Contraception and Cultural Values

A Research Paper submitted to the Department of Engineering and Society

Presented to the Faculty of the School of Engineering and Applied Science

University of Virginia • Charlottesville, Virginia

In Partial Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering

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Spring 2023

On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Introduction

Family planning is essential for women's health and gender equality. Adolescent mothers have a higher risk of experiencing eclampsia or infections, which may be fatal to the mother or child, and are more likely to have low weight or early births (World Health Organization, 2022). More mature mothers can also suffer pregnancy complications without adequate spacing between births (Gates, 2019). Nearly half of all pregnancies are unplanned, and of these, 30% end in abortion, with 45% of abortions being unsafe (UNFPA, 2022). In fact, unsafe abortions contribute to 5-13% of all maternal deaths (UNFPA, 2022). Family planning does more than keep mothers safe. Women who can choose when to have children can ensure they only have as many children as they have resources to provide for (Gates, 2019). Family planning also helps promote gender equality. When women can prevent pregnancy, it allows them to stay in college, pursue careers, and earn more money (Planned Parenthood Action Fund, 2015). Women can plan their life and dedicate themselves to a career without the risk of pregnancy unexpectedly interrupting an endeavor (Collins & Collins, 2003).

Clearly allowing women to control when they have children keeps mothers safe, allows more children to grow up healthy and cared for, and gives women agency over their lives. Several contraceptives are effective at preventing pregnancy, and yet contraceptive use is not universal. The United Nations' 2022 State of the World Population (SWP) report estimates 257 million worldwide who wish to avoid pregnancy are not using safe, reliable contraceptive methods (UNFPA, 2022). Certainly, economic and accessibility barriers play a role in contraceptive usage. But another key component is how contraception is perceived in various cultures and social groups. Furthermore, not all methods of contraception are viewed the same.

Two ways to distinguish social groups is along the lines of religious preference and geographic location. This paper seeks to understand the intersection between cultural values and contraceptive use across different geographical locations and religions.

Case Context

Humans have used different forms of contraceptives for thousands of years before the birth of Christ (Allyn, 2001). These took the form of spermicidal concoctions, sponges to remove sperm, condoms from animal parts (e.g., bladders), and the practice of coitus interruptus (Allyn, 2001). In the 1840's, vulcanized rubber allowed for rubber condoms to be manufactured, which were replaced by latex in the 1930's (Newham, 2020). The first documented Intrauterine Device (IUD) was invented in 1909 by Dr. Richard Richter (Margulies, 1975). Oral contraception in the form of a pill was first introduced in 1950 (Liao & Dollin, 2012). Sterilization first began in the nineteenth century but did not become safe and widely available until the 1960's (Newham, 2020). New methods of contraception continue to be developed and improved upon.

Contraceptive methods can be grouped into a few broad categories. "Traditional" methods include abstinence, coitus interruptus (or colloquially referred to as "pulling out"), and the rhythm method. These methods are more likely to be seen as socially acceptable, but the former two are less reliable (73% and 76% effective respectively) (Ashley – Planned Parenthood, 2015). They also can only be used when a woman has a cooperative partner, and do not protect a woman from pregnancy in the case of rape or partner abuse. Condoms and diaphragms physically block the sperm in intercourse. They improve upon traditional methods in terms of efficacy (98% for condoms and 85% for diaphragms) (Ashley – Planned Parenthood, 2015).

Condoms have the added benefit of protecting against STDs, but they also require a cooperative partner. There are several forms of hormonal birth control, the most popular being the pill, but it is also available as an implant, shot, ring, and patch (Ashley – Planned Parenthood, 2015). Hormonal methods are 99% effective. A copper IUD is another reliable but reversible method that is non hormonal (99% effective) (Ashley – Planned Parenthood, 2015). Lastly, permanent birth control (also known as sterilization) can be chosen by both men and women and is the most effective method (Ashley – Planned Parenthood, 2015).

There are two variables considered in comparing the use of contraceptive methods. One variable is geography. For instance, within a singular social group, there may be variations in norms between members who reside on different continents. The other variable considered is religious affiliation. This paper considers how Christian, Muslim, Hindu, and non-religious groups consider various contraceptive methods. Even within a single religious group, there is often variation in opinion.

Co-production

To analyze the relationship between social groups, values, and preferences for contraceptive technology, the framework of co-production will be used. Co-production, first articulated by Sheila Jasanoff, is the notion that technology and the social order are intertwined (2004). Technology shapes values, customs, and identity of a social group, and in turn these aspects of a social group determine how a technology is purposed, modified, or rejected. In some cases, use or rejection of technology even defines a social group.

In the case of contraception, social groups have determined how they will respond to contraceptive technologies, based on the values they hold. Different social groups have different notions about the role a woman should play in society. Is her primary responsibility to be a mother or does a women decide whether or not that is a role she wishes to fulfill? Pregnancy may be viewed through different lenses – it can either be a cause for celebration or carry a heavy stigma. The role of sex is also controversial. Should it be conducted among any consenting adults? As a special act between a married couple? Only for procreation in a married couple? Is sexual disease prevention embraced, or taboo? Different social groups will have unique answers to these questions, and thus will view contraceptive methods differently.

Conversely, contraceptive technologies are seen to promulgate societal norms. For instance, many people of a conservative bent are concerned that access to contraceptives will encourage promiscuity, intercourse between unmarried people, and adultery, by removing the consequence of pregnancy and (for some contraceptives) disease. However, contraceptives also have the effect of promoting gender equality in a society. When women can determine if and when they have children, they are able to pursue their education and career without forgoing sexual relationships or gambling that their trajectory will be interrupted by pregnancy (Collins & Collins, 2003). More women's success in the workplace has allowed more people to recognize that women are as competent as men, and means women are more likely to be treated with respect. Social connotations also vary across contraceptive technologies. One reason the pill became so popular was that it was seen as a more "elegant" form of contraception than the condoms that came before it (Allyn, 2001). That is, the pill could be dissociated from the act of sex itself, and thus could be marketed without bearing the stigma of promiscuity (Allyn, 2001).

In some African communities, condoms also carry the implication of unfaithfulness, whereas forms of birth control that do not protect against disease do not (Gates, 2019). Contraceptive technologies that only need effort on the woman's part allow her to have full control over her body, but they also allow contraception to be seen as a "women's issue" instead of encouraging discussion between partners. Because the existence of and access to contraceptive technology has a crucial impact on the norms of society, social groups have a vested interest in technologies and policies that favor their values.

Research Question and Methods

The question posed for investigation is: How have the values of certain social groups been reflected in their decision to accept or reject contraceptive technologies? Accessibility to contraceptives is a contentious issue throughout many countries, in part because contraceptive usage is often closely tied to religious views. Understanding why different social groups hold the stances that they do can help progress towards a world that supports women's health without devaluing religious beliefs. To answer this question, a literature review was performed by reading previous work that considers how various social groups have chosen to respond to the availability of contraceptive methods.

Some studies had larger sample sizes and more quantitative results for specific questions about values and usage. This included Yeatman and Trinitapoli's analysis of religious denomination and family planning in Malawi (2008), and Hill, Siwatu, and Robinson's research considering religion and contraceptive use in the United States (2014). It also included three studies that were consulted to make comparisons across countries to understand factors

surrounding contraceptive use and acceptability (Sevinç, 2020; Geist & Cole, 2020; de Looze, Madcour, Huijts, Moreau, & Currie, 2019).

Other were more qualitative, like the journal article featuring interviews from sixteen Pakistan couples, which yielded a more nuanced perspective on their opinions (Sarfraz, Hamid, Kulane, & Jayasuriya, 2023). Iyer's investigatation of the relationship between religion and contraceptive use in India combined quantitative and qualitative findings (2002). These sources were used to draw conclusions about the relationship between values of various social groups and their use (or nonuse) of contraceptive technologies. The frame of co-production offered insights about how different groups' cultural values affect their contraceptive preferences, and how in turn those preferences influence the groups' social norms.

Results

Cultural values, especially concerning sex, pregnancy, and the role of women, influence the use of contraceptives in a social group. Interestingly, despite the firm stances many religions take on contraceptive use, religious edicts do not strongly influence contraceptive use. Rather religious values and interpretations are made malleable by local cultural norms and individual conclusions. These idiosyncratic values inform whether members of a group use contraceptives, and the use or nonuse of contraceptives in turn promotes or discourages the values that favor contraceptive usage.

Several religions discourage contraception, either implicitly (Islam and Judaism both encourage procreation) or explicitly (as banned by the Catholic church) (Schenker & Rabenou,

1993). Meanwhile Protestant Christians, Hindus, and non-religious people have no such restrictions from religious edict (Schenker & Rabenou, 1993). One might think then that there would be difference in contraceptive use among religious lines. On average, non-religious people are more accepting of contraception than religious people; 7.2% of non-religious people find contraception unacceptable, compared with 18.9% of religious people surveyed (Sevinç, 2020). However, much evidence shows a lack of correlation between couples' contraceptive use and the views officially stated by their religion. In one study considering non-ad hoc (that is a method taken in advance, as opposed to at the time of intercourse) use of contraceptives by women aged 15-44 in the United States, the differences between Protestants and Catholics also varied based on race. Specifically, Catholics in general were 20% more likely to use a non-ad hoc form of birth control, but white Catholics were 42.6% less likely than the average woman (Hill, Siwatu, & Robinson, 2014). In Malawi, the use of contraceptives trended opposite from their religious leaders' opinions. Although only ~60% of the Catholic and Protestant leaders approve of contraception and ~90% of Muslim and Pentecostal leaders do, Catholics and Protestants are more likely to use contraception than other denominations (Table 1, Figure 1) (Yeatman & Trinitapoli, 2008). After eliminating socioeconomic factors, there was no significant difference between the usage across the denominations. Moreover, individuals who attended religious services more regularly were more likely to use contraception (Yeatman & Trinitapoli, 2008). Iyer's study in southern India found no significant difference between contraceptive use of Hindus and Muslims after factoring out socioeconomic influences, despite the Islamic religious leaders in the area being strongly opposed to contraception (2002). Meanwhile, non-religious people do not necessarily share views on contraception across countries. Sevinç concluded that non-religious people in the far East are more likely to find contraception morally unacceptable

than in Western Europe (2020). Religious edict does not appear to be a strong factor in contraceptive use. If people's values have been reflected in their decision to use contraception, then their values must not be held within their religion.

	Modern FP Acceptable, %	Sexual Morality Weekly, %	Congregation Size, mean (SD)	N
Catholic	63	47	36 (43)	19
Mission Protestant	66	58	34 (52)	38
Pentecostal	90	39	26 (27)	31
African Independent Churches	84	55	31 (28)	38
Muslim	91	41	76 (101)	22
New Mission Protestant	74	44	36 (43)	34
Total	78	48	37 (52)	182

Table 1: Characteristics of Religious Leaders and Congregations by Denomination from Malawi Religion Project (Yeatman & Trinitapoli, 2008)

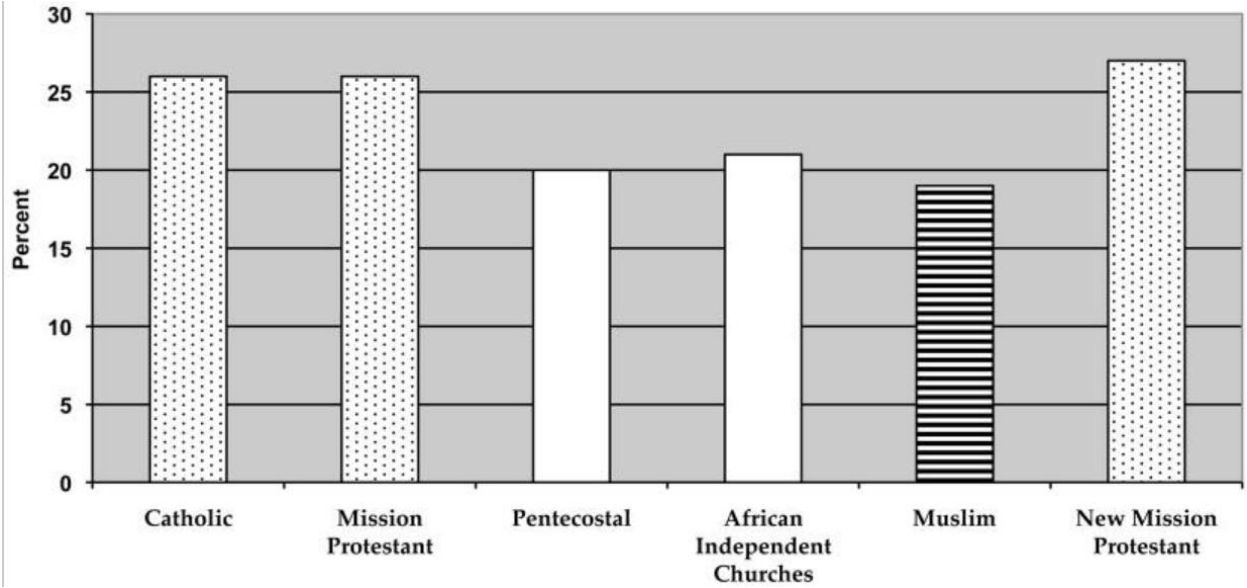

Figure 1: Current Use of Modern Family Planning by Religious Affiliation (Yeatman & Trinitapoli, 2008)

What could account for this? It appears that local cultural values permeate the religious community, and individual values affect how scripture is interpreted on a personal level. In the Malawi study, a factor that did have a significant positive effect on contraceptive usage was having a local leader with positive attitudes toward family planning (Yeatman & Trinitapoli, 2008). Another factor was the size of the religious community. The strong correlation between religious participation and contraception may seem counterintuitive to a Westerner. However, it is not so unusual when accounting for the fact that religious activities make up the majority of a woman's social interactions in these communities. Religious gatherings are the primary way to meet other women and propagate information about family planning, and that flow of information is freer in a larger community (ibid.). At the individual level, women often make choices about their body in ways that may contradict their religious leaders' teachings, but that align with their own understanding of their religion. In the study of Indian women, nearly all of the Muslim women said that contraception was not permitted in their religion (Iyer, 2002). Yet one third of them said they disagreed with this stance, and another third answered "no view" which the authors concluded might indicate a reluctance to answer rather than a true indifference to the matter. One woman remarked "I am educated, therefore I have a small family. We do not need to consult the priest because everything is written in the *Shariat*" (ibid.). In the Pakistani survey, couples used Islam to justify perspectives both in support of and against contraception (Sarfraz, Hamid, Kulane, & Jayasuriya, 2023). Some respondents believed that family planning violates the pillars of their faith: "The number of children should be left to Allah." But others argued that family planning was necessary to uphold their religious values. For instance, a man is called upon to provide for his family, and he can more successfully do that when the births are spaced (ibid). Rather than functioning as a top-down flow of doctrine, religion is often something

that people braid into their existing values. It is these more idiosyncratic values that instead inform whether a social group accepts or rejects contraceptive technology.

If not religion, what values do influence contraceptive use? One factor is how easily matters of the female body can be discussed. Recall that social interaction, and primarily social interaction with other women, was a primary reason why the large religious groups in Malawi were more likely to use contraception (Yeatman & Trinitapoli, 2008). In contrast, several of the Pakistani couples indicated that men were often too shy to discuss such things with their wives, and often failed to communicate how many children each partner desired, much less what methods they might go about using to attain that (Sarfraz, Hamid, Kulane, & Jayasuriya, 2023). A similar lack of communication persisted in the Indian study (Iyer, 2002). Those women were more likely to opt for a sterilization, which they could do without informing their husbands, than bring their husbands into the conversation. Contraception is more likely to be used when women can discuss their bodies freely. In other words, societies that value the voices of women and normalize transparency about women's health are more likely to accept birth control. In turn, women who have access to contraception are better able to participate in public discourse, generating a society with women's voices are carried. A woman who is stuck at home caring for children is less likely to be successful in this regard.

Another factor determining contraceptive use is how pregnancy is viewed within the society. The Pakistani couples that depended on Allah to determine the size of their families saw children as divine blessings (Sarfraz, Hamid, Kulane, & Jayasuriya, 2023). Many African cultures also have associations between pregnancy and divinity (Yeatman & Trinitapoli, 2008).

And this cultural expectation can be further amplified by members of the older generation who follow this view. The biggest influence on whether the Indian women of either religion practiced contraception was whether a female from extended family (typically a mother-in-law) resided in the house – these women were 45% less likely to use contraception (Iyer, 2002). Conversely, couples that recognized children can impose a cost were more likely to be open to family planning (Sarfraz, Hamid, Kulane, & Jayasuriya, 2023). Communities that emphasize sexual morality, and therefore would see pregnancy outside of marriage as shameful, are also more likely to see contraceptive usage among unmarried women (Hill, Siwatu, & Robinson, 2014; Yeatman & Trinitapoli, 2008). Contraception transforms childbearing into something that can be planned by humans instead of left to chance (or God), which may be negative or positive depending on one's values. Groups that value agency in one's life are more likely to push for access to contraceptives.

Education is another important determinant in contraceptive use. Groups that value education are more likely to see childrearing from a pragmatic lens, and will also wish to provide educational opportunities to their children (Sarfraz, Hamid, Kulane, & Jayasuriya, 2023). Both the Indian study and an international study identified a woman's level of education was one of the most significant factors in whether she would use contraception (Iyer, 2002; Geist & Cole, 2020). Educational experiences allow both access to resources and discourse that she might not have otherwise. Without these, a woman may rely on misinformation and anecdotal evidence, and is more likely to avoid contraceptives for fear of side effects (Sarfraz, Hamid, Kulane, & Jayasuriya, 2023). In cases where a woman has not received an education, the education level of her husband, will also be positively correlated with her use of family planning (Iyer, 2002).

Social groups that value education, and particularly the education of women, are more likely to support access to contraceptive technologies. Contraceptive access in turn makes it easier for a woman to pursue an education (Planned Parenthood Action Fund, 2015). Women with educational experiences themselves are more likely to value women's education as well as the personal agency discussed previously. An educated woman is also more likely to value women's discourse.

Lastly, groups with more gender equality are more likely to use contraceptives. The Pakistani wives that knew their husband supported women's decisions knew they could bring up issues with their husbands, and start that necessary dialogue (Sarfraz, Hamid, Kulane, & Jayasuriya, 2023). In a study across 33 countries, gender equality was strongly correlated with contraceptive use (de Looze, Madcour, Huijts, Moreau, & Currie, 2019). Societies with more gender equality enable women to discuss and choose their reproductive options, resulting in greater usage of contraceptives. Meanwhile, family planning can promote gender equality by allowing women to control their fertility.

With all of these values, there exists a feedback loop, in accordance with the theory of co-production. Social groups that value women's equality are more likely to let women to discuss their bodies freely, take control over their lives, and pursue an education. These factors increase a women's likelihood of having access to and choosing to use a contraceptive technology. And women who are using contraceptive technologies have a better shot at having their voices heard, planning their lives, and getting an education. They are also more likely to value and normalize these capabilities within their social group. Conversely, cultures are less likely to adopt

contraceptive technologies when women's bodies are a taboo topic and leaving things to God is considered in conflict with and superior to planning and education. For women some in these cultures, such as some of the Pakistani women, access to contraceptives exists, but the women are not interested in using them, as they do not help them reach their goals and ideals of womanhood. For others, such as some of the African communities, the women may not know enough about contraceptive methods to communicate a need for it, or their needs may not be listened to. Where women are not using contraceptives, there is an alternative feedback loop that makes it harder for a woman to attain an education or to aspire to anything other than motherhood, because it reinforces that a woman's value is primarily in her ability to function as a mother. This entanglement between cultural values and technological usage is in exact alignment with Jasanoff's theory of coproduction.

Discussion

It has been seen that social groups that value woman's voices, autonomy, education, and equality are more likely to adopt contraceptive technologies. Moreover, there is a tight feedback loop where contraceptive usage promotes the very values that favor contraceptive usage, whereas less contraceptive usage discourages these values. This two-way street between values and technological usage supports the theory of co-production.

One of the major limitations of these studies is the fact that a variety of contraceptives are not widely available to all women, so it is sometimes difficult to tell whether a woman's values or her socioeconomic situation have informed her usage. Several of the studies take measures to eliminate this effect when determining statistical significance, but there is still not a way of

knowing how all women would make choices if provided full access to an array of contraceptive methods. For instance, the study in the United States notes that health insurance is a key factor in whether a woman uses a non-ad hoc birth control (Hill, Siwatu, & Robinson, 2014). The women in the Indian study have access to sterilization procedures, but reversible contraceptives may be more difficult to obtain (Iyer, 2002).

Although socioeconomic status was the main unseen barrier in this study, it is worth noting that in some countries, contraception is not even legal. Although birth control has been legal in the United States since 1965, a more conservative Supreme Court has the potential to change this in coming years. On the flip side, historically many governments have committed forced sterilization (sometimes tied to eugenics) of their citizens. In either case, reproductive health is not a woman's choice, and in no way reflects her values. And yet the part of the feedback loop from technological usage to values may still persist. Each woman should be able to decide for herself what contraceptive methods she is most comfortable with. But it is important that this choice truly reflects her values, with correct information about the methods, rather than a choice coerced or dictated by the people that hold power, or a choice malformed due to misinformation.

If I could redo this project, I would have familiarized myself more with the literature in this area before forming my research question. Originally, I had intended to consider the values imbued in differing contraceptive technologies, for instance, to perceive how condoms, pills, and sterilization might be more or less acceptable to different groups. There are some studies that have surveyed the types of contraceptives used by different groups. But most women do not have

many choices in terms of the type of contraception they have access too, and so in general we cannot draw inferences about a woman's values from the type of contraception she uses. Instead, I had to back up my investigation to focus simply on use and nonuse.

One thing that stood out to me is how information travelled between women, especially surrounding topics that might be considered taboo. Women often placed more stock in what they heard from other women – members of their church, family members, other women in their community – than what they heard from officials or religious leaders. It is a reminder that in the engineering practice, if you design something designated for a social group, it is not enough to objectively show that it works and is safe. You must also understand what that group wants, ensure that the technology will fill that need appropriately, and gain the trust of that group in order for them to actually use it.

Conclusion

Contraception is most likely to be used when women are free to discuss their bodies, when having a family is considered a practical matter, when both partners, but especially the women, are educated, and when gender equality has been established. In turn, contraception empowers women to study, work, and plan their families if they wish to become a mother. It takes discussion to understand the values of different social groups and why they may be averse to certain methods. Something that would be interesting to try that was outside my scope would be to hold a survey with the depth of those held in individual geographic locations, but to take women from across the globe for the study. This would allow a more standardized comparison across cultures, but would maintain the depth lost in the international studies I considered here.

Understanding what women want from their lives and their bodies can help us design and distribute technology that will allow women to reach their goals, whether those include a career and/or a family.

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