and will continue to be in the next decades) significantly accentuated by the growing imbalance in the sex ratio at young ages due to considerable discrimination against girls before and after birth observed from the 1980s (sex selective abortion, neglect in caring for daughters leading to premature death) (Attané 2013)².

Such a shortage of women in the marriage market (namely, a reduced availability of female partners) is expected to result in a corresponding increase in the number of men who will remain unmarried against their will (called the "enforced" male bachelors) (Li et al. 2006; Guo, Deng 1998), as described by Ebenstein and Jennings (2009): "China is on the cusp of a dramatic deterioration in the marital prospects for men". This shortage may also result in an increase in the age gap between spouses (Ní Bhrolcháin 2000), and an increase in marriage migration (Hugo, Nguyen Thi 2007). In the longer term, if fertility remains stable, the shortage of women, and therefore of mothers, will lead to a fall in the birth rate and consequently a slowdown in demographic growth (Attané 2006).

- 2) On society and individuals. Unlike the demographic impact, the nature of social change brought about by a reduced availability of female partners on the marriage and sexuality markets, the strategies and individual issues resulting from it and their impact on society, living conditions, sexual behaviours, and gender roles are largely unexplored. However, it will be necessary for people, both men and women, to adapt to this new social and demographic concern. The impact of such a sex imbalance on women status will not be directly addressed in the present project. To understand how discriminations against women and inequalities in gender roles persist and even spread in the specific context of a reduced availability of female partners, the present project will focus on men's perceptions and behaviours. These various dimensions of the general problem of the sex imbalance and its impact on men's opinions, behaviour, and living conditions are central to the present project.

2.2. RESEARCH QUESTIONS AND PROJECT OBJECTIVES

The numerical sex imbalance is not totally a new phenomenon in China. The works of Ho (1959) and Lee and Wang (1999), in particular, attest to the historical presence of a skewed sex ratio in some areas. While Lee and Wang (1999) attribute some specific marriage practices (namely that of "*tong yang xi*" which consists in adopting a daughter to marry the family's son) to the relative scarcity of young women of marriageable age in some areas, however, no study has yet analysed empirically the consequences of such a large-scale and long-lasting sex imbalance on individual situations, perceptions and behaviours. However, this unique demographic situation and the impact it has (and will have to a larger scale in the coming decades) on Chinese society and its various players is of interest to social science for several reasons.

1) First, from the point of view of union formation and mate-selection process.

Spouse availability of each sex can affect union formation (Goldman and Pebley 1989; Henry 1969; McDonald 1995), as for instance, in Pakistan during the second half of the 20th century (Sathar and Kiani 1998). In China, marriage remains a very widespread practice, but will be

² A 3rd explanation is the long-term effect of the excess female mortality that characterized most of the 20th century in China (Klasen, Wink 2002).

increasingly jeopardized by the sex imbalance in the marriage market. Adjustment mechanisms have therefore to be put in place to adjust to the reduced availability of female partners (earlier marriage for women or later marriage for men, and therefore a greater age gaps between spouses, marriage migration, increase in "enforced" male bachelorhood) with inevitable implications for individuals, both men and women.

A research assumption is that the shortage of women on the marriage market, with a greater demand for women on the part of the men, is likely to affect mate-selection process. As explained by Fan and Li (2002), mate selection in China is still pragmatic and involves evaluation of a potential spouse's attributes, such as age, education, occupation, income, economic ability, physical characteristics, health, family background, etc. Considering the hypergamous principle that husbands should be somewhat 'superior' to wives in terms of the above-mentioned attributes (Fan and Li 2002), men from the less disadvantaged socio-economic groups in rural areas and rural migrants in cities are not attractive in these regards, as demonstrated in previous studies (Li et al. 2010; Yang et al. 2012). Therefore, an assumption is that these men have to escape the prevailing sexual stratification system to reach a potential female spouse or partner, and that on the medium-term, social norms governing union and family formation might therefore be relaxed. In addition, the shortage of women is expected to exacerbate the inequalities between male social groups, since access to women could be transformed into an indicator of men's socio-economic status, in the continuity of what has been evidenced by Osburg (2008) among the masculine elite in urban China in the reform era.

2) Second, from the point of view of men's perception of gender roles in a context of reduced availability of female partners.

In this perspective, another concern is about the impact of numerical sex imbalance on women status and gender roles as perceived by men. Some authors defend the idea whereby when there are significantly fewer women than men in a given society, their value and therefore their power, increases and consequently can benefit women's emancipation (Collins 1974; Guttentag and Secord 1983), notably through hypergamy. Others believe on the contrary that when women become rarer, men have a greater hold on them (South and Trent 1988). For Osburg (2008), if women practicing hypergamy expect upward social mobility, men seek in return a physically attractive partner, whose value as a sexual object would be increased. While the current numerical sex imbalance is the direct consequence of the low status of women in Chinese society (Attané 2013), we suggest that men's perception of gender norms may be affected by the shortage of women, and that there might be a polarization of men and women roles within family and society. This trend could be further accentuated by the expected increase in average age gap between the spouses given that it "is currently reported to be a factor in women status and an indicator of inequality within the couple, as well as in women's role and position in society" (Barbieri, Hertrich 2005).

3) Next, from the point of view of men's sexual behaviour.

Marriage is highly valued in China. Social norms still strongly influence behaviours, and most young people continue to consider that all adults must marry and that there are no alternatives to that (Evans 1997). Heterosexual marriage thus remains the prerequisite for marital-type cohabitation and family formation. Most often, it is also the legitimate framework for sexual activity (McMillan 2006). Thus in contemporary Chinese society there is a rift between married people and unmarried ones (Zhang and Zhong 2005). The personal and family life of single men in particular, is impacted by singlehood and differs greatly from that of married men (Li et al. 2010; Attané et al. 2013). Yet, prolonged if not permanent singlehood is imposed on an increasing number of men as a result of the growing shortage of women. There have been attempts to gauge the impact of this shortage on the frequency of male singlehood (Li et al. 2006; Tuljapurkar et al. 1995), but its consequences on men's personal situations are little known. Yet, this situation may lead to unintended situations, affecting notably men's life plans, sexual activity and limiting their possibilities for forming a family.

In addition to the "marriage market" studied in demography, the situation in the "sexuality market"³ (Collins 1974) must be considered. An assumption is that, like the marriage market, the sexuality market can arguably be affected by the reduced availability of female partners for heterosexual intercourses, this leading therefore to a transformation of male sexual behaviours. Given the social norms mentioned earlier, we suggest that the reduced availability of potential heterosexual partners influences the sexual activity of single males by restraining and/or diversifying it, especially in increasing the frequency of masturbation and sexual intercourses involving casual partners. There also might be an increase in resort to commercial sex and in men's sexual relationships with other men, a larger number of sexual relationships before marriage, and a subsequent relaxation of norms governing sexual behaviours.

4) Last, from the point of view of men's living conditions and social networks.

Poverty has proved to be a dual factor of exclusion in rural China. First, as observed in other societies, it excludes from marriage the poorest section of the male population (Bourdieu 1989). Although this is nothing new in China, the economic reforms, the growing shortage of women and the increasing cost of marriage for men have made the problem more acute. Second, poverty also appears to be a cause of sexual exclusion, as unmarried men with access to active sexuality are more socially and economically advantaged than the others (Li et al. 2010). Therefore, we suggest that poverty, combined with enforced bachelorhood and infrequent if not inexistent partnered-sex, may act as a triple factor of exclusion and, given the stigma still attached to those who remain single in China (Ebenstein, Jennings 2009), preclude the acquisition of social recognition and the development of social networks traditionally brought about by marriage and family life.

In short, this project comprises four basic objectives: 1) To analyse from the theoretical and empirical point of view, men's propensity to change the social norms governing union and family formation, by adopting behaviours that compensate the changes in the sex structure, but that do not comply with the original norms; 2) To understand how the reduced availability of women influences sexual stratification and men's perception of women status and gender roles; 3) To study the impact of a reduced availability of female partners on men's sexual behaviour, which is the most intimate aspect of the male-female relationship, in a context of significant social control; 4) To analyse the living conditions of the "enforced" male bachelors (social networks, human capital, socio-economic characteristics), given that forming a family within a heterosexual marriage still appears to be a prerequisite for developing social networks and getting social recognition.

The analysis will be based on a survey we intend to carry out among villagers in rural areas and among rural migrants in urban areas from three Chinese provinces, this latest group sharing similar socio-economic characteristics than the men who are predicted to fail to marry in rural areas, i.e. poor and uneducated (Ebenstein, Jennings 2009). The sample will include a total of around 4,400 men (married and single, aged from 28 to 65 years old). This cross-sectional survey will compare samples of unmarried men to married ones, these latest being considered as the reference group embodying the prevailing social norms. Two age-groups will be considered in each category (28-45/45-65 years old) to take into account the possible age and generation effects.

2.3. STATE OF THE ART

This project lies at the intersection of a range of research issues developed at the crossroads between demography, sociology, and economics: Studies on the consequences of a numerical imbalance between the sexes on the marriage market; analysis of the changes in perception of gender roles, of sexual behaviours and the role of subjective norms in specific contexts; the study of the propensity of individuals to change social norms governing union and family formation; and

³ The marriage market is defined as "all persons contemplating marriage, that is to say whose health, situation and volition do not exclude from the marriage market, at least for a period of time" (Henry 1981). Here we understand the sexual marketplace as comprising all adults potentially contemplating sexual activity involving a partner.

male bachelors' specific living conditions. While the state-of-the-art in each of these fields is fairly well documented, no link has yet been formed between them. This project, which has the original feature of being positioned at the intersection of all these various fields, is part of an innovative theme that has not been the subject of any survey or in-depth study to date.

2.3.1 SEX IMBALANCE ON THE MARRIAGE MARKET: OTHER EXAMPLES IN THE WORLD

At certain periods in their history, many countries have had a sex imbalance in their marriage markets. Henry (1966) for example, examined to what extent human (mainly male) losses during WW I in France had altered matrimonial behaviours. He also observed that despite the important shortage of men, most women did ultimately marry, largely by reducing the age gaps between spouses and a rise in the number of marriages with immigrant men. Vietnamese women also faced a shortage of potential spouses in the 1970s as a result of demographic growth, the civil war and male emigration (Goodkind 1997). Currently there is a shortage of potential spouses in the Afro-American community in the US because of a sharp increase in mixed-race marriages between black men and non-black women (Crowder, Tolnay 2000). The marriage markets in other countries have also been affected by a shortage of females. In Portugal at the end of the Middle Ages, the sex imbalance in adults was attributed to a preference for sons resulting from the primogeniture system, together with female hypergamy that led to an increase in male singlehood especially in the lower social classes (Hudson and den Boer 2004). The white community in 19th century Australia also suffered a shortage of females due to differential migration with considerable consequences on male marriage (Akers 1967). In Europe, the rural exodus that massively concerned women, led to an increase in male singlehood in some rural regions (Bourdieu 1989). But in these cases, the numerical imbalance between the sexes on the marriage market only concerned a limited population. Furthermore these were one-off events and the impact on matrimonial behaviour and society was offset by various compensatory mechanisms. The situation will be different in China where the male surplus on the marriage market will reach between 10 and 15% of the corresponding male cohorts for several decades (Li et al. 2006). This change is therefore a textbook case because of its scale and significance, and its lasting impact on society and individuals, both men and women.

2.3.2 GENDER ROLES IN CHINESE SOCIETY

Women status and gender roles in China are well documented and the issue of gender equality is debated in a number of research (Angeloff, Lieber 2012; Croll 2000). It is noteworthy however that recent studies all agree that the situation of Chinese women is special in a number of ways. Paradoxically, their equality with men, constantly asserted by the regime since it came into power in 1949, is visible and yet negated by the major economic transformations of the past 30 years. In particular, it is being challenged by traditions currently being revived, such as arranged marriages, female infanticide, excess early female mortality, discrimination in employment, etc. which are the causes or symptoms of a devalued status of women, and thus of the shortage of women (Angeloff, Lieber 2012; Attané 2013). However, at the same time some progress has been observed, notably in education and consequently in women's negotiating power within the household (Wu 2010). Thus the Chinese case, with all the social upheavals of China's recent history, raises a number of challenges for the sociology of gender, since it calls into question the positive relationship traditionally observed between socioeconomic modernization and the improvement in women's status. Through gender it is possible to understand all social relationships since it is found in all of them, and constructed and crossed with class and age relationships, etc. This project will therefore focus in particular on the gender/number relationship that has not been subject to in-depth empirical analysis yet. It will thus give evidence of how the numerical imbalance between the sexes, that will be increasingly acute at adult ages in the coming decades, can influence men's perception of gender roles and therefore men's behaviours toward women.

2.3.3 SEXUAL BEHAVIOUR IN SPECIFIC CONTEXTS

As one of the most intimate areas of individual experience, sexuality is a specific aspect of relations between individuals, and therefore a legitimate subject of social science research. Contrary to what one might suppose, sexual behaviour is not universal and there are many differences between societies in this area (Bozon 2002). The organization of intimate behaviour provides original insight into how, in a given society, gender and class relations, and the social age system, all interact. Since the 1970s, and especially after the 1990s, a growing number of socio-demographic surveys have analysed sexual behaviours using controlled indicators. However there are far fewer such surveys in the Arab countries and in Asia, including China, than in other parts of the world such as Europe, Africa and South America (Bozon 2003). While in the 1990s, the surveys viewed sexual practices from the point of view of health and risk, the surveys in the 2000s use sexual biographies as a way of looking at gender inequality (Heilborn et al. 2006; Bajos, Bozon 2008). The survey we would like to carry out in rural areas of China and among rural migrants in urban areas will compare samples of single men with married ones, these latest being considered as the reference group embodying the prevailing social norms. At the heart of our reflection will be the biographical processes and socio-economic circumstances that lead certain men to remain unmarried and the consequences on their sexual lives, wellbeing and social relations.

2.3.4 SURVEYS ON SEXUALITY IN CHINA

In China even more than in Western societies, sexuality is still a very private matter. That is part of a social and cultural backdrop forged by simultaneous but complementary influences from Daoism and Confucian traditions, which still bear the imprint of austerity and the social control imposed by Communist ideology. The Cultural Revolution in particular, reinforced these controls and various aspects of people's private lives, including sexuality, were strictly regulated and even highly stigmatized (Honig 2003). That is why sexual behaviours in China were not studied before the country opened up socially in the 1990s. Since then, research has abounded, including work by Liu Dalin (1992; 2005), Pan Suiming (1993; 1997; Huang, Pan 2007), Li Yinhe (1991; 1992; 2004; 2008), Das et al. (2007), Huang Yingying (2011), the Shanghai Sexual Networks Survey conducted in 2007-2008 by Merli (who is a scientific partner in the project) et al. (Feng et al. 2010; Merli, Morgan 2011) and the China Health and Family Life Survey carried out in 1999-2000 (Parish et al 2007). While Pan (2005) looked mainly at sexual behaviour associated with prostitution, most of the other surveys were devoted to sexuality in the context of social liberalization (especially in terms of sexual health or STIs/HIV/AIDS transmission, e.g. see Liu et al. 1998) but without any specific reference to male singlehood or numbers (i.e. the influence of the numerical imbalance between men and women in the sexuality market). Furthermore they mainly dealt with urban populations. The survey we would like to carry out would target other issues, including those related to changing sexual behaviour and the propensity to change the norms governing them when the availability of female partners is reduced. Furthermore, this survey will be conducted among villagers in rural areas and rural migrants in urban China, and would therefore considerably enrich the current knowledge.

2.3.5 TWO EXPLORATORY SURVEYS ON THE SEXUALITY OF MALE BACHELORS IN CHINA

The present project lies on a previous research project jointly financed by INED and Programs for Chang Jiang Scholars and Innovative Research Team in Universities, Chinese Ministry of Education, (Grant No. IRT0855), led together with the Institute for Population and Development Studies (IPDS, China), which is also a partner to the present project. The exploratory project concerned the individual situations (socioeconomic characteristics, self-perception, sexual health etc.) and the sexual behaviour of single men through two surveys, one in rural China on a sample of 621 men, and the second on 958 migrants in the suburbs of Xi'an. Starting from the premise that unmarried men in contemporary China only have limited access to the prerogatives traditionally associated with marriage (children, cohabitation with a partner, heterosexual relations, etc), and that if this situation is not chosen, it can lead to frustrations which are difficult to overcome in socially acceptable ways, the exploratory project demonstrated that unmarried men have much less active sexual lives than married men (41.3% had no sexual intercourse in their lifetime, the average number of sexual intercourses being once a month

in the 12 months prior to the survey for unmarried men, compared with 4.1 times for married men). Furthermore it established that extreme poverty is an additional factor of exclusion for Chinese men, because it not only excludes from marriage but also from any sexual activity, and that single men are, on average, exposed to greater health risks in their sexual relations with a low use of condoms and poor knowledge of STIs (Li et al. 2010; Yang et al. 2011; Zhang et al. 2011, etc.). These exploratory studies paved the way for further data collection initiatives, and allowed us to identify new research questions that are at the heart of the present project. Last but not least, the experience we obtained from this earlier project will be invaluable to us and ensure the successful outcome of the current one.

2.4. OBJECTIVES, ORIGINALITY AND NOVELTY OF THE PROJECT

Current research on the numerical imbalance between men and women in the marriage market is usually limited to the demographic and quantitative aspect, neglecting the qualitative one. Conversely, research on sexuality, gender roles and living conditions hardly touches on numbers in the analysis of relations between men and women. As a result, little is known about the consequences of a sex imbalance on the marriage market and, more broadly on individuals, their life plans and living conditions, and on gender roles and sexuality.

This project deals with unexplored themes in contemporary societies both North and South. It is innovative because it will shed light on new trends and provide analysis at the intersection of demography, sociology and economics, in a field (China) with unprecedented demographic changes but which, given the size of the Chinese population (20% of the world population) is likely to influence the demographics elsewhere, notably by importing women from other countries. Our exploratory surveys (see above) revealed a variety of characteristics of single men in the context of a shortage of women. Using that first experience, we now propose to carry out a larger study that includes this specific theme within the broader issue of male bachelors living conditions, perception of gender roles, and family and sexual behaviours, in a context of reduced availability of female partners and major social and economic transformations. In the longer term, the results of our analyses of the Chinese case are expected to serve as a basis for similar studies in other countries that, like China, are undergoing a numerical imbalance between the sexes that will lastingly affect both society and individuals (e.g. India).

3. THEMATIC ANALYSIS

The analytical work itself and the preparation of articles for publication will be carried out within this task. Production will be in the form of scientific articles addressing four major themes:

- » Theme 1: *Consequences of a reduced availability of female partners on union and family formation*

This theme will be developed in two phases. First, we will carry out a regional modelling of the shortage of women on the marriage market based on population projections and simulations of longitudinal marriage. The 2010 census data will be used to adjust the national simulation model taking into account the numerical sex imbalance, the timing of marriage and net migration rates at adult ages. Then, a demographic analysis of the data on marriage and family collected in the survey will be conducted (age at 1st marriage, marriage rates by age, age-gap between spouses in the various marriage cohorts; divorce and union sustainability; prevalence and average duration of celibacy; forms of union; virilocal vs uxrilocal marriage; marital cohabitation; family arrangements, etc). This theme will also analyze the influence of subjective norms, defined as the perceived social pressure to perform or not to perform a given behaviour (Ajzen 1991) on men's propensity to access to a potential wife, and on marital and family arrangement.

- » Theme 2: *Consequences of a reduced availability of female partners on the sexual stratification process, including mate selection and men's perception of gender roles*

In the second phase, using both the quantitative and qualitative data collected, we will address the more qualitative aspect of the phenomenon by looking at the process of sexual stratification, defined as the ranking and differential reward system of the sexes. It will include changes induced by the reduced availability of female partners in mate selection process and strategies, criteria governing the definition of the "matching spouse", etc. In a same sociological perspective, we will also question the men on intermediaries (parents, peers, neighbours, organized networks, etc.) involved in connecting potential spouses and their role in such a context, and on the nature of goods and/or money potentially exchanged at marriage in relation to the traditional bride-price practice described in particular by Anderson (2007) and Brown (2003). The impact of the reduced availability of female partners on men's perception of gender roles will also be a part of this theme. It will be considered in particular in the intimate relationship, in the housework division, and in the labour division. Data for unmarried men will be compared to those for married ones in two age-groups, the latest being considered as the reference group embodying the prevailing norms.

»» Theme 3: *The impact of a reduced availability of female partners on men's sexuality*

The study of men's sexual behaviour, both single and married, will be at the core of this theme. The specific practices within each of these sub-groups and their individual context will be highlighted and analysed, and placed in perspective with the issue of numbers (numbers relative to each sex). Behaviour will be studied from a quantitative and comparative perspective: how distinct are married and unmarried males' sexual behaviours in a context of significant social control? What are their respective specific features? Can we draw the conclusion that the reduced availability of female partners significantly influences men's sexual behaviour and practices? This theme will also address the matter of sexual health, to consider the evidence given for instance by Tucker et al. (2005) that the increasing prevalence of sexually transmitted infections in cities is due to the sexual practices of rural migrant workers (whose demographic characteristics are similar to the men who are predicted to fail to marry in rural areas) (Ebenstein, Jennings 2009).

»» Theme 4: *Poor socio-economic conditions as a factor of social exclusion for male bachelors*

The impact of bachelorhood associated with poor socio-economic conditions on men's individual trajectories and social networks will be part of a theoretical and empirical approach. It will be measured both quantitatively (using data from the section of the survey devoted to that issue) and qualitatively (based on the qualitative interviews conducted in Task 3). An in-depth analysis of men's socio-economic characteristics, both in terms of human and social capital, will be conducted. Then, various dimensions of both perceived and prevailing norms in terms of social integration and related practices will be investigated. How men perceive themselves (health status, personal wellbeing, living conditions, relations and interactions with parents, peers and/or siblings, etc.) and how they analyze their unequal access to female partners will also part of this theme. Both unmarried and married men will be targeted in order to make comparisons, the married men being considered as the reference group.

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