Attitudes towards abortion, contraception and abstinence in rural and urban Burkina Faso, 2000-2001

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Introduction

The promotion of abortion rights is a great challenge in Africa. A number of physicians, who treat abortion complications every day and see women die from pregnancy interruptions, are keen to promote access to safe abortions. But strict laws limit their efforts, so that they ask politicians, lawyers and other policy makers to broaden the existing abortion laws. Since legal changes rarely happen, they attribute the continuing occurrence of so many abortion deaths to a lack of political will. But policy makers think that the inertia in this domain is not their own fault. The issue is indeed highly unpopular among their voters; if they promoted safe abortion, they would go against the wishes of the community whose support they critically need to stay in office. If not much is done about unsafe abortion in Africa, it is thus ultimately because the community is so vividly opposed to this practice.

We face here an important contradiction: Africans have abortions (24 per 1000 women in reproductive ages every year according to the last WHO estimates), even many abortions in some places, but they seem to condemn this practice very strongly at the same time. The aim of this paper is to understand this discrepancy between representations and practices.

Our response, in short, is that the gap between abortion practices and attitudes stems from rapid social change which is not progressing at the same speed in different areas of social life. The accelerated integration into the globalized market economy is indeed currently transforming the lives of many Africans, especially those living in urban areas. Fertility declines are one of the many evolutions resulting from these broad socio-economic changes. Certain countries of East Africa are well advanced into the fertility decline. In West Africa, fertility levels are still high in the region as a whole (5.9 children per woman, Pison 2005), but they have been decreasing in the region's cities (Shapiro et Tambashe, 1999). The last DHS surveys indicate that women have about 3 children on average in most of the region's capitals.

To study the impact of broad socio-economic change on individuals' practices and representations of varied means of birth control means, we chose to contrast two populations living about 30 km away, one in a rural and one in an urban area of Burkina Faso. A rural-urban comparison cannot replace a historical understanding of the processes currently altering individuals' rapport to birth control in West Africa. Our paper's aim is only to produce a number of hypotheses about the

main social forces driving birth control change as fertility declines in Africa: the multiple figures of this evolution will necessarily be specific to each context, and need to be studied in a longitudinal perspective in each case.

Most of what we know about individuals' rapport to birth control (practices and meanings) in West Africa comes from anthropological work, and focuses almost exclusively on pre-transitional rural populations: we will first review this literature. We will then summarize what is known about the changes in fertility regulation practices at the beginning of fertility transitions in West Africa, that is, in the region's cities: how do the use of contraception, abstinence and abortion combine to produce the observed fertility reductions? We will then describe our data, a survey of practices of- and attitudes towards abortion and contraception in an urban and a rural area in Burkina Faso. After briefly describing the abortion rates, contraceptive prevalence, sexual activity and fertility rates in both settings, we measure the magnitude of approval of abortion and contraception in both areas, and determine how attitudes towards abstinence structure, or not, the rapport to contraception and abortion. By examining who is more tolerant towards contraception and abortion in each setting, and relating individuals' attitudes towards birth control to their attitudes on other topics, we will produce a number of hypotheses about the social forces driving the observed contradictory evolution between the representation and the practice of induced abortion.

1. Fertility regulation prior to the fertility transition in West Africa

Demographers sometimes forget that pre-transitional populations, if they do not practice birth limitation (they do not avoid high parity births), nevertheless actively practice birth control (Mason, 1997). Fertility was (and remains) closely controlled in pre-transitional populations, and this is true for contemporary high fertility African societies.

1.1 Abstinence prior to the fertility transition in West Africa

Switching from abstinence to sexual activity, and then back from sexual activity to abstinence, was (and still is) the main mode of fertility regulation for women in pre-transitional African populations. The first of these switches corresponds of course to women's entry into their sexual life.

The modalities of this transition were, as in all traditional societies, the object of careful scenarios, whose main feature was the occurrence of first births in the frame of marital unions. This goal was met in several ways (Caldwell, 1992): in some societies, young girls had to respect a sexual taboo on premarital (penetrative) sexuality (flirts could be encouraged), and got married while still virgin, right after their puberty, to a husband chosen by their family. In other societies, girls were allowed to have pre-marital sexual intercourse with partners of their choice, but they had to get married quickly after they became pregnant. For example, among the Lobi of Côte d'Ivoire, young girls were engaged during their childhood. They were free to have boyfriends after their initiation, but after the occurrence of a pregnancy, they quickly wed their official fiancé, who then became the father of the child (Rouville, 1987). Today, modalities of union formation are changing rapidly in rural West Africa (Bledsoe et al. 1993). Although having a birth inside of marriage is still very important, as is premarital abstinence in those societies not allowing sex before marriage, many of the old rules have become less strict. For example, in a set of villages in Mali, young women and men now often choose their spouse themselves, and women get married a later (Hertrich and Lesclingland, 2003).

After marrying and having a first child, married women were supposed to space their pregnancies by about three years, a feature specific to African fertility. Women managed these long birth intervals by breastfeeding their child for about two years, and abstaining from sexual intercourse during about the same period (Page et Lesthaeghe, 1981). For example, in a study among the Mossi in rural Burkina Faso at the end of the 1970s, Bonnet (1988) counted that women breastfed on average during 29 months, were amenorrheic for 17 months, and abstained from sexual intercourse for 22 months after each birth; the median birth interval was 33 months in that population. These results underline how women use to spend about two thirds of their reproductive married life sexually inactive in these contexts. In our study in nine (Mossi) villages in Burkina Faso in 2000, we found that rules about postpartum abstinence were, among all sexual rules, those that were the most easily relaxed by individuals (Rossier, Pictet, Ouedraogo, forthcoming); quite a few respondents felt that the use of contraception after each birth would promote conjugal harmony, and the prospect of abandoning post-partum abstinence seemed quite reasonable to most.

While observing birth spacing rules, couples were also trying to have as many children as possible (Lesthaeghe, 1989). Women stopped having sexual intercourse and pregnancies only once they reached the end of their reproductive life. For example, Bledsoe et al. (1998) showed that "traditional" couples using modern contraception in the rural Gambia in the 1990s were trying to maximize their number of children: modern contraception helped them space children, save women's energy, have more children later, and ultimately, have more children. Although people in rural Burkina do not yet limit their births at the aggregate level, we found that some of the younger informants in the villages were we worked were thinking of limiting their births in the future (Rossier, Pictet, Ouedraogo, forthcoming).

Altogether, the main goals of birth control were (and still mostly are) to bound fertility to marriage, to space births, and to maximize the number of children in rural West Africa. To reach these goals, the favored modes of fertility control were (and still mostly are): early and universal unions for girls, and in many societies, female abstinence before marriage; female abstinence after each birth; and reproduction until menopause coupled with a high rate of remarriage in case of marital separation. In other words, a number of context-specific fertility regulation goals were (and still are in large part) achieved by a *social control over women's sexuality and marriage*.

At the individual level, this mode of fertility regulation means that women and men had to manage the timing of their pregnancies by respecting (or braking, but discreetly) a set of social rules concerning women's sexuality and marriage. One of the rules we mentioned already, post partum abstinence, has a strong downward impact on fertility: this practice alone reduces women's fertility from about 15 births (the maximum average fertility) to 6 or 7 births, the average currently observed in rural Africa (Bongaarts, 1988). But pre-transitional African societies, like all societies, have numerous sexual scripts, and not all have an impact on fertility. Indeed, sexual norms fulfill an important social function apart from regulating fertility: they enable individuals to interiorize, inscribe in their body, the shape and limits of fundamental social orders such as castes or male domination (Godelier, 2004).

Because the rules on fertility and sexuality are essential for the functioning of any social organization, sanctions are planned for individuals who do not respect them[1]. For example, among the Mossi of Burkina Faso, a traditionally virilocal society, a young girl who became pregnant (had sexual intercourse) while still living at her father's house, was banned from her village (Lallemand, 1977). Today, pregnant unmarried girls are rarely banished in rural Burkina Faso. But the rejection and mockeries on the part of one's peers and family, interiorized by the culprits as "shame", are other less severe forms of punishment, which are still vivid (Rossier, Pictet, Ouedraogo, forthcoming). Pregnancies that happen in such circumstances are felt as "shameful". Indeed, if the term "unwanted pregnancy" does not exist in the local languages of West Africa, the notion of "shameful pregnancy" was and still is widespread. Shameful pregnancies are pregnancies that happen after sexual relations reproved of by dominant social and reproductive norms, that is, typically, pre-marital pregnancies, shortly spaced pregnancies, and extra-marital pregnancies (occurring while the husband was absent). In this fertility regulation system, no pregnancy is unwanted, but some are shameful.

1.2 Abortion prior to the fertility transition in West Africa

Induced abortions are precisely one way of dealing with such "shameful" pregnancies. Abortion is perceived as "shameful" itself, since it reveals, while hiding, the existence of unproper pregnancies (Bleek 1981, Johnson-Hanks 2002, Rossier, Pictet and Ouédraogo, forthcoming). If local representations severely condemn abortion as shameful, they also make space for an important nuance: pregnancy interruptions are tolerated in private, once (reproved of) sexual relations have led to an illegitimate pregnancy. Abortions become a way of « avoiding shame » (Bleek 1981), of avoiding that an illegitimate pregnancy is revealed by a shameful birth; abortion is « the lesser shame » (Johnson-Hanks 2002). The practice of abortion, although openly condemned, is of crucial importance in pre-transitional African societies, where individuals control their births by respecting relatively constraining social rules promoting female abstinence and fidelity. Since individuals sometimes

[1] Unlike in historical Christian Western societies, sexual intercourse and sexual pleasure are not viewed negatively in the moral system of traditional West Africa (Caldwell et al., 1989). When sexual intercourse is forbidden, it is not because sexual activity is a sin, but rather because sexuality, although seen as enjoyable, can be a source of social instability when illicit.

(often) bent this sexual code, (secret) abortions offer them a breathing space when they have committed a glaring offence to dominant reproductive norms.

The relative tolerance towards abortion (directly correlated to the strictness of sexual rules) is also facilitated by the fact that in local visions of reproduction, life is seen as starting rather late in the pregnancy (Renne, 1996). Life and death are seen as cyclical in traditional African societies: a birth is the passage of a spirit from the world of the dead to the world of the living; the spirit goes back to the other world when a person dies, and will come back again to the world of living with the birth of another person (Bonnet 1994; Bruyer 1997). In that vision of life and death, an abortion sends a spirit which wanted to come back to the other world, which does not prevent him or her from coming back some other time, in another pregnancy (Rossier, Pictet and Ouédraogo, forthcoming). Abortion is not seen as a final solution, as a murder.

If induced abortion plays an important role in pre-transitional societies, since it helps people take some necessary liberties with strict sexual rules, its practice was and still is probably relatively infrequent[2] (Caldwell 1975, Coeytaux 1988). A few studies have documented the existence of this phenomenon in rural West Africa, but without quantifying it: in Ghana (Bleek 1978, Bleek, 1990), Nigeria (Renne, 1996), and Burkina Faso (Ouedraogo et Pictet, 1999, Dehne, 1999)[3]. One recent work give more precise numerical information on that topic: according to Henshaw et al. (1998), there is from 10 to 13 abortion s for 1000 women in reproductive age in the rural regions of North Nigeria. Let us underline that even if these rates are low in an international perspective, they nevertheless correspond to a relatively widespread practice[4].

1.3 Contraception prior to the fertility transition in West Africa

[2] Legal abortion rates recorded in countries which have abortion statistics go from 6.5 abortions for 1000 women aged 15 to 44 in the Netherlands in 1996 to 83.3 abortion for 1000 women aged 15 to 44 in Vietnam in 1966 (Henshaw, Singh, Haas 1999). The world average being estimated at 35 abortions for 1000 women in reproductive age, abortion rates below 15 per 1000 women can be defined as « low »; pre-transitional West African populations can be thought of having “low” abortion rates (less than 15 abortions per 1000 women a year).

[3] Historical works have long shown that women had induced abortions well before the start of births limitation and the fertility decline (Devereux, 1955, Van de Walle, 1998).

[4] A “low” yearly abortion rate of about 10 abortions per 1000 women in reproductive age means that about one woman in four will have an abortion in her life in the absence of repeat abortion.

As we have seen, abortion is strongly disproved of, but perceived as a necessary evil should a shameful pregnancy occur. Modern contraception, on the other hand, seems to rather well accepted: iindividuals interviewed in surveys such as the DHS usually express a favourable opinion of contraception in rural African areas. As already mentioned, some couples in rural Gambia found contraception useful to space births, in order to enhance women's health and their number of children (Bledsoe et al. 1998). Our qualitative work in rural Burkina Faso showed general support of the use of contraception for spacing, but individuals were less enthusiastic about giving contraception to women who do not have a socially accepted sexual life (pre-marital and extra-marital relationships); some respondents were also opposed to individuals' control over their number of children, and the use of contraception for this purpose was less favoured. (Rossier, Pictet, Ouedraogo, forthcoming).

Despite rather high levels of (theoretical) support, modern or natural contraception is rarely used in rural West Africa. For example, in rural Burkina Faso in 2003, only 3% of all married women use any form of contraception according to the last DHS; this level increased only by only a few points in the villages of the Bazega province where we worked when a community distribution program was put in place (Baya et al., 1998). Using contraception indeed means planning to have sexual intercourse and wanting to avoid a child. In societies where one plans to have sexual intercourse only when the arrival of a child is socially accepted and conjugally desired, and where a high number of children is desired, contraception is understandably pointless in most cases, even when well accepted. Why use contraception to control one's fertility, when one can achieve much more respectability by abstaining, and having as many children as possible?

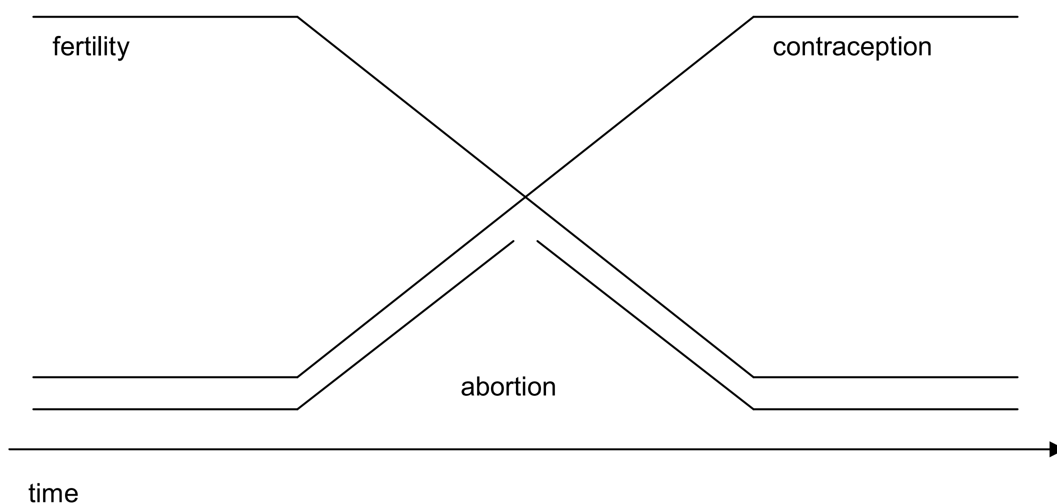
Altogether, we saw that female abstinence is the favored mode of birth control in pre-transitional African societies. Induced abortions, which are common but not frequent, allow individuals to make up for occasional dents to social rules on female sexuality. Abortion is thus condemned in general, but tolerated in particular. Contraception is usually well accepted, except when women are supposed to abstain from sexual relations, so that contraception is rather irrelevant. The introduction of modern contraception has not been followed by its adoption in this context. Today in rural West Africa, younger generations have more choice when entering their unions, favor the use of

contraception during the postpartum period, and think of limiting their births in the future: a fertility decline and a birth control transition seem to loom ahead.

2. Fertility regulation at the beginning of the fertility transition in West Africa

What happens to the use of abstinence, abortion and contraception (natural and modern) when fertility starts to decline in Africa? Based on their observation of the early European and Japanese demographic transitions, Davis (1963), Tietze and Bongaarts (1975), and Frejka (1985) have developed a theory on the reciprocal roles of contraception and abortion in meeting the increasing demand for fertility regulation characterizing the beginning of fertility transitions. To them, the incidence of induced abortion, which is low prior to the transition just like the prevalence of contraception, increases at the beginning of the decline with the use of contraception, and levels off and then declines in later phases of the transition as the diffusion of contraception continues (Figure 1).

Figure 1 : Contraception and abortion during the fertility transition



These authors were less concerned by the historical evolution of individuals' recourse to varied means of birth control than by the changing relations between abortion and the prevalence of (modern) contraception. Existing empirical studies across the world seem however to validate this theoretical model. A number of researchers have observed an increase in abortions at the beginning of

fertility declines, followed sometimes by a decrease in abortions with the diffusion of contraception, in different countries of Latin America and Asia (Hollerbach 1980; Frejka and Atkin 1996; Singh and Sedgh 1998; Westoff et al. 1998; Ahmed et al. 1998). But these works are rare, since the estimation of the evolution of clandestine abortion rates over time is a difficult task (Barreto, 1998, Rossier, 2003). Are these general trends also at work during African fertility declines? We will review now the existing literature on the evolution of practices of abstinence, abortion and contraception as fertility declines unfold in West Africa.

2.1 Abstinence at the beginning of the fertility transition in West Africa

Most young people in urban West Africa have today sexual relations before they marry; this increase in premarital sexuality is a recent trend. For example, in Ouagadougou, the median age at mariage increased from 18.0 in 1993 to 20.0 in 2003 according to DHS surveys. In the same time, the median age at first sexual intercourse increased from 18.0 to 18.6: women's entries into sexuality and into marriage have just been dissociated in that city. A qualitative enquiry shows that premarital abstinence, although still a dominant norm in Ouagadougou, seems difficult to achieve in a city where arranged and early marriage have become rare (Rossier et Soubeiga, forthcoming). Young people want to marry, and premarital sexuality is a way to discover and attach stable partners; young people also want to discover the thrills of sexual pleasure they hear of from their peers and the media, and young women sometimes use their body to get ahead in an economically harsh environment. To make a compromise between these new imperatives and their old ideals of premarital abstinence, young people often have clandestine sexual relations, or have sex only when they are sure to be in a future marital union. But they abstain less and less before marriage.

Birth intervals are longer in urban than in rural Africa: the fertility decline has not changed couples' desires to space their births. The analyses of DHS surveys also show that the mean duration of post partum abstinence is lower in African countries with lower fertility (Kirk and Pillet 1998, Benofo 1995): obviously, urbanites are abstaining less than their rural counterparts after each birth, while still achieving longer birth intervals. They are increasingly using other means than abstinence to achieve the spacing they want.

2.2 Contraception at the beginning of the fertility transition in West Africa

Modern and natural contraceptive practices are fairly widespread among married couples in the cities of West Africa. Numbers of users are especially high when considering only married women who are not abstaining (that is, who sexually active at the time of the survey) (Lasbeur, 2005). Once abstinence is taken into account, many married women protect themselves against the risk of an unwanted pregnancy in urban Africa, which is counterintuitive to a common perception of a widespread unmet need for fertility regulation. Contraception, especially medical contraception, is used to stop having children; contraception is also used to space births, but abstinence still accounts in part for the long births intervals observed in cities (Akam, 2005).

In contrast, many young urban married people do not use contraception, even when they are sexually active (Delaunay, 2005). Those who do use contraception often use natural methods or condoms, which entail greater rates of contraceptive failures for inexperienced users. Our qualitative investigation in Ouagadougou (Rossier and Soubeiga, forthcoming) shows that if young people have sex before marriage, they do so knowing they are breaking what is still a dominant sexual rule. They often do not use contraception, because they (or at least one of the partners) want to have a child in the hope of getting married, or because they do not have enough resources to avoid risk. When they do use contraception, they often use less effective natural methods or to condoms. Indeed, using medical contraception means going to service providers, who are in general reticent to prescribe contraception to unmarried women; young people also do not want to be seen is such places, especially because social networks are dense in that context, and that information circulates fast. They also do not want to risk lowering their fecundity, and medical contraception is perceived as potentially harmful in a context where bio-medical visions of bodies and sickness are far from generalized.

2.3 Abortion at the beginning of the fertility transition in West Africa

The rate of induced abortion seems to be very high in the cities of West Africa today. A handful of studies, using different estimation methods, converge on that point. Henshaw et al. (1998) estimates that there is between 32 to 46 abortions per 1000 women 15 to 44 in the urban Southern

regions of Nigeria. In Lomé in 2002, 25% of women who already had sexual intercourse declared having had at least one abortion (Beguy et Ametepe 2004). Similarly, about one third of the interviewed women in Abidjan in 1998, 1997 and 1996 declared having had an abortion (Guillaume, 2003, Desgrées du Loû et al. 1999).

But induced abortions in that setting seem to concern disproportionately young, unmarried people. In Abidjan, Guillaume and Desgrées du Lou (2002) conclude from their data that abortions are mainly used to delay women's first birth. In Lomé in 2002, the estimated abortion risk is 20 times higher for single women than for married ones (Beguy et Ametepe, 2004). In Ouagadougou in 2001, the abortion rate is 10 times higher for teenagers than for women over 40 years (Rossier, Guiella et al., 2006). So, not only is the level of induced abortion much higher once the fertility decline has started in Africa, but the timing and reasons of abortion seems to have shifted. An anthropological study in a small town in Nigeria covering two decades showed that if induced abortion seemed to be used in the 1970s mainly to avoid the shame of too closely set pregnancies, this means of birth control seems to concern in the 1990s mainly women who have a premarital pregnancy (Renne, x).

However, induced abortion in cities still help eliminate "shameful" pregnancies, even if the definition of what "shameful" pregnancies are have changed because of important evolutions in union formation modes and in the role of sexuality inside marriages. Induced abortion is still probably perceived as "shameful" in African cities, although no study has examined this question to date. Representations of abortion may be even more severe than in pre-transitional African societies. Indeed, our qualitative study in rural Burkina (Rossier, Pictet, Ouedraogo, forthcoming) showed that Christian, younger villagers or those who had gone to school more strictly condemned abortion than others. An important reason for this shift seems to lie in these individuals' visions of the beginning of life: moving away from a cyclical vision of life and death, of a vision where life starts only late in the pregnancy, they adopted a more scientific and Christian vision, where every life is unique and starts right after fecundation: induced abortion has become a murder.

Altogether, birth control practices and visions seem to change greatly with the onset of the fertility decline in Africa. The recourse to pre-marital abstinence and post partum abstinence has

decreased in West African cities where the fertility decline is well underway; if post-partum abstinence does not seem to be a big deal for urban residents anymore, premarital sexuality still seems to remain the object of strict moral condemnation. The recourse to modern and natural contraception has increased, especially for limiting the number of births; it also replaces to some extent abstinence for spacing, but meets only part of the fertility regulation needs of young non-married couples. The recourse to induced abortion has increased greatly, especially for young unmarried couples. Attitudes towards abortion may have become less tolerant, but not much is know about individuals' meanings of birth control in urban West Africa.

3. Data and methods

In this section, we will first summarize how we measured the incidence of abortion, contraceptive prevalence and the practice of abstinence in both the urban and rural survey. We will then explain how we construct and analyse the data on respondents' attitudes towards contraception, abortion and abstinence. Finally, we will describe briefly the rural and the urban samples.

3.1 Measuring fertility and the practice of abortion, contraception and abstinence

In both studies, we used a new method to collect quantitative data on clandestine abortion, the confidants' method (Rossier 2002, Rossier et al., 2006). Preliminary ethnographic work showed that individuals are aware of their close friends' induced abortions in the study context: women usually talk to their peers about the unintended pregnancy and ask them for help in locating illegal abortion providers. In a survey of 963 women of reproductive age representative of the city of Ouagadougou, we asked respondents to list their close friends, and, for each of them and for each of the 5 years preceding the survey, whether they had an induced abortion. We estimated the incidence of abortion in the nine villages by asking a representative sample of 1055 women how many induced abortions occurred in their village the preceding year.

We asked women in both surveys, using classic DHS questions, whether they were currently using contraception, and if yes, what method they were using (including natural methods). In the urban survey, we included additional questions asking specifically women if they were currently using post-

partum abstinence, periodic abstinence or withdrawal, before asking questions on modern methods. The contraceptive prevalence in the rural sample is close to the results of other data sources (Rossier, 2002). We also asked women whether they had sexual intercourse during the month prior to the survey, and combining this measure with current marital status, we computed indicators of marital and premarital abstinence. A first analysis of the sexual activity data showed that the proportion of women being currently sexual activity is low in the rural sample compared to the 1998 DHS (Rossier, 2002, p. 178). Fertility data were collected in both samples using DHS questions, and the computed fertility rates are very close to other existing data sources (Rossier 2002, Rossier et al. 2006).

3.2 Constructing attitudinal data on abortion, contraception and abstinence

To frame attitudes toward abortion, Western surveys generally ask several question that test under which conditions the respondent views abortion as an acceptable act (Cook and Wilcox 1993). The different conditions are supposed to form a gradation. 'Physical' circumstances that can legitimize an abortion (such the health of the mother being endangered by the pregnancy, or the foetus presenting an anomaly) are distinguished from 'social' circumstances, such as the father's absence, unfavorable economic conditions, or an already numerous progeny (Benin 1985). The latter reasons are in principle less easily accepted by respondents. The extreme positions are held on the conservative side by people opposing abortion regardless of circumstances, and on the liberal side, by people accepting abortion regardless of circumstances. Shades of acceptance are captured by adding the number of reasons to which individuals agree. These indicators of tolerance towards abortion can then be related to socio-demographic characteristics, and, in more sophisticated studies, to other dimensions of individuals' meaning systems.

Acceptance of abortion is thus measured in surveys for different scenarios in which a woman may need to interrupt her pregnancy or control her fertility, providing a complex picture of attitudes towards abortion. We decided to collect our respondents' ideas on abortion using this methodology, and to apply the same method to grasp ideas on modern contraception. We therefore also asked questions about the acceptability of contraceptive use in different situations where a woman may need to control her fertility.

However, since situations demanding fertility control are culturally defined, we needed to adapt this methodology to understand bodies of meaning on contraception and abortion in the sub-Saharan context. To do so, we conducted preliminary qualitative work: a stay of 5 month in a village and in-depth interviews with 12 key informants for the rural study; 30 semi-structured interviews with a diverse sample of respondents recruited using the snow ball technique for the urban study. These data helped us design a scale of different, more or less easily acceptable, reasons to tolerate an abortion (4 in the rural and 6 in the urban questionnaire, Table 1). Among the situations described, several referred to situations were abstinence would have been traditionally preferred: extra-marital relations, pre-marital relations, and, in the village only, being post-partum.

Table 1: Phrasing of different attitudes questions on abortion and contraception

Rural sample		Urban sample	
contraception	**abortion**	**contraception**	**abortion**
Certains disent que: La contraception, c'est bien pour les femmes qui ne veulent plus accoucher. Etes-vous d'accord ou pas d'accord?	Certains disent que: Faire venir les règles, ça peut se justifier pour une femme qui a une grossesse qui la fait souffrir. Etes-vous d'accord ou pas d'accord?	Certains disent que la contraception moderne, c'est bien si la santé de la femme mariée exige qu'elle évite une grossesse. Etes-vous d'accord ou pas d'accord ?	Certains disent qu'un avortement, ça peut se justifier si la grossesse met la santé de la femme en danger. Etes-vous d'accord ou pas d'accord ?
Certains disent que: La contraception, c'est bien pour les femmes dont les enfants ne sont pas encore éveillés, et qui veulent se reposer. Etes-vous d'accord ou pas d'accord?	Certains disent que: Faire venir les règles, ça peut se justifier pour une femme dont l'enfant qu'elle tient dans la main est encore petit. Etes-vous d'accord ou pas d'accord?	Certains disent que la contraception moderne, c'est bien si le couple marié n'a pas les moyens d'avoir un enfant de plus à ce moment. Etes-vous d'accord ou pas d'accord ?	Certains disent qu'un avortement, ça peut être la seule solution pour un couple marié qui n'a pas les moyens d'avoir un enfant de plus à ce moment. Etes-vous d'accord ou pas d'accord ?
Certains disent que: La contraception, c'est bien pour les jeunes filles qui savent qu'elles ne peuvent pas se maîtriser. Etes-vous d'accord ou pas d'accord?	Certains disent que: Faire venir les règles, ça peut se justifier si par exemple on n'a pas pu empêcher une fille de se promener. Etes-vous d'accord ou pas d'accord?	Certains disent que la contraception moderne, c'est bien pour les couples non mariés mais qui pensent se marier un jour, ou le jeune homme par exemple qui n'a pas les moyens. Etes-vous d'accord ou pas d'accord ?	Certains disent qu'un avortement, ça peut être la seule solution si le couple n'est pas marié, ils ont une relation solide, mais le jeune homme par exemple n'a pas les moyens. Etes-vous d'accord ou pas d'accord ?
	Certains disent que: Faire venir les règles, ça peut se justifier s'il se trouve qu'une femme a pris une grossesse alors que ce n'est pas celle de son mari. Etes-vous d'accord ou pas d'accord?	Certains disent que la contraception moderne, c'est bien pour les couples non mariés, mais qui ne sont pas prêt à s'engager, par exemple si l'un des deux n'est pas sérieux. Etes-vous d'accord ou pas d'accord ?	Certains disent qu'un avortement, ça peut être la seule solution pour un couple qui n'est pas marié, et n'est pas prêt à s'engager, par exemple si l'un des deux n'est pas sérieux. Etes-vous d'accord ou pas d'accord ?
		Certains disent que la contraception moderne, c'est bien pour permettre à une femme mariée de poursuivre ses activités. Etes-vous d'accord ou pas d'accord ?	Certains disent que l'avortement, ça peut être la seule solution pour une femme mariée qui veut poursuivre ses activités et qui tombe en grossesse. Etes-vous d'accord ou pas d'accord ?
			Certains disent que l'avortement, ça peut être la seule solution en cas d'adultère, par exemple quand un homme marié a enceinté une jeune fille ou une femme qui a été enceinte par un jeune homme. Etes-vous d'accord ou pas d'accord ?

Another methodological innovation is that we applied a similar scale of approval to measure tolerance towards contraception. In the DHS surveys, individuals are merely asked if they approve of contraception; in Western countries, attitudes towards contraception hare not explored in such details. Here, we defined different situations in which contraception could be seen as more or less acceptable (5 in the urban and 3 in the rural questionnaire, Table 1). Among these situations are some where couples were not supposed to have sexual relations according to dominant sexual norms (pre-marital couple, and in the rural sample only, after the birth of a child).

We analysed these attitudinal data as follows. We first describe the respondents' approbation of abortion and contraception in different situations, and order the situations according to how much approbation they foster. An analysis of this order shows whether people think differently about abortion and contraception for situations of illegitimate sexuality, and if these differences are the same in the urban and rural sample. We verify that this order at the aggregate level is also the logical gradient used by individuals separately. We then construct a single indicator of tolerance towards abortion and contraception for both samples, adding the number of reasons for which abortion and contraception are tolerated. One difficult is that questions were asked somewhat differently in the two samples, so that we have to restrict the comparison to those items, which are more directly comparable. We are then able to compare more rigorously the general levels of tolerance between the two settings, and between men and women.

We finally perform a series of linear regressions of diverse socio-demographic variables (religious affiliation, sex, education, age, proxy of poverty /affluence level, marital status, migratory status, ethnicity) on individuals' degree of tolerance towards abortion and contraception in each sample. In both samples, a proxy of poverty level was constructed from variables indicating the possession of the household of varied goods; the household goods considered were not the same in the city (television, VCR, telephone, refrigerator, transportation means) and in the villages (radio, plow, cart, transportation means, draft animal, breeding animal). In both cases, a principal component analysis was performed on the selected variables, and the factorial scores, with one more mathematical transformation, yield an indicator of poverty / richness for each individual; this indicator was

separated in five equal classes in the urban sample, four equal classes in the rural sample, so as to give, the quartile or quintile of poverty / richness in each sample.

Finally, another series of linear regression in the rural sample only relate attitudes towards abstinence, towards life and death, and the role of God in fertility decisions, to the tolerance scales towards abortion and contraception. Each of these dimensions is grasped by three questions (Table 2), which we added to form three attitudinal scales. The variables were collected for the rural sample only, after an extensive qualitative enquiry whose results are described in Rossier, Pictet, Ouédraogo (forthcoming).

Table 2: Phrasing of different attitudes questions on abstinence, fertility limitation, and life and death

Rural		
Abstinence	**Role of God in fertility decisions**	**Life and death**
Certains disent que: De nos jours, il est difficile pour la plupart des jeunes de pratiquer l'abstinence Etes-vous d'accord ou pas d'accord?	Certains disent que: Une femme qui prend des comprimés n'aura pas le nombre d'enfants qui lui étaient destiné par Dieu Etes-vous d'accord ou pas d'accord?	Quand un petit enfant meurt, c'est triste, mais certains disent qu'il reviendra Etes-vous d'accord ou pas d'accord?
Certains disent que: De nos jours, il est difficile à une femme et son mari de se maîtriser après la naissance d'un enfant Etes-vous d'accord ou pas d'accord?	Certains disent que: Les kinkirsi des enfants qui sont empêchés de venir vont se venger sur la femme qui prends de comprimés Etes-vous d'accord ou pas d'accord?	Certains disent que: Un vieux qui meurt, il reviendra un jour dans un enfant du lignage Etes-vous d'accord ou pas d'accord?
Certains disent que: Une jeune fille qui tombe enceinte chez ses parents, de nos jours, ce n'est plus vraiment une honte, car c'est fréquent Etes-vous d'accord ou pas d'accord?	Certains disent que: Le nombre d'enfants n'est pas décidé par Dieu, mais par le mari et sa femme, ou la famille Etes-vous d'accord ou pas d'accord?	Certains disent que: Un ventre qui se gâte, ce n'est pas grave, c'est une grossesse qui reviendra Etes-vous d'accord ou pas d'accord?

3.3. The rural and urban samples

Our rural study site was a health district of 9 villages close to the capital. Its total population was 7498 at the same time of the survey, of which 1554 women in reproductive ages (we performed a census at the same time as the survey). The sampling strategy entailed one level of cluster. Compounds were chosen at random (using a lists of compounds established in 1995), and in each selected compound, all women aged 15 to 49 and one man aged 18 or above chosen at random were selected. This sampling strategy means that the sample results are representative of women in average compounds in the study site, and not of average women in the study site. We interviewed a sample of 1055 women aged 15 to 49 (a sampling rate of 67.9%, with a response rate of more than a 100%, the census having obviously missed some women) and 450 men. Weights were calculated to combine

men and women, so that together, they are representative of men and women of reproductive ages of an average compound in the nine villages.

We administered the urban questionnaire to a representative sample of men and women living in Ouagadougou in November 2001.We adopted a two-stage cluster sampling procedure. Using city-wide data from the 1996 census, updated for non-zoned areas, we randomly drew 57 census tracks weighted by their population. We then enumerated the population in the selected census tracks, and randomly drew households weighted by their size. All women aged 15 to 49 were interviewed in the selected households. A separate sample of households was constituted for the sample of males (aged 15 and above). 82% of the selected men and 84% of the selected women completed the questionnaire: altogether, 963 women aged 15 to 49 and 417 men aged 15 and above were interviewed. Weights were calculated for each individual, to render the two samples representative women and men of reproductive age in Ouagadougou.

4. Results : practices of birth control in rural and urban Burkina Faso

As we can see (Table 3), the fertility level in rural Burkina as a whole was 7.3 in 1998 (DHS data). The fertility rate observed in the nine villages in 2000 varied from 6.6 to 5.3 children per woman: lower rates were observed in the villages lying closer to the road to Ouagadougou. We ordered here the villages by their fertility level; note that we grouped close-by villages together to obtain six village groups homogenous in size. Ouagadougou, with a total fertility rate of 3.4 in 2001 was the most advanced in its fertility transition, which is progressing rapidly: the fertility level was 3.1 in 2003 (DHS data).

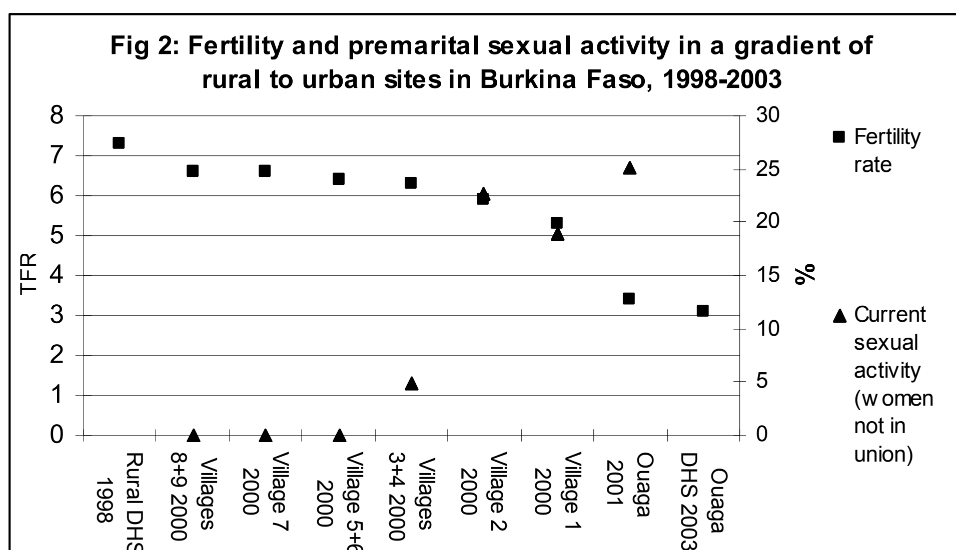
We see (Figures 2 and 3) that female sexual activity increases at the onset of the fertility decline in our setting: women are having more sex outside of marriage as well as inside of marriage (less post-partum abstinence). As predicted by demographic theories on the role of abortion and contraception in bringing about fertility decline, we see that the recourse to both modern and natural contraception is increasing as fertility drops (Figures 4 and 5). Induced abortion is increasing as well: as a matter of fact, in Burkina Faso, contraception has yet not spread enough to reduce the number of induced abortions, even in the capital city (Figure 6).

Table 3: Fertility, sexual activity, contraception and induced abortion in a gradient of rural to urban sites in Burkina Faso, 1998-2003

All women 15-49 (unless specified)	Rural DHS 1998	Villages 8+9 2000	Village 7 2000	Village 5+6 2000	Villages 3+4 2000	Village 2 2000	Village 1 2000	Ouaga 2001	Ouaga DHS 2003
Fertility rate	7.3	6.6	6.6	6.4	6.3	5.9	5.3	3.4	3.1
Current sexual activity (not in union)		0	0	0	4.8	22.7	19.0		
Current sexual activity (in union)		11.3	33.1	20.2	14.3	25.4	24.7	47.4	
Current sexual activity	33.4	9.8	29.3	18.2	12.7	25.1	23.5	39.4	38.9
Modern contraceptive use	2.6	3.1	4.3	5.9	4.8	6.2	8.4	36.6	29.5
Natural contraceptive use	4.2	1.6	2.5	1.3	9.0	2.9	2.5	34.6	6.2
Induced abortion rate		4.3	12.6	9.2	12.2	12.8	22.1	39.9	

Note: Natural contraceptives are periodic abstinence and withdrawal. In the rural sample, pregnant and menopaused women are not counted in the denominator for contraceptive use. Sources: *« Stratégies Reproductives en Milieu Rural » survey, 2000, Unité d'Enseignement et de Recherche en Démographie, Université de Ouagadougou, Enquête Santé de la Reproduction à Ouagadougou, 2001, Unité d'Enseignement et de Recherche en Démographie, Université de Ouagadougou, DHS Burkina 1998-89 Macro International, DHS 2003, Macro International.*

As we can see, the small sample sizes in the villages render the curves of increasing sexual activity and increasing contraceptive use somewhat blurred: one notices however a distinct upwards trend for these different quantities as fertility declines. Also, we did not ask the standard DHS questions on contraceptive use in the 2001 Ouaga survey, but enquired first and specifically about natural methods: as we can see, reports of both natural and modern methods are greater in our survey than in the 2003 DHS. Work elsewhere (Sardon, xx) has shown the difficulty of capturing natural methods, and the need to ask additional questions on them.



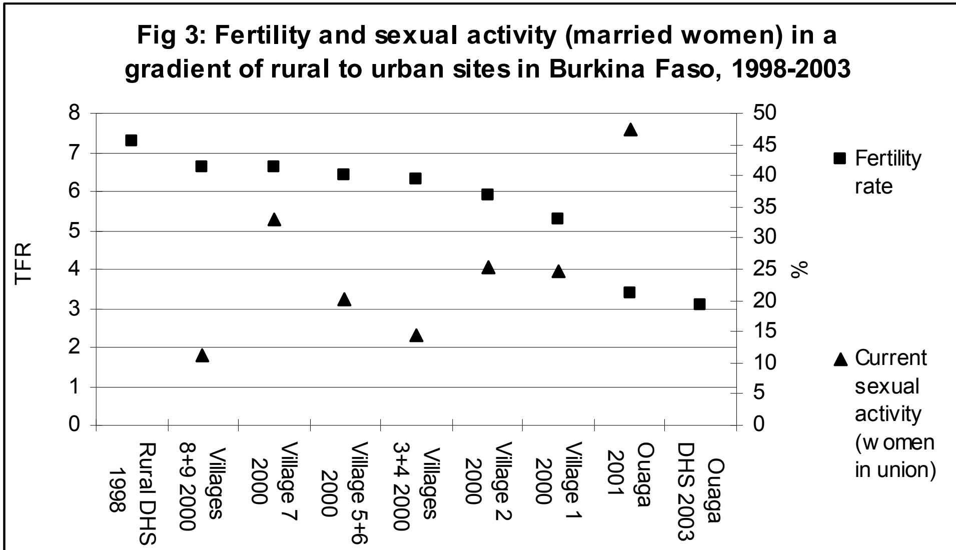


Fig 3: Fertility and sexual activity (married women) in a gradient of rural to urban sites in Burkina Faso, 1998-2003
TFR
%
Fertility rate
Current sexual activity (women in union)
Rural DHS 1998
Villages 8+9 2000
Village 7 2000
Village 5+6 2000
Villages 3+4 2000
Village 2 2000
Village 1 2000
Ouaga 2001
Ouaga DHS 2003

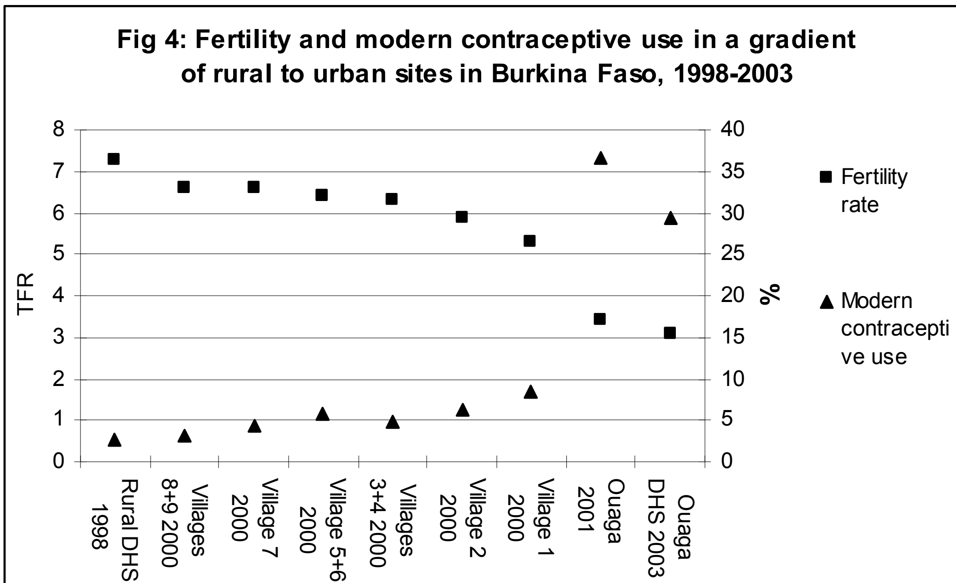


Fig 4: Fertility and modern contraceptive use in a gradient of rural to urban sites in Burkina Faso, 1998-2003
TFR
%
Fertility rate
Modern contraceptive use
Rural DHS 1998
Villages 8+9 2000
Village 7 2000
Village 5+6 2000
Villages 3+4 2000
Village 2 2000
Village 1 2000
Ouaga 2001
Ouaga DHS 2003

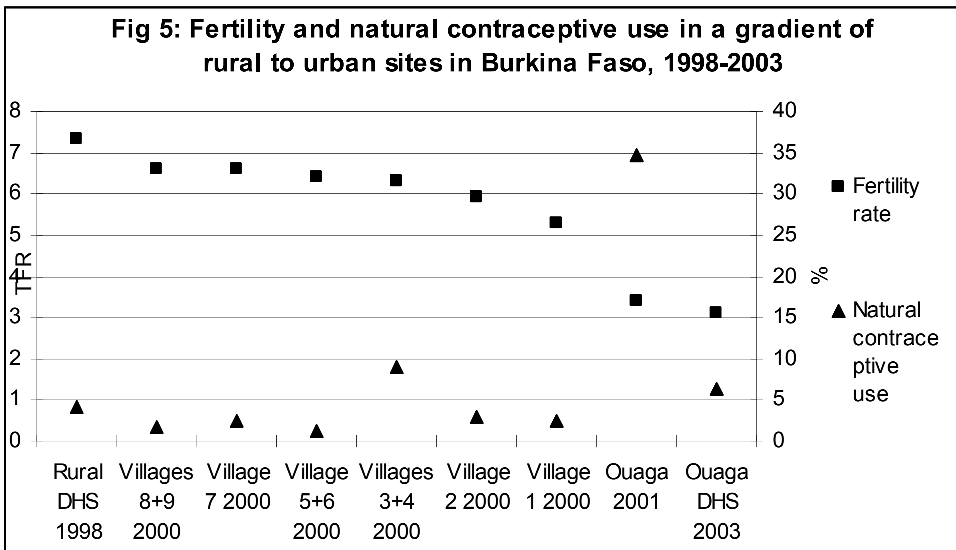
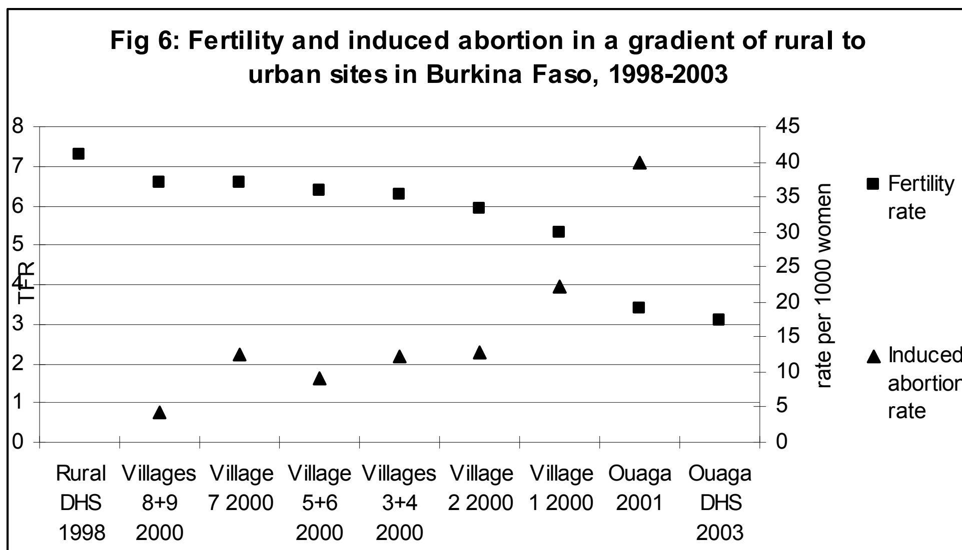


Fig 5: Fertility and natural contraceptive use in a gradient of rural to urban sites in Burkina Faso, 1998-2003
TFR
%
Fertility rate
Natural contraceptive use
Rural DHS 1998
Villages 8+9 2000
Village 7 2000
Village 5+6 2000
Villages 3+4 2000
Village 2 2000
Village 1 2000
Ouaga 2001
Ouaga DHS 2003



5. Results : visions of birth control in rural and urban Burkina Faso

As we can see (Table 4), about two thirds of our rural respondents think the use of contraception is acceptable to limit birth or for unmarried couple, and about one quarter disagree: the agreement is more pronounced (80%) when contraception is meant to replace post-partum abstinence. Although contraception is well accepted in our rural survey overall, the idea of limiting one's number of births and to have sex outside of marriage, and the use of contraception in both these occasions, still meets a fair number of oppositions in the population.

Urban respondents, just like rural respondents, agree in their majority that using contraception is acceptable: their acceptation is somewhat more pronounced than that of rural respondents (about three quarters of urbanites agree with contraception against two thirds of rural respondents, whatever the reason) (Table 5). Just like rural respondents, urban respondents disagree more often with contraception in the case of unmarried couples (a quarter of urban respondents do not agree with this idea), but unlike rural respondents, they do not disapprove contraception more to limit the number of births[5]. Also, urban respondents make less of a difference in their approval of contraception between married and unmarried couples than rural respondents.

[5] Agreement is even weaker when women' activities is the reason give to use contraception (a third of respondents do not agree with this proposition); this question was not asked in he rural sample.

Table 4 : Attitudes towards contraception and abortion by reason for acceptance, nine villages in Burkina Faso, 2000, n= 1522.

It is acceptable to use contraception when	The couples does not want more children %	The last child is still small %	The couple is unmarried %	
Completely agrees	53,0	68,0	51,4	
Partly agrees	11,2	11,6	12,5	
Partly disagrees	8,7	3,7	10,0	
Completely disagrees	15,2	8,4	15,2	
Don't know	11,9	8,3	10,9	
N	1497	1495	1494	
It is acceptable to use abortion when:	Pregnancy with health problems%	The last child is still small %	The couple is unmarried %	The couple is adulterous %
Completely agrees	18,4	19,9	20,1	24,0
Partly agrees	9,5	10,3	9,1	9,2
Partly disagrees	9,6	9,3	10,9	11,5
Completely disagrees	49,4	49,1	46,5	44,5
Don't know	13,1	11,5	13,5	10,8
N	1495	1494	1494	1492
Source: « Stratégies Reproductives en Milieu Rural » survey, 2000, Unité d'Enseignement et de Recherche en Démographie, Université de Ouagadougou.				

A majority of rural population respondents disapprove of induced abortion: about 60% of the respondents find induced abortion unacceptable when the pregnant woman encounters health problems, when the last child is small, when the couple is not married, and when the couple is adulterous, and about 30% find it acceptable for all these reasons. Abortions in case of "shameful" pregnancies meet a somewhat higher degree of agreement, especially when the couple is not married and adulterous, but the differences are not marked.

Urban respondent's attitudes towards abortion vary in one way from that of their rural counterparts. Their opposition towards abortion is stronger: for most reasons, about 90% of them disagree with abortion[6]. But urban respondents, like rural respondents, are more open to abortion for "shameful pregnancies" (unmarried and adulterous couples), and the difference are more pronounced than in the rural sample.

[6] Urban respondents make an exception when women health is at stake, in which case a majority finds abortion acceptable; in the rural sample, the question on health conditions was asked different (having "health problems" and not "having one's life endangered"), and the two "health" questions are not comparable.

Table 5 : Attitudes towards contraception and abortion by reason for acceptance, Ouagadougou, Burkina Faso, 2001, n= 1380.

It is acceptable to use contraception when	Woman's health is in danger %	The married couple does not want a child (now) %	The couple is unmarried but want to get married %	The couple is unmarried and does not want to get married %	The married woman wants to pursue her activities %	
Compl. Agrees	69,6	66,6	63,2	63,7	54,0	
Partly agrees	8,0	9,0	7,4	6,7	9,9	
Partly disagrees	4,7	5,4	6,5	5,2	6,7	
Compl. Disagrees	10,2	13,7	17,7	19,4	24,5	
Don't know	7,6	5,2	5,2	4,9	5,0	
N	1373	1379	1377	1376	1376	
It is acceptable to use abortion when:	Woman's health is in danger %	The married couple does not want a child (now) %	The couple is unmarried but want to get married %	The couple is unmarried and does not want to get married %	The married woman wants to pursue her activities %	The couple is adulterous %
Compl. Agrees	49,0	6,1	5,1	9,3	2,9	9,9
Partly agrees	5,9	3,4	3,0	2,9	1,7	9,1
Partly disagrees	7,4	3,6	3,2	3,3	2,4	4,8
Compl.disagrees	34,3	85,6	87,3	82,7	91,7	72,3
Don't know	3,4	1,3	1,4	1,8	1,3	4,0
N	1374	1374	1374	1376	1374	1362

Source : Enquête Santé de la Reproduction à Ouagadougou, 2001, Unité d'Enseignement et de Recherche en Démographie, Université de Ouagadougou.

To synthesize these results, we joined the two "agree" categories together, and the two "disagree" categories together, the third modality being "Do not know" (Table 6). We also reduced the analysis to those questions on abortion and contraception, which were comparable. To capture respondents' attitudes towards contraception, we kept two questions in each sample: 1) the couple is married but does not want a child (two versions of this question exist in the rural sample: limiting or spacing); 2) the couple is unmarried (two versions of this questions in the urban sample: wants to get married or not). To measure respondents' attitudes towards abortion, we kept three questions in each sample: 1) the couple does not want a child (now); 2) the couple is unmarried and does not want to get married; 3) the couple is adulterous. We ordered these reasons according to how many people disagreed with them, in the urban and rural samples. We see that more rural respondents are unsure how to answer these questions than urban respondents, and that the letter especially sure of themselves when they give their opinion about abortion.

Table 6 : Attitudes towards contraception and abortion for three reasons of acceptance in nine villages and in Ouagadougou, Burkina Faso, 2000 and 2001, n= 1522 and 1380.

Rural sample			
It is acceptable to use contraception when:	The couples does not want more children: spacing %	The couples does not want more children: limiting %	The couple is unmarried %
Disagrees	12,1	23,9	25,2
Agrees	79,6	64,2	63,9
Don't know	8,3	11,9	10,9
N	1495	1497	1494
It is acceptable to use abortion when:	The couple is adulterous %	The couple is unmarried %	The couple does not want a child (now) %
Disagrees	56,0	57,3	58,4
Agrees	33,2	29,2	30,2
Don't know	10,8	13,5	11,5
N	1492	1494	1494
Urban sample			
It is acceptable to use contraception when:	The couple does not want a child (now) %	The couple is unmarried but wants to get married %	The couples does not want more children: spacing %
Disagrees	19,2	24,2	24,7
Agrees	75,6	70,6	70,4
Don't know	5,2	5,2	4,9
N	1379	1377	1376
It is acceptable to use abortion when:	The couple is adulterous %	The couple is unmarried %	The couple does not want a child (now) %
Disagrees	77,1	86,1	89,2
Agrees	18,9	12,2	9,5
Don't know	4,0	1,8	1,3
N	1362	1376	1374

Source : « Stratégies Reproductives en Milieu Rural » survey, 2000 and Enquête Santé de la Reproduction à Ouagadougou, 2001, Unité d'Enseignement et de Recherche en Démographie, Université de Ouagadougou.

We then verified that this order at the aggregate level is also the logical gradient used by individuals separately. For example, do those individuals who agree with the second most easily accepted reason to use contraception also agree with the first most easily accepted reason? Table 7 shows the algorithm used to determine how many urban respondents follow the aggregate order when it comes to their opinions on the different reasons to accept contraception. Table 8 gives the proportion of respondents having "logical" opinions on contraception and abortion in each sample: we see that about 8 individuals out of 10 are "logical", except for opinions on abortion in the urban sample, where about 9 individuals out of 10 are "logical": this topic seems to meet a widespread consensus in the city. Individuals who gave "do not know" answers to at least one of the question on contraception (or abortion) were excluded from the calculations of the proportion of "logical" respondents on contraception (or abortion).

Table 7: Proportion of individuals who follow the aggregate order in their acceptance of three reasons to use contraception, Ouagadougou, 2001, n= 1262

The couple is unmarried and does not want to get married	The couple is unmarried but want to get married	The couples does not want more children	Number of observations	Number of "logical" individual
0	0	0	103	103
		1	90	90
	1	0	17	
		1	79	79
1	0	0	31	
		1	69	
	1	0	94	
		1	779	779
		83,3%	1262	1051
Source : Enquête Santé de la Reproduction à Ouagadougou, 2001, Unité d'Enseignement et de Recherche en Démographie, Université de Ouagadougou.				

Tableau 8: Proportion of individuals who follow the aggregate order in their acceptance of different reasons to use contraception and abortion in nine villages and in Ouagadougou, Burkina Faso, 2000 and 2001,

	Contraception		**Abortion**	
	Urban	**Rural**	**Urban**	**Rural**
All	81,4	80,2	90,4	80,1
N	x	x	x	x
Source : « Stratégies Reproductives en Milieu Rural » survey, 2000 and Enquête Santé de la Reproduction à Ouagadougou, 2001, Unité d'Enseignement et de Recherche en Démographie, Université de Ouagadougou.				

We then constructed a single indicator of tolerance towards abortion and contraception for both samples, adding the number of reasons for which abortion and contraception are tolerated, including only those individuals who have an opinion on every item, but not restricting ourselves to "logical" individuals (Table 9). We reduced the number of variables used for contraception to two variables, choosing the "limiting" variable for married couples in the rural sample, and the "does not want to marry" for unmarried people in the rural sample. These indicators allow us to compare more strictly the levels of tolerance towards abortion and contraception between the rural and the urban setting, and the male and female samples.

We see as previously (Figure 7) that urban respondents are slightly more approving of contraception than rural respondents. Villagers are more likely than urbanites to approve of contraception only for one reason, that is for married couples, and not for unmarried couple. Attitudes towards premarital abstinence are obviously more relaxed in the city, so that contraception for

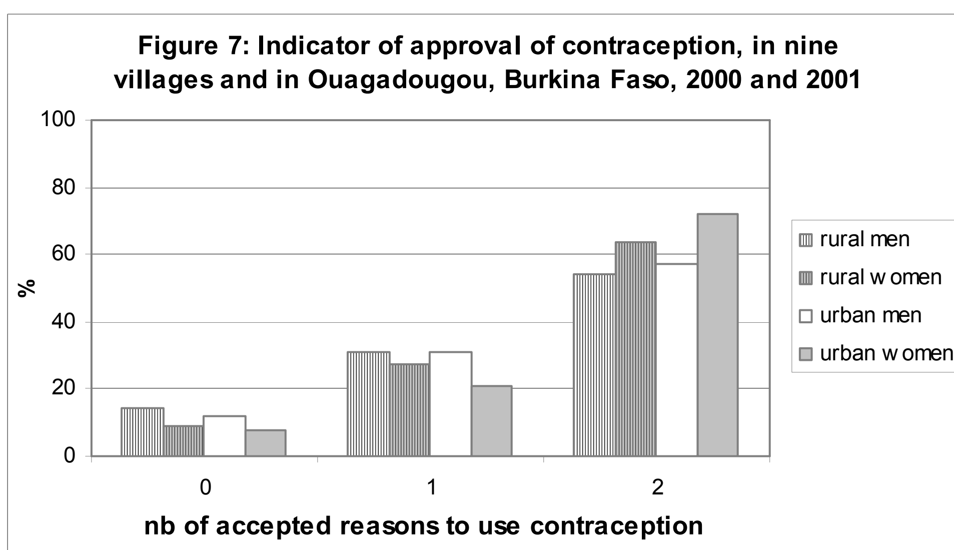
unmarried couples is also seen as more acceptable there. Women approve of contraception more easily than men, both in the rural and urban samples.

Tableau 9: Indicator of approval of contraception and abortion in nine villages and in Ouagadougou, Burkina Faso, 2000 and 2001,

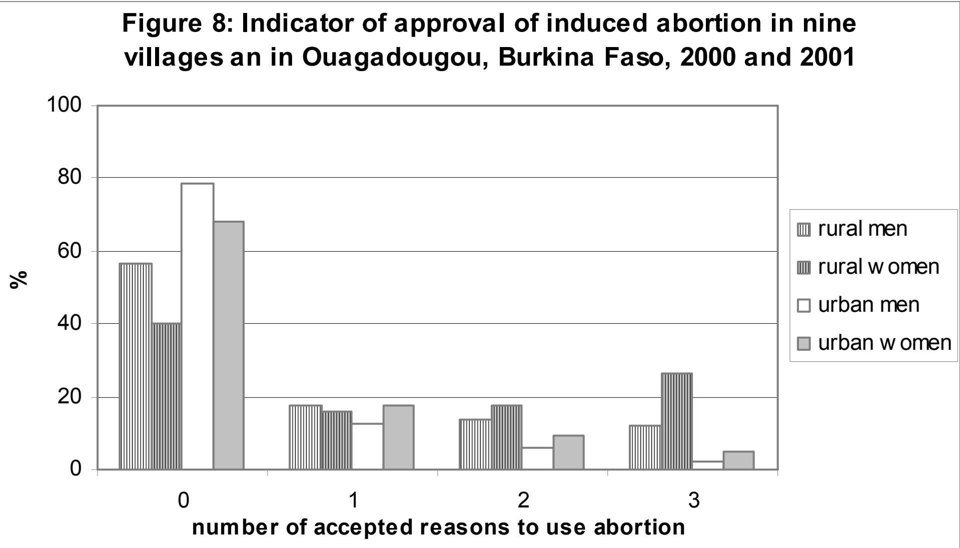
	Rural			Urban		
Nb of reasons accepted to use contraception	**Men**	**Women**	**All**	**Men**	**Women**	**All**
0	14.4	8.9	11.7	11.9	7.9	10.0
1	31.2	27.4	29.3	30.9	20.7	26.1
2	54.3	63.7	59.0	57.3	71.8	64.0
n	381	864	1245	394	880	1274
Nb of reasons accepted to use abortion						
0	56.8	40.2	48.4	78.8	68.3	73.9
1	17.4	16.1	16.8	12.7	17.5	14.9
2	13.8	17.7	15.7	6.1	9.5	7.7
3	12.1	26.1	19.1	2.4	4.8	3.5
n	363	833	1196	401	884	1285

Source : « Stratégies Reproductives en Milieu Rural » survey, 2000 and Enquête Santé de la Reproduction à Ouagadougou, 2001, Unité d'Enseignement et de Recherche en Démographie, Université de Ouagadougou.

Differences in opinions on abortion (Figure 4) are more pronounced between sexes and between settings compared to opinions on contraception: women are markedly more tolerant towards abortion than men, and rural respondents are much more open on this issue than urban respondents. As a result, only 40% of rural women disapprove of abortion in any of the proposed situation when 79% of urban men do not tolerate abortion in any circumstance (remember that the reason "the woman's life is in danger" is not included in this analysis).



Most respondents who are more tolerant of abortion accept just one circumstance where they think this practice is justified: in case of pregnancies resulting from adulterous relationships. Rural women are different from all other respondents in that regard: when they are tolerant towards abortion, they are more likely to accept all the proposed reasons as acceptable justifications of this practice, and not just one. The likely explanation for this feature is that rural women feel that all the situations described involve improper sexual relations. Indeed in more traditional visions of reproduction, postpartum sex, premarital sex, and adulterous sex are all seen as “shameful”. In other words, they are more tolerant towards abortion, because they are have more strict standards of sexual behaviour.



Villagers approve more of contraception when they are poor, when they are married or ever married, ad when they have a primary education compared to no education at all (Table 10). As expected, people following the traditional religion approve less of contraception than people adhering to a revealed religion (Christians or Muslims) (this is true only for men, results by sex not shown); Muslims are more likely than Christians to approve of contraception (this is true only for women, results by sex not shown). People would lived for sometime outside of their village, either in a foreign country or in the city, were less likely to approve of contraception than those villagers who never migrated. Ethnicity, age and sex have no relation with attitudes towards contraception in the sample villages, once other factors are controlled for.

Tableau 10: Linear regression of individuals’ socio-demographic variables on their approval of contraception and abortion in nine villages, Burkina Faso, 2000, n=942.

	Contraception		Abortion	
Variables	**Standard estimate**	**P > |T|**	**Standard estimate**	**P > |T|**
Age	-0.03	0.18	-0.01	0.00
Christian Traditional Muslim	ref. -0.38 0.11	 0.00 0.02	ref. 0.00 -0.14	 0.99 0.10
Has not lived + 6 months out of BF Has lived + 6 months out of BF	ref. -0.11	 0.06	ref. -0.18	 0.08
Has not lived + 6 months in the city Has lived + 6 months in the city	ref. -0.11	 0.08	ref. -0.10	 0.39
Single Married Div / sep / widowed	ref. 0.23 0.24	 0.00 0.08	ref. 0.27 0.07	 0.04 0.78
No education Primary Secondary or more	ref. 0.16 -0.04	 0.02 0.74	ref. -0.09 -0.08	 0.51 0.73
1st quartile of poverty 2nd quartile of poverty 3rd quartile of poverty 4th quartile of poverty	ref. -0.26 -0.31 -0.22	 0.15 0.08 0.21	ref. -0.73 -0.67 -0.64	 0.03 0.05 0.05
Mossi Peul Other	0.30 0.54 ref.	0.50 0.35	-0.96 -0.27 ref.	0.48 0.87
Men Women	ref. 0.01	 0.87	ref. 0.17	 0.09
Source : « Stratégies Reproductives en Milieu Rural » survey, 2000. R-square = 0.05				

Urban respondents(Table 11), just like rural respondents, approve more of contraception when they are very poor, than when they have a medium to low income; when they are richer on the other hand, they are more open to contraception. More educated urban respondents also approve more of contraception than less educated ones; being married is not significantly linked to a greater approval of contraception, but this relation is positive like in the rural sample. Being divorced or separated or widowed is related to less open attitudes towards contraception, but this is true only for men (results by sex not shown). Women are significantly more likely to approve of contraception in the city even when other factors are controlled for, as opposed to what was observed in the villages. Age, ethnicity and being born in the village bear no relationship with opinions on contraception in the urban sample.

Tableau 11: Linear regression of individuals' socio-demographic variables on their approval of contraception and abortion in Ouagadougou, Burkina Faso, 2001, n=633.

	Contraception		Abortion	
Variables	**Standard estimate**	**P > |T|**	**Standard estimate**	**P > |T|**
Age	-0.00	0.45	-0.00	0.79
Christian Other Muslim	ref. 0.38 -0.03	 0.08 0.59	ref. 1.30 0.15	 0.00 0.01
Did not grow up in the village Did grow up in the village	ref. 0.05	 0.33	ref. -0.07	 0.26

Single	ref.		ref.	
Married	0.03	0.66	-0.13	0.13
Div / sep / widowed	-0.27	0.05	-0.24	0.14
No education	ref.		ref.	
Primary	0.21	0.00	-0.05	0.56
Secondary	0.16	0.03	-0.02	0.78
More than secondary	0.25	0.04	0.27	0.05
1st quantile of poverty	ref.		ref.	
2nd quantile of poverty	-0.13	0.09	0.05	0.56
3rd quantile of poverty	0.05	0.58	0.03	0.78
4th quantile of poverty	0.07	0.41	0.09	0.35
5th quantile of poverty	0.02	0.79	0.24	0.01
Mossi	0.00	0.96	-0.09	0.19
Peul	0.14	0.31	-0.29	0.06
Other	ref.		ref.	
Men	ref.		ref.	
Women	0.18	0.00	0.20	0.00
Source : Enquête Santé de la Reproduction à Ouagadougou, 2001, Unité d'Enseignement et de Recherche en Démographie, Université de Ouagadougou.. R-square = 0.07				

Let us now examine the socio-economic determinants of attitudes towards abortion in both settings. We see that in the villages (Table 10) poor, younger, married and female individuals are more likely to be tolerant towards abortion. Muslims disapprove somewhat more of abortion than Christians and followers of the traditional religious, the latter two categories of followers having comparable levels of tolerance towards abortion. Neither education nor ethnicity make a difference when it comes to opinions about abortion in the rural sample. Villagers having lived outside of their country are somewhat less tolerant towards abortion, but having lived some time in the city makes no difference.

In the urban sample, we see (Table 11) that the most educated and rich people are more likely to be open to abortion. Women too are more tolerating as well, while Christians are significatively less likely to approve of abortion. Age, marital status, having grown up in the village or not, do not make a difference in attitudes towards abortion. Ethnicity counts this time: Peuls disprove somewhat more of voluntary pregnancy terminations. One possible explanation is that traditionally, Peuls are nomads: sedentary Peuls are prossibly more acculturated than urban Mossi, and more removed from the traditional meaning system on reproduction, which is, as we saw, more open to abortion as way to hide sexual mishaps.

Altogether, we see that the same social forces seem to shape attitudes towards both contraception **and** abortion in the villages. Indeed, being in situations that are perceived as legitimate to use birth control in the traditional meaning system on reproduction (wanting to limit when one is

poor, wanting to space when married) lead people to think more favorably of either means of birth control. Something distinguishes opinions on abortion and contraception in the village, however: education has a strong positive impact on the acceptance of contraception, but has no such effect on attitudes towards abortion. Also, those who bear more heavily the weight of “shameful” pregnancies (women, young people) are especially favorable to abortion, but are not necessarily more open to contraception (everything else being constant). In the village, recourse to abortion is more frequently the choice of the “victim” and contraception is more often the option of those who have some education, but both sets of people see the use of birth control as especially legitimate in certain situations: for married people (when sex is OK) and for poor people (when birth limitation is OK). The underlying ideals are to resort to abstinence before marriage, and to not limit births unless constrained by resources.

When looking at opinions of contraception in the city this time, we see similar patterns emerge: higher educational levels (and higher socio-economic background) are linked to a greater approval of contraception on the one hand. Being very poor and female is also related to being more approving of contraception. The difference with visions about contraception in the village is that being married makes no significant difference in opinions on contraception in the city, although the relation goes in the expected direction (married people having a greater tolerance towards contraception). This shows again that attitudes towards premarital sex are somewhat more relaxed in the city.

The social factors structuring attitudes towards abortion in the city are very different from those structuring attitudes towards contraception in both the rural and the urban sites, and the similar factors structuring attitudes towards abortion in the village. Two main factors are linked to attitudes towards abortion: Christians (and more acculturated ethnic groups) are more opposed to abortion in the city. Highly educated, upper class individuals are somewhat more open to abortion. The only similarity with the village is that, in both settings, women are more tolerant towards abortion than men.

As we can see, social change is not happening by simple contact with new ideas: people who have lived in other contexts did not adopt the opinions on birth control prevailing there. Change seems to be brought about, rather, by a shift in the weight of the diverse dimensions structuring the attitudes

under study. For example, the impact of the Christian religion on attitudes towards abortion is very important in the city, and negligible in the rural area: this meaning system obviously does not have the same weight in both contexts. The impact of higher education and upper class positions on attitudes towards birth control, although perceptible to some degree in the village, is much stronger in the city. Finally, gender, who is crucial to understand attitudes towards abortion in both settings (women as victims of shameful pregnancies), emerges more strongly as a structuring dimension of attitudes towards contraception in the city, where women have more pressing reasons (like cash earning jobs) to regulate their fertility.

But why are more educated people more open to the use of contraception and abortion? Why is being a Christian not linked to attitudes towards contraception, but to attitudes towards abortion? Why are those living in the city more open to contraception, and less tolerant towards abortion? The answers to these questions may lie in the underlying meaning systems in which attitudes towards varied means of birth control are embedded. As we can see (Table 12), the reserve people express towards contraception are mainly linked to their feelings towards the necessity of abstinence. The role of God in reproductive decision (versus the role of individuals) is not related to ideas about contraception in our rural sample. Educated and urban citizens are apparently more relaxed on sexual rules, which is also evident from the higher rates of sexual activity compared to the village, which explains at least in part their more open attitudes towards contraception (to be complete, our analysis should also have included attitudes towards gender equality and towards birth limitation).

Tableau 12: Linear regressions of individuals' attitudes towards abstinence, role of God in fertility decisions, and life and death, on their approval of contraception and abortion in nine villages, Burkina Faso, 2000.

	Contraception		Abortion	
Variables	**Standard estimate**	**P > |T|**	**Standard estimate**	**P > |T|**
Abstinence	0.16	0.00	0.16	0.00
Role of God	-0.03	0.28	0.16	0.00
Life and death	-0.01	0.64	0.14	0.00
n	1227		1185	
Source : « Stratégies Reproductives en Milieu Rural » survey, 2000.				

Note : a greater score on the « abstinence » variable means that people are less strict about abstinence. A greater score on the "fertility limitation" variable means that people attribute a greater importance to God deciding of the number of births, which is hoped to be as numerous as possible. A greater score on the "life and death" variable means that people have more traditional views of the beginning of life (souls cross life and death in cycles, each life is not unique).

Attitudes towards abortion are linked to visions of abstinence, like contraception (abortion being more acceptable to people who think abstinence rules are difficult to respect). Tolerance of abortion is also, and this is the main difference with the approval of contraception, linked to visions of the beginning of life: people who have a cyclical (traditional) visions of life and death are more accepting of abortion. Opinions on abortion are also related to visions of the role of God versus individuals) in deciding in fertility matters: people who think individuals take fertility decisions (and not God) are less tolerant towards abortion. Respondents with more individualized world visions see each life as unique, and put individuals at the heart of fertility decisions: these respondents are also less tolerant towards abortion. Urban and Christian worldviews are apparently typical of this kind of individualism in Burkina Faso today, and this is why abortion is so univocally condemned in that city.

Research on attitudes towards abortion in the developed world show that a third dimension (after sex and the place of the individual) is instrumental in defining attitudes towards abortion: gender (Luker, 1985, Rossier, 2005, other ref). The approval of gender equality puts the right of women to decide of their reproduction before the right of potential individual to live. In Ouagadougou, we saw that only a small socio-intellectual elite is more open to abortion, and this feature is probably linked to the equal attitudes towards gender which are not yet very diffused in this society.

6. Conclusion

The process of individualization which is taking place in African cities has many strands. These different evolutions do not happen at the same time, and occasional contradictions may arise from diverging timings in change. We argue that changes in the rapport to conjugality (a tightening of conjugal links to the detriment of lineage relations) is happens first, and precipitate an increase in pre-marital and marital sexuality. But abstinence ideals are somewhat slower to change, and we saw that the acceptance of contraception is linked to more relaxed views towards abstinence. In other words, contraception is only used in socially accepted sexual relations. From this gap between the representation and practice of sexuality arises the non use of contraception in many sexual relations (pre-marital, post partum), which explains an increasing occurrence of accidental pregnancies, and thus an increasing recourse to induced abortion in West African cities. But at the same time, the

increase in individualistic ideals characterizing these societies explains that abortion become more heavily stigmatized as so many murders of individuals lives. The combination of these different changes explain why abstinence is on the decline (new conjugal ideals), why contraception is not diffusing faster (ideals about abstinence are slower to change), why accidental pregnancies and thus induced abortion are on the rise, and why at the same time, ideas about abortion are become more conservative (rise in individualistic ideals).

In the future, ideals about abstinence are likely to fade, and the representations and practice of sexuality may become less dissonant: the use of contraception may then meet less obstacles, and the rate of accidental pregnancies and abortion are then likely to drop. At the same time, gender equality may make progress on the continent, so that attitudes towards abortion may become more tolerant again. If everything evolves according to scenarios observed elsewhere (and in the absence of state interventions promoting abortion instead of contraception), the representations and practices of abortion may remain sort of contradictory, but in a non problematic way:. It is likely that one day I Africa, despite open attitudes towards abortion, the numbers of abortion will be low.