A cross country analysis of ideal family size, family planning, and women's values and beliefs

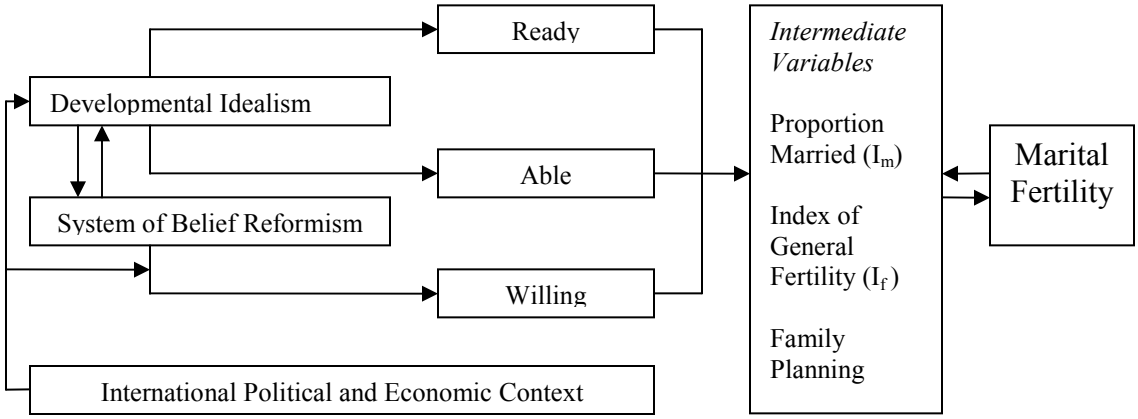
By

Hani A. Guend, MS, MPHS, Ph.D.
INRS, Urbanisation, Culture et Société.
Montréal (Québec), Canada

I use three nationally representative samples of ever-married women from DHS waves 2 and 3 to model the associations of women's values and beliefs with two outcome variables: ideal family size (IFS) and current use of family planning (FP) in Bangladesh (BDHS), Pakistan (PDHS), and Turkey (TDHS).

1. Conceptual framework Two main hypotheses are articulated to explain reproductive behavior changes among populations of Muslim culture. First, developmental idealism (DI) (Thornton 2001) have been advocated as the necessary path to progress, adopted and implemented often through governmental policies that shaped the socio-economic landscapes in several Muslim countries. The developmental experience of contemporary Turkey some label *Turkish Paradigm* (Richards and Waterbury 1990) served as a model for development policies that marked much of the second half of the twentieth century in this area of the world. Second, under the impact of endogenous social forces but also as reactions to the implementation of DI at different levels of policy making nationally and internationally, Islamic reformism (IR) emerged and contributed to changing people's norms and beliefs in a direction favorable to acceptance of FP as a fact of life. Figure 1 illustrates the causal paths of this large conceptual framework.

Figure 1
Causal Path of the Effects of Developmental Idealism and Islamic Reformism on Marital Fertility



Variables which have potential explanatory power with regard to fertility change are identified by reference to this theoretical framework then used as covariates in the statistical models. Thornton's (2002) enumeration of the dimensions of traditionalism and modernity relevant to the social context of interest to us includes a *family organized society; family solidarity; extended households; young and universal marriage; extensive parental authority; lack of affection before marriage; and low regard for women's rights and autonomy; as well as polygamy, child marriage, and veils*. The dimensions associated with the modern family are social structure that has *non-familial elements, extensive individualism, many nuclear households, older and less universal marriage, extensive youthful autonomy, marriage largely arranged by the couple, affection in mate selection, and high regard for women's autonomy and rights, as well as family planning and low fertility*. The underline highlights characteristics that have measurement proxies in the PDHS and BDHS data and discussed in the following section.

Both Bangladesh and Pakistan are indeed family organized societies where marriage is quasi-universal. Women's early marriage is widespread in both countries and in the first case one can even speak of widespread child marriage of girls. In such social settings, one expects the statuses of women's rights and gender equality to have important explanatory power for the understanding of reproductive behavior. Although polygyny is an interesting aspect of family life,

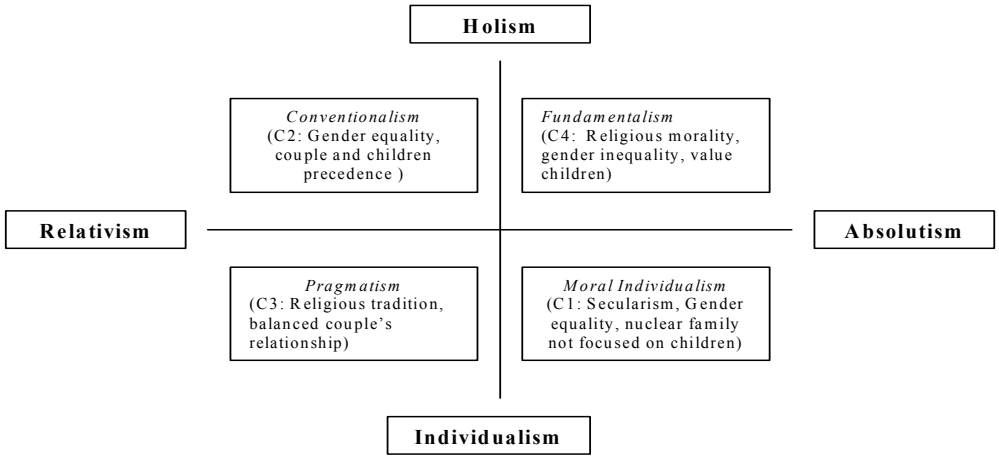
it is of minor importance for the purpose of our study. Fertility represents the achieved part of a woman reproductive potential. In this sense polygyny if widely practiced would play in the direction of lower fertility despite its symbolic value as a marker of traditionalism. The veil is of particular importance to understanding the dynamic of social change behind fertility decline. However we shall underscore the difference between the veil as attire and the veil as a social system characterized by widespread women's seclusion. It is the latter that is relevant to our purpose and will be addressed in the analytic part of this paper especially with regard to Pakistan.

In the absence of empirical data collected specifically to relate to DI conceptual framework, DHS data can fill the gap. The three samples analyzed represent ever-married women of Bangladesh, Pakistan, and Turkey. Selection of these countries follows from the conceptual framework of reference defined above. Turkey is representative of countries which experienced DI intensively. Pakistan represents Muslim countries with little to no experience with DI, while Bangladesh is representative of countries which experience DI through targeted policies. Moreover, the populations of Pakistan and Bangladesh represent the bulk of the Indian group within the Muslim world. On both accounts Turkey represents a unique case because of its centrality within the Turkic ethnic-linguistic group and its status as role model to other nations with regard to its experience with DI. This way, we cover an example of non-induced diffusion of DI with little to none of system of belief reformation. Pakistan embodies this case. Turkey represents a case of a hard core developmentalist state with a proven legacy of positive support for diffusion of DI values and patterns of individual and collective behaviors. Bangladesh represents the experience of a fertility transition triggered by targeted policies, mainly FP.

To further the analysis of the Turkish data, I use the *Dimensions of Variation in Attitudes to Reproductive Behavior* (Simons 1999) illustrated in Figure 2 as a heuristic device to link these two concepts to the individual level of investigation and facilitate the interpretation of women's values and beliefs in connection with the larger conceptual framework. One shall think of DI as

the vehicle of Individualism, and think of traditional Islam marked by the Sufi Ethos as a match to Holism on the continuum Holism-Individualism to make Figure 2 speaks more directly to the context of this study. A traditional Muslim culture marked by the Sufi Ethos supports a holistic worldview in the form of explicit and implicit adhesion to beliefs and values largely influenced by the Sufi (mystic) meanings and symbols. This conception sits on one end of the axis Holism-Individualism, while on the other end sits DI in its pure form. The latter translates into the *secular* project of society that has been consistently promoted since the founder of modern Turkey launched revolutionary changes that touched every aspect of life beginning in the first quarter of the twentieth century. In Turkey, and in Muslim countries where the Turkish Paradigm prevails, one shall expect to find a polarization of values, beliefs, and lifestyles along the line of the axis Holism-Individualism. These poles are often referred to as two opposite socio-cultural universes, namely modernism versus traditionalism. This polarization expands into the realm of family ideals and FP which are the main foci of this study. The two ideal-types that sit on the ends of the continuum Holism-Individualism are mitigated along the axis Relativism-Absolutism. The intersection of these two dimensions creates four moral universes identified as *Fundamentalism, Moral Individualism, Pragmatism,* and *Conformism*.

Figure 2: Dimensions of variation in attitudes to reproductive behavior adapted from Simmons (1999)



The individual questionnaire of the TDHS 1993 contains thirteen country specific questions about women's values and beliefs in the realm of marriage, family, and reproductive behavior. These questions are used here to locate the respondents within each of the four moral universes. Few examples shall elucidate this categorization.

One would expect a respondent from the *Moral Individualism* universe to agree that FP is not against religion, and live with a partner who believes so. She would disagree with statements such as "men are wiser than women", and find divorce justified in the case of a husband lacking civility. However infecundity of either wife or husband is in itself unacceptable ground for divorce in this moral universe. A respondent who belongs to the moral universe labeled *Fundamentalism* would adhere to the letter of religious texts understood as transcendental truths. This attitude can translate for example into beliefs that men are wiser than women, while divorce can be justified for husbands' misbehavior on the ground of religious morality. Drinking is expected to be a strong moral ground for divorce in the fundamentalist universe because Islam prohibits it. Drinking could also be declared a ground for divorce in the *moral individualism* universe but this time from a civic not religious moral perspective. Therefore the views of two seemingly opposite moralities can agree to oppose or support specific items but with different intensities and purposes. A respondent from the moral universe of *Conventionalism* would be a fundamentalist holding less doctrinal views. She might believe that FP is against religion because it is the dominant popular (miss-informed) view and would be married to a man who believes so. She would find drinking a good ground for divorce based on a religious standpoint but with less conviction than a fundamentalist. Such a respondent also would tolerate mother-in-law interfering in the marital relationship because it conforms to the norms of traditional extended family. A respondent from the universe of *Pragmatism* is basically a moral individualist without strong doctrinal standing. Therefore she would have somewhat lose moral values and beliefs. In this case, childbearing strengthens the marital relationship thus the importance of fertility. The

survival of the family justifies tolerance for husband's misbehaviors. Also, some dose of gender inequality is tolerated not on a religious ground but from a pragmatic standpoint.

2. Data I use three nationally representative surveys in a comparative perspective, namely Bangladesh Demographic and Health Survey (BDHS) of 1993/1994, the Pakistan Demographic and Health Survey (PDHS) of 1990/1991, and the Turkish Demographic and Health Survey (TDHS) of 1993.

BDHS has a sample of 9640 women representative of all ever-married women 10 to 49 years old. Fieldwork took place from mid-November 1993 to mid-March 1994. The primary sampling units are *mahallas* in urban areas, and *mauzas* in rural areas. Over sampling for Barisal Division and for municipalities relative to the other divisions, SMAs, and rural areas, was applied. Our analysis is limited to women's questionnaire only. The following questions are used to elicit the two outcome variables, IFS and FP. First, ever married women of reproductive age are asked two questions about the ideal number of children. If the woman has no children, she is asked: "if you could choose exactly the number of children to have in your whole life, how many would that be?" If she has children, the question is rephrased: "if you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?" Responses to these two questions serve to define the first outcome variable. Second, subsequent to a question on knowledge of methods of contraception, all respondents who knew at least one method are asked whether they had ever used the known methods. Then, they are probed further by asking them whether they "ever used anything or tried in any way to delay or avoid getting pregnant." The statistical analyses account for the weighted, multistage, stratified cluster design of the samples of women representative of all ever-married women younger than 50 years in all three cases. Tables 1 and 2 display weighted distributions of the samples by categories of current use of FP. Note the small percent of FP users cross the board in Pakistan (Table 2), a stark contrast with Bangladesh (Table 1) where modern contraception

also predominates. PDHS has a sample of 6910 eligible women selected from a sample of 8019 households which constitute the secondary sampling units with an overall response rate of 93.5 percent. Women are eligible to interviewing if they were ever married, 15 to 49 years old, and stayed in the household the night before the household interview was conducted. The primary sampling units are enumeration blocks in urban areas, and mouzas/dehs/villages in rural areas. Over sampling of all urban areas and of three out of four provinces was implemented to produce reliable estimates of population and health indicators for rural and urban areas. The weighting scheme accounts for the design and for the response differential components. Here also, I limit the analysis to the women's questionnaire which was translated into Urdu, the national language, and into three regional languages.

TDHS has a sample of 6519 women representative of all ever-married women younger than 50. Thirteen country specific questions about women's values and beliefs are included in the women's questionnaire. They expand the dimensions of analysis beyond the few questions related to woman's social status and values in the two previous cases. Table 3 displays a weighted cross-tabulation of the sample by FP method and covariates. The association of each covariate with FP is significant at 95 percent confidence level except for two variables, "husband infecund, divorce" and "wife infecund, divorce". As one would expect, higher education is associated with higher rate of FP. This is the case whether one looks at woman's or husband's education. Note however that the association of FP with woman's or husband's occupation is less straightforward. Urban residents' rate is also higher than that of rural residents. Even a higher gap is associated with respondents' ethnicity. Turkish women use contraception at a significantly higher rate than Kurdish women. The two outcome variables result from responses to fertility preference, and current use of FP questions similar in content to those discussed in the previous section. I model the numeric responses only given that the non-numeric responses are few in this case. There are

huge differences between the frequencies of non-numeric answers in each of the three cases.

Pakistan has by far higher frequencies of non-numerical answer mostly of the type “up to Allah”.

Table 1
Sample’s distribution by current use of F P as percent of the total, Bangladesh 1993/94

INDEPENDENT VARIABLES			None/Folk	Traditional	Modern
SOCIO-DEMOGRAPHIC VARIABLES					
Residence area	Rural	8532	53	6	29
	Urban	1108	6	1	5
Respondent’s religion	Islam	8468	53	6	29
	Christianity, others	1172	6	1	5
Respondent’s education	No Education	5598	37	3	18
	Primary	2603	15	2	9
	Secondary	1242	6	1	5
	Higher	197	1	0	1
Husband’s education	No Education	4395	29	2	15
	Primary	2293	14	2	8
	Secondary	2039	12	2	8
	Higher	837	4	1	4
Respondent’s occupation	No occupation/man	8803	55	6	30
	Agriculture	57	0	0	0
	White collar	755	4	1	3
Husband’s occupation	No occupation/man	2404	16	1	8
	Agriculture	3894	24	3	14
	White collar	3320	19	3	13
NUPTIALITY AND REPRODUCTIVE BEHAVIOR VARIABLES					
Ever had abortion	No	7921	49	5	28
	Yes	1719	10	2	6
Children ever born	0-2 Children	2622	21	1	5
	3 Children	3034	16	2	13
	4-5 Children	1980	10	2	9
	6+ Children	2004	12	2	7
LIFESTYLE BEHAVIORAL VARIABLES					
Respondent go hospital alone	No Data		.	.	.
Money decision	Respondent	607	26	2	15
	Resp & Someone	645	20	4	22
	Someone else	141	6	1	4
Reads newspaper once a week	No	8957	56	6	31
	Yes	683	3	1	3
Watches TV once a week	No	7927	50	5	27
	Yes	1713	9	2	7
Listens to radio once a week	No	5913	38	4	20
	Yes	3727	21	3	15
VALUES AND BELIEFS					
Husband approves FP	Disapprove	1049	10	1	1
	Approve	7308	40	6	35
	Don’t know	618	6	0	0
Respondent’s ideal family size	0-1 Child	163	1	0	1

	2 Children	5217	30	4	20
	3 Children	2161	12	2	8
	4+ Children	2099	16	1	5
Schooling for girls	No Data		.	.	.

Table 2
Sample's distribution by current use of family planning as percent of the total, Pakistan 1990/91

INDEPENDENT VARIABLES			None/Folk	Traditional	Modern
SOCIO-DEMOGRAPHIC VARIABLES					
Residence area	Rural	4592	66	1	3
	Urban	2019	23	2	5
Respondent's religion	No Data		.	.	.
Respondent's education	No Education	5237	73	1	5
	Primary	601	8	0	1
	Secondary	698	7	1	2
	Higher	75	1	0	0
Husband's education	No Education	3213	46	1	3
	Primary	1120	16	0	1
	Secondary	1923	24	1	4
	Higher	324	3	0	1
Respondent's occupation	No occupation/man	5637	75	2	8
	Agriculture	421	6	0	0
	White collar	553	7	0	1
Husband's occupation	No occupation/man	1171	16	0	1
	Agriculture	2075	30	0	1
	White collar	3365	43	2	6
NUPTIALITY AND REPRODUCTIVE BEHAVIOR VARIABLES					
Ever had abortion	No data		.	.	.
Children ever born	0-2 Children	1530	23	0	0
	3 Children	1606	22	1	2
	4-5 Children	1472	19	1	3
	6+ Children	2003	25	0	4
LIFESTYLE BEHAVIORAL VARIABLES					
Respondent go hospital alone	No	4682	66	1	4
	Yes	1917	23	1	5
Money decision	No Data		.	.	.
Reads newspaper once a week	No	5665	79	1	6
	Yes	922	10	1	3
Watches TV once a week	No	4632	66	1	3
	Yes	1972	23	2	5
Listens to radio once a week	No	4814	66	1	5
	Yes	1792	23	1	3
VALUES AND BELIEFS					
Husband approves FP	Disapprove	2218	35	0	1
	Approve	1895	24	2	5
	Don't know	2023	32	0	0
Respondent's ideal family size	0-1 Child	18	0	0	0

	2 Children 335	4	0	1
	3 Children 444	5	0	1
	4+ Children 5814	79	2	7
Schooling for girls	None 1199	18	0	0
	Primary/middle 1618	23	0	1
	Secondary 1617	21	1	3
	Higher 1500	17	1	4
	Other/Allah/fate 663	9	0	1

Table 3
Sample's distribution by current use of family planning, Turkey 1993

INDEPENDENT VARIABLES		None/Folk	Traditional	Modern
SOCIO-DEMOGRAPHIC VARIABLES				
Residence area	Rural 2337	46	28	26
	Urban 4181	37	25	37
Ethnic background	Turkish 5576	36	28	35
	Kurdish 768	67	13	20
Respondent's education	No Education 1764	55	22	23
	Primary 3612	37	29	34
	Secondary 913	32	23	44
	Higher 228	28	20	53
Husband's education	No Education 528	64	18	18
	Primary 3676	41	28	31
	Secondary 1760	36	27	37
	Higher 553	31	21	48
Respondent's occupation	No occupation/manual 4646	41	25	34
	Agriculture/independent 1299	41	32	27
	White collar 570	34	22	45
Husband's occupation	No occupation/manual 306	42	27	32
	Agriculture/independent 1136	44	29	27
	White collar 2310	37	24	39
NUPTIALITY AND REPRODUCTIVE BEHAVIOR VARIABLES				
Ever had abortion	No 3607	45	25	31
	Yes 2911	35	28	37
Marriage ceremonies	Not same day 2328	39	26	35
	Same day 3470	37	29	35
Marriage	Family arranged 4424	42	27	32
	Not Family arranged 2096	38	25	36
LIFESTYLE BEHAVIORAL VARIABLES				
Respondent shopping	No 3085	49	23	28
	Yes 3431	33	29	38
Husband shopping	No 2864	43	25	31
	Yes 3652	38	27	35
Respondent budget	No 4474	45	26	29
	Yes 2044	31	27	42
Husband budget	No 1278	58	18	24
	Yes 5241	36	28	35
Reads newspaper once a	No 3580	47	26	28

			33	27	40
Watches television once a week	No	717	61	23	16
	Yes	5802	38	27	35
Listens to radio once a week	No	1628	47	27	26
	Yes	4888	38	26	36

Table 3 (Continued)
Sample's distribution by current use of family planning as percent of the total, Turkey 1993

VALUES AND BELIEFS VARIABLES				
Respond: FP not against religion	Disagree 128	56	22	22
	Agree 4562	36	27	38
Husband: FP not against religion	Disagree 1059	59	22	19
	Agree 4758	35	27	38
Men not wiser than women	Disagree 2989	44	27	29
	Agree 3309	37	26	37
Husband cannot beat disobedient wife	Disagree 3267	45	27	28
	Agree 3171	36	25	39
Women can argue with husband	Disagree 3297	43	27	29
	Agree 3128	37	25	38
Not OK for married men to go out	Disagree 3570	43	27	30
	Agree 2855	37	25	38
Husband drinks, divorce	Disagree 2773	43	25	32
	Agree 3432	39	26	35
Marital discord, divorce	Disagree 1769	47	25	27
	Agree 4586	38	26	36
Husband aggressive, divorce	Disagree 1631	49	25	26
	Agree 4699	38	27	36
Unfaithful husband, divorce	Disagree 1564	49	24	27
	Agree 4734	38	26	36
Husband unfecund, no divorce	Disagree 724	37	28	35
	Agree 5524	41	26	33
Wife unfecund, no divorce	Disagree 1037	42	26	32
	Agree 1286	56	22	22
Mother-in-law interferes, divorce	Disagree 4562	36	27	38
	Agree 1059	59	22	19

Note how the TDHS sample is almost evenly distributed over the categories of each outcome variable. This sample distribution contrasts sharply with that of Pakistan and the sample distribution of Bangladesh. The latter is right skewed while the former is left skewed with regard to IFS. More interesting is the great imbalances of the distribution over the categories of current use of FP. Bangladeshi women surpass by far Pakistani women. We are clearly in presence of three different fertility regimes which can be ordered along the line of DI.

3. Methods The individual questionnaires in PDHS and in BDHS contain a few but well targeted questions susceptible to capture the difference in intensity and direction of social change affecting fertility in the two populations. Age at marriage is usually used for its strictly demographic effect. That is higher age at marriage reduces periods of exposure to pregnancy. In

the case of Pakistan and especially in that of Bangladesh it can also be a proxy to social change wherein early (child) marriage is a marker of traditionalism. A country specific question in PDHS asked whether the respondent can go to the hospital alone. This question is loaded with meanings related to social change. In a traditional Muslim society women's seclusion is a social norm that plays in favor of high fertility. For one, a secluded woman's primary role in life is childbearing. For two, seclusion as a social system cannot function in a context of low fertility. Children, and many of them, are active agents of such a system. A mother relays on her children for many vital social functions when they are young. She expects to gain some power by proxy once they become adults. Another country specific question asked about respondents' expectation for daughters' education. Also, the "go to hospital alone" question can be used to measure to what extent the seclusion system is alive. And as a corollary it measures whether a woman enjoys freedom of movement that allows her to have access to contraceptive means. The "daughter's schooling" question can be used to measure the ideational change with regard to support of the current system. Another value and belief question asked whether husband approves family planning. This question is common to both surveys.

Specific to Pakistan, the "go to hospital alone" question is absent from the BDHS. However, in the case of Bangladesh, respondent is asked whether she makes spending decisions alone, with someone else, or is it someone else who makes decision about spending money. Responses to this question can be interpreted similarly to the hospital question for inference about women's status. Common questions also ask whether the respondent reads the newspaper, watches television, and whether she listens to the radio once a week. These questions fulfill the purpose of knowing the level of exposure to family planning promotion. They can also be interpreted as markers of lifestyle. Abortion and age at first marriage are used to control for nuptiality and reproductive behavior. Control for environmental characteristics is done using

rural/urban and region of residence. Respondent's and husband education and occupation are also included as control variables. So is respondent religion in the case of Bangladesh.

To prepare the multivariate modeling of the Turkish data, I do a preliminary multi-dimensional analysis of the explanatory variables. This analysis aims to define complex variables that represent each of the moral universes defined in the conceptual framework.

Principal components analysis (PCA) PCA of the thirteen values and beliefs questions define scores that classify respondents on a scale along the continuums of holism-individualism and relativism-absolutism. The principal components thus obtained are then used as explanatory variables in the multinomial modeling of IFS and FP along with the other independent variables. PCA performs well on continuous variables or categorical variables with many categories. It is applied here on categorical variables with 2, at best 3 categories. I use PCA despite this weakness since few empirical tests show that it fulfills well the purpose of this preliminary exploration. That is a simple classification of respondents on the dimensions of a conceptual construct that helps interpret the meaning of the values and beliefs variables. PCA offers a convenient compromise between two alternative options. The first alternative is the more elaborate method of qualitative data analysis which requires manual recoding of the variables and their cross-tabulations. The second is a simple cross tabulation of the variables to create scores and use them to classify respondents. The first is too fastidious and time consuming. The second is too simple and neither of the two produces necessarily better results than PCA.

Multinomial logistic regressions I fit two multinomial logistic models to the data. The first models IFS while the second models FP. In the case of Bangladesh and Pakistan, IFS is modeled as a categorical outcome variable with categories: three children, four children, five or more children, as well as a separate category for non-numeric responses. These four categories compare to replacement level fertility of two children or below, as the omitted category. In the case of Turkey, IFS is modeled as a

categorical outcome variable with categories zero/one child, three children, and four children or more. Replacement level fertility of two children is the omitted category. The second models current use of FP as a categorical outcome for use of traditional methods, and use of modern methods of FP, versus no use or use of folkloric methods only. The analysis controls for demographic and socioeconomic variables, and variables for nuptiality, fertility and reproductive behavior. The explanatory variables operationalize to some extent the hypotheses. These variables describe the respondent's and her husband's lifestyle; values, beliefs, and exposure to FP promotion. For all statistical analyses except PCA, I use STATA commands for survey which take account of the survey design in the calculation of the variance. Therefore, the multinomial logistic estimations are based on the pseudo likelihood function instead of the usual likelihood function. I also estimate the design effect (DEFF) defined as the ratio of the variance of the coefficient our survey data yield to the variance derived under simple random sampling assumptions[1].

Variables' description All variables are categorical except respondent's age which is included as a continuous variable on a scale of 1 to 7 that refers to 5-year age groups covering the reproductive life span 15 to 50 years in the case of Pakistan and Turkey. In the case of Bangladesh where a substantial proportion of women marry before age 15, the age category 10 to 15 years is included in the analysis. Dummy variables are recoded in a way that facilitates interpretation along the logic of DI.

S*ocio-demographic background* is controlled for through use of the following variables: respondent's age, rural/urban residence, region of residence, religion (Bangladesh only), education and occupation of both the respondent and her husband.

[1] Tables reporting the regression coefficients, the standard errors, and DEFF are available on request from the author.

Nuptiality and reproductive behavior Abortion is included in the models for Bangladesh and Turkey only since the question is dropped from Pakistan's survey. Marriage is quasi universal in all three countries sampled. Current estimates of Coale's Index of proportion married equal to 0.851 for Bangladesh versus 0.784 for Pakistan and 0.701 for Turkey in 2000, 2001, and 1990 respectively. Thus it is important to control for the nuptiality regime. I use *Age at first marriage* as a proxy for traditional vs. modern family. I calculate the 4 quartiles of age at first marriage then recode it as 4-category variable by reference to the four inter-quartiles (Q1 to Q4). The expectation is that in the first quartile women would tend to have traditional behavior, while those in the fourth would tend to have a modern behavior. 75 percent of women marry before they reach their twentieth anniversary in Pakistan. The same proportion of ever married women marries even earlier before they reach their 16th birthday in Bangladesh. We are dealing here with an extremely traditional matrimonial system and more so in Bangladesh than in Pakistan. The *number of children ever born* is also coded as a 4-category variable in the case of Bangladesh and Pakistan. Categories represent the inter-quartiles of number of children ever born. In the Turkish case where average family size is lower, the number of children ever born is modeled as a categorical variable on a scale of 0 to 4. Category 4 includes cases with four or more children ever born while "no children" is the omitted category in the model. *Abortion* is coded as a dummy variable for ever having versus not having a voluntarily terminated pregnancy. When used as explanatory variable, *Current use of FP* is modeled as dummy variable for use of traditional or modern methods to prevent pregnancy versus no use or use of folkloric methods only.

TDHS 1993 provides a variable which tells whether marriage was family arranged or not. Coding this variable as a dummy for family arranged versus not arranged marriage involves a decision about a third category described in the survey as *elopement*. Interpreting this category in terms of traditional versus modern, Aykam and Wolf (2000) included it with the family arranged type. I choose to classify it with the *not family arranged* category because this is more in line with the underlying hypotheses of this research. Elopement is indeed a traditional practice that happens in conservative rural settings. Usually it consists in a couple developing a secret romantic relationship. The girl then would run away with her lover to avoid family arranged marriage creating a "fait accompli" situation. In most cases, the two families manage to legitimatize the union through a post hoc ceremony to save the "honor of the family". Although a traditional practice, elopement is an expression of individualism that breaks away from the traditional system of family arranged marriage with likely positive association with practice of FP later in the couple's life. Moreover, its classification as arranged marriage entails a subtle non-stated assumption this work strives to avoid. That is the tacit reference to a Western pattern of behavior as the standard of what is modern, progressive, or advanced along the line of DI.

The type and timing of marriage ceremonies is rendered by two variables, *same day* for whether the religious ceremony and the civil marriage took place on the same day or not, and *which earlier* that captures which one was celebrated earlier. These two variables are also loaded with meanings related to the adhesion to the developmental project of modern Turkey in which secularization of life constitutes a cornerstone. Like in all countries of the Middle East where the Turkish Paradigm is adopted, the legacy of Islamic law competes with the legacy of the positive law. The competition is the more felt in the realm of family matters and marriage customs. In the particular case of the Republic of Turkey the state adopted modified versions of the Swiss and Italian Civil and Penal Codes, outlawed the implementation of Islamic law, and closed religious courts since its inception (Hancioğlu 1994). As a consequence of this interdiction from public

display of religious practices, the latter are likely to be confined to a grass-roots expression on the fringes of what is legal. For example, for a Muslim community, to be legitimate, marriage must fulfill several conditions that include a ceremony which advertises it. Standing alone, the legal sanction by a state official is not sufficient to legitimize a marital relationship in the eyes of the community. In order to fulfill the legal (state) requirements along with the legitimacy in the eyes of the community a Muslim couple have to do both. The timing of these two ceremonies is therefore an indicator of adhesion to religious law, or some traditional expression of it, or the adhesion to the secular project. In the first case the religious ceremony has to go first, in the second case the civil marriage takes precedence. I therefore include the *same day* variable but, unfortunately, I had to drop the "*which earlier"* from the models because of too many missing values. These non-responses are probably related to the fact that religious marriage being outlawed, many respondents choose not to talk about it. However since the two variables are correlated and we know from the data that in most cases a religious ceremony precedes the civil marriage, same day is to be interpreted as adhesion to the secular project. While not the same day is likely to mean a religious ceremony took precedence with the expected implication for IFS and practice of FP. An alternative interpretation is that those who celebrate official and religious marriage ceremonies on the same day are actually people who care at all about having a religious ceremony, as opposed to people who rely only on the official ceremony. If this is the case "same day ceremony" is to be interpreted as a marker of attachment to religious beliefs and practice.

Lifestyle behavioral variables These variables allow the distinction of modern from traditional life style using gender distribution of household responsibilities, women's freedom of movement, and exposure to the mass media. "Can go to hospital alone" tells if the respondent lives in a social environment which adopts women seclusion or not. Money decision making proxies the respondent power within the household. The three generic mass media questions are recoded as dummy variables. .

Values, beliefs, and exposure to FP promotion Three questions under this heading are related to knowledge and belief about FP. "Knows modern FP*"* tells whether the respondent knows a modern method of family planning. "Source of knowledge" about FP models the sources of knowledge as private sources versus government and NGOs promoted sources. Husbands' attitude towards family planning is modeled as 3-category variable modeling whether husband disapproves FP (omitted category), approves FP, and whether the respondent does not know husband's feeling about FP. The country specific question in PDHS about the respondent's expectations for daughter's education is categorized into the usual education categories (primary, middle/secondary, higher) and other (fate, as far as she can) versus the omitted category for no education. In the case of Turkey, Each one of these two main models is supplemented with sub-models A and B to include alternative ways of testing the association of values and beliefs with the outcome variable. I use in sub-model A the results of the PCA interpreted as types of moral dimensions in relation to attitudes to reproductive behavior. Sub-model B includes linear combinations that reduce the thirteen values and beliefs variables into five dimensions: Lifestyle, Gender Equality, Marital Relationship, Religious Belief, and Couple's Infecundity.

Values and beliefs: These variables seem to be carefully chosen to account for the adhesion to the traditional norms infatuated with religious teachings, or adhesion to the secular project of society as expressed in the personal and family relationships. Whether the respondent and her partner believe that FP is against religion or not is modeled as a dummy variable for agree versus disagree. The categories "some methods against religion" and "all methods against religion" were collapsed into a single category "FP against religion". Four questions ask whether respondents agree or disagree with the following statements: men are wiser than women, a husband can beat a disobedient wife, women should not argue with their husbands, and it is ok for

married men to go out. These questions capture the respondent's standing with regard to gender relationships. Interpreting the questions in the light of the religious teachings which underlie the popular beliefs consciously or unconsciously, one can locate the respondent on the scale of Holism-Individualism. Indeed each one of the four variables can be traced back to a formal teaching of the Koran. However, believers diverge on the interpretation of which teachings of the holy text are to be understood as transcendental norms and values, and which are to be understood as temporal injunctions valid for specific socio-historical contexts. It is this fine line of demarcation that separates what we label *fundamentalism* from the other three moral universes

4. Discussion of preliminary results

Bangladesh and Pakistan I reproduce below (panel A of table 8) an extract from a table reporting the distribution of children among ever-married Pakistani women, and the mean ideal number of children, according to number of living children (Ali and Rukanuddin 1992). To explain the high proportion of non-numerical answers about ideal number of children, the authors note that many women found this type of hypothetical question difficult to answer. They further comment on possible explanation of the percent of ever-married women who responded "Up to Allah" [read "up to God"] without providing a specific numerical answer: "The question on ideal family size (particularly for women who already had children) is perhaps phrased in such a manner that the respondent is required to perform the difficult task of thinking abstractly and independently of her actual family size. In view of the high level of illiteracy among women, such question may be difficult for many women to answer." (Ali and Rukanuddin 1992, p.105). Caldwell (1982) discusses a similar issue by reference to the context of traditional African society. He underlines the fact that this type of answer

carries a complex meaning. Therefore it should not be dismissed easily as the previous quote seems to suggest.

Indeed, it may be true that the phrasing of the question and the hardship associated with abstract thinking explain in part the high percent of such a response. It is also possible that this answer means exactly what it says. Leaving the answer to Allah does not mean at all that women do not have an ideal family size. But it means that even reaching that family size is Allah's business[2]. May be it is not the low level of education that prompt this type of answer but rather a high level of awareness about religious teaching, as opposed to education which promotes the beliefs of DI, that prompt this answer. In other words, this type of answers could stem from a Sufi Ethos culture as opposed to a culture impregnated with the perceptions originating from DI. The point is supported by the contrast we find between Bangladesh and Pakistan. Compare the proportions of "Non-numeric" answers given in Pakistan to those given in Bangladesh. These are probably the real answers due to lack of education. And they are higher in Bangladesh than in Pakistan. Now compare the proportions of "up to Allah" in Pakistan and Bangladesh, the difference is huge. It cannot possibly reflect a differential in educational level but a difference in worldviews. This might be a typical illustration of situations where *contraception does not belong to the realm of conscious choice* terms in Coale's famous expression. The non-numerical answers are therefore included as a separate category in the model alongside the numerical answers.

[2] This very exact idea is expressed in the Koran: "To God belongs the Kingdom of the heavens and the earth; He creates what he will; **He gives to whom He will females, and He gives to whom He will males or He couples them, both males and females; and He makes whom He will barren**. Surely He is All-knowing, All-powerful." (Arberry 1996, II:198).

Table 4
Percent distribution of ideal number of children for ever-married women and mean ideal number of children for ever-married women, by number of living children

Ideal number of children	Number of living children including current pregnancy								Total
	0	1	2	3	4	5	6	7+	
A. PAKISTAN 1990-1991									
0-1	0.3	0.4	0.9	0.3	0.2	.	.	.	0.3
2	7.2	7.4	10.1	3.9	3.7	3.5	3.8	1.4	5.1
3	6.6	8.8	7.5	13.9	3.2	4.8	4.5	3.3	6.7
4	16.9	17.3	19.8	18.9	26.7	13.8	15.4	13.7	18.0
5+	9.1	7.3	6.8	6.9	9.1	12.0	11.8	10.7	9.1
Up to Allah	**58.5**	**58.1**	**54.6**	**55.7**	**56.4**	**65.5**	**64.3**	**69.8**	**60.2**
Non-numeric	**1.3**	**0.7**	**0.3**	**0.4**	**0.6**	**0.5**	**0.2**	**0.9**	**0.6**
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean Ideal[1]	3.9	3.9	3.6	3.8	4.2	4.2	4.4	4.8	4.1
B. BANGLADESH 1993-1994									
0-1	4.2	2.8	0.7	1.8	1.2	0.4	0.5	0.5	1.7
2	63.9	67.2	63.1	48.2	49.2	42.0	36.1	26.8	54.1
3	12.1	14.2	22.7	31.5	21.5	29.2	29.3	24.6	22.4
4	5.4	4.3	5.3	8.3	17.0	13.7	16.1	24.9	9.6
5+	0.5	0.7	0.4	1.2	1.6	2.9	2.3	3.8	1.3
Up to Allah	**5.6**	**6.1**	**3.2**	**3.0**	**2.9**	**4.1**	**2.6**	**4.1**	**4.0**
Non-numeric	**8.4**	**4.6**	**4.5**	**6.0**	**6.6**	**7.7**	**13.1**	**15.4**	**6.9**
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean Ideal[1]	2.2	2.3	2.4	2.6	2.7	2.7	2.8	3.1	2.5

Source: Panel A is a summary of table 8.6 in (Ali and Rukanuddin 1992) which I also calculated independently form the primary data. I then calculated the figures in panel B from the primary data of Bangladesh for comparative purpose.

1. Means are calculated for women giving numeric responses only

Turkey

Principal Components of Women's Values and Beliefs Since these variables are correlated with each other, for better parsimony and to operationalize the theoretical concepts expressed in the main hypothesis, I create four new variables matching the first four principal components. The four components account for 65 percent of the variation in values and beliefs. Scores for each component are displayed in table 4. Sure enough, these four variables describe two quite opposite profiles easily interpretable on the axis Holism-Individualism. One profile hints at individualism and secular views, the other is more holistic and religious in nature. The two other profiles are mitigated expressions of the former ones. They are less obvious but still

interpretable. Each profile is described below based on the loading on each one of the 13 values and beliefs variables.

Table 5
Scores for Principal Components of Values and Beliefs, Turkey 1993

Explanatory variables	First component	Second component	Third component	Fourth component
Respondent: FP not against religion	0.174	0.161	**0.664**	0.005
Husband: FP not against religion	0.174	0.161	**0.665**	0.016
Men not wiser than women	**0.335**	0.193	-0.111	**-0.317**
Husband cannot beat disobedient wife	**0.357**	0.192	-0.130	**-0.304**
Women can argue with husbands	**0.327**	0.154	-0.126	**-0.289**
It is not that OK married men go out	**0.283**	0.140	-0.138	**-0.288**
Husband drink, divorce	**0.261**	**-0.261**	-0.038	**0.387**
Marital discord, divorce	**0.373**	-0.194	-0.056	**0.340**
Husband aggressive, divorce	**0.411**	-0.132	-0.054	**0.228**
Unfaithful husband, divorce	**0.340**	-0.168	-0.061	0.184
Unfecund husband, no divorce	-0.018	**0.550**	-0.149	**0.374**
Infecund wife, no divorce	0.041	**0.549**	-0.127	**0.384**
Mother-in-law interfering, divorce	0.143	**-0.274**	0.058	-0.045

Moral individualism (first component) It can also be characterized as doctrinal secularism in the context of the Turkish DI. The respondent believes in a marriage based on couple's harmony rather than on its reproductive function. The first is a characteristic of modern family while the second is a characteristic of traditional familial relationships. The respondent also supports an equalitarian marital relationship. The respondent strongly agrees that men are not wiser than women, men cannot beat wives, women can argue with husbands, and it is not ok for married men to go out. If husband drinks, is aggressive, unfaithful, or there is marital discord, divorce is then justified. This profile is a strong reminder of Thornton's enumeration of the characteristic of modern family we discussed in the beginning of the previous chapter.

Fundamentalism (fourth component) or doctrinal Islamism Gender inequality in favor of men that seems to stem from a literal interpretation of the Koranic text is

condoned. For example the data show that women who belong to this moral universe strongly agree that men are wiser than women and a husband can discipline a disobedient wife. This echoes literally the meaning of a Koranic verse[3]. Women should not argue with their husbands and it is OK for married men to go out. Husband's misbehavior is not accepted especially drinking. The latter is even an acceptable ground for terminating marital relationship. Again this brings to mind the Koranic injunctions that prohibit drinking. However, fecundity is important but it is less so than among conventionalists. Husband's aggressiveness is an acceptable ground for divorce. Note here how the line is drawn between aggressiveness and disciplining a disobedient wife. The first is rejected while the second is recognized as husband's prerogative.

Conventionalism (second component) load moderately on each value except for infecundity of either wife or husband which does not justify divorce. Mother-in-law interfering in the couple's life is acceptable and women's status is moderately valued. Contrary to the previous case, husband's drinking is not an acceptable ground for divorce. This seems to stem from a pragmatic tolerant attitude which reflects the reality of social life as opposed to the more doctrinal fundamentalist's attitude that stems from a literal reading of the Koran. The latter of course translates into a more radical morality.

Pragmatism (third component) Loading on gender equality variables is insignificant so is loading on variables related to husband's misbehaviors. The highest loadings are recorded for FP perceived as not against religion by both the respondent and her husband.

[3] "And those you fear may be rebellious admonish; banish them to their couches, and beat them. If they then obey you, look not for any way against them; God is All-high, All-great." (Arberry 1996, I:105)

4. Analytical results and discussion In all three cases, a full model 1 includes all the variables for women values and beliefs. In this main model, associations of the explanatory variables with IFS are tested individually. In the case of Turkey, sub model 1A reduces the full model through utilization of the results of PCA as moral universes and tests the significance of the association of Moral Individualism, Conformism, Pragmatism, and Fundamentalism with IFS. Similarly, a complete model 2 tests individually the associations of all variables with the outcome "current use of FP". It is than complemented with sub-models 2A, and 2B for similar purposes as with IFS modeling. In the benefit of space, I do not report the full outcomes of sub-models A and B. Since the control variables are unchanged, their coefficients remain almost the same as in the main model. Therefore, I report the results for the composite variables only. The outputs of the multinomial logistic regression models are summarized in tables 6 to 13 which report the odds ratios (OR) and confidence intervals (CI) for control and explanatory variables. Although I report the ORs with 90 percent confidence levels of statistical significance or higher, I only consider as conclusive 95 percent confidence levels or higher. But, since inconclusiveness is part of the story in this study, a presentation limited to the strong associations would be incomplete. Therefore I include in the tables the results with ninety percent statistical confidence and occasionally refer to these results in the comments too. I also estimated design effect to appreciate the impact on the variances of the variables of interest of this complex design compared to a simple random sampling design[4]. Discussion of the results comes in sequence for IFS and FP but with all three cases compared and contrasted.

[4] Tables of DEFF are available on request from the author.

A. Ideal family size (IFS) The socio-demographic characteristics of the respondent and her husband have little bearing on her idea of an ideal family size. Only ethnicity and religion have strong associations with large IFS. Kurdish ethnicity and minority ethnicities other than Turkish and Kurdish increase the odds of preference for family size of four or more children by more than one time and a half. Being a Muslim woman in Bangladesh also increases the odds of wanting a family with five children or more by more than eight times, compared to a non-Muslim woman.

Urban residence is statistically not significant save in the case of Pakistan where it is associated with less non-numeric responses and IFS of five or more children. Education of both respondent and husband is statistically significant only at the secondary and higher levels except in Turkey where a husband with primary education is 40 percent less likely to prefer an IFS less than two children. Moreover this significance is not true across the board. Respondent's secondary education plays in reducing the likelihood of wanting large family sizes only. That is three children in the case of Turkey (OR=0.55) and five children or more in the case of Pakistan (OR=0.34) and Bangladesh (OR=0.00). Association of husband's secondary education is significant only in Turkey and Bangladesh where it is associated with reduced desire for very small family size (OR=0.43 for IFS<2) in the first case, and with reduced desire for large family size in Bangladesh (OR=0.26 for IFS=4). A respondent married to a partner with higher education tends to prefer a family size of three children in Pakistan (OR=2.1). Her Bangladeshi alter-ego would be repulsive of family size of 5 children or more (OR=0.0).

Husband's occupation is not significant in all cases. Respondent's occupation is significant only in the case of Bangladesh in the expected direction. That is occupations

in agriculture are associated with reduced odds of wanting a family of five or more children, and white collar occupations associated with ORs 50 percent lower for preferring a family size of four children. Respondent's age does not matter in Pakistan but is significant in Turkey and Bangladesh. At 99 percent confidence level preference for IFS lower than replacement level increases by 14 percent for every five years of age in Turkey. In Bangladesh respondent's age is associated with lower odds for preferring a family size of four children in the average proportion of 17 percent for every five years.

In sum, non obstante the ethnic divide, in Turkey the only significant characteristic for a small IFS (<2 children) is a mature respondent and an educated husband at least at the secondary level. In Pakistan what matters most is education. Being married to a husband with higher education translates into higher odds of preference for relatively small IFS (3 children) and lower odds for preference for large IFS (5+ children). Respondent's occupation plays in the same direction with less likely association with large family size. In Bangladesh also Education of both respondent and her partner plays in the direction of less likely association with large family size. So is respondent's occupation in either agriculture of white collar occupation. Note that it is only in Bangladesh that respondent's occupation is statistically significant in the direction of rejection of large family size. This might be due to the combined effect of two factors, a context of poverty where women strive to make ends meet and a higher consciousness about the possibility to gain control over their own destiny.

We turn now to the patterns of nuptiality, fertility, and reproductive behavior. Even Muslim populations that have been exposed intensively and for a long time to DI driven policies such as Turkey, marriage is still universal; thus the importance of

increased age at first marriage for reducing exposure to the risk of childbearing. This is especially true when use of modern methods of contraception is not the norm. The latter statement also applies to Turkey. Our findings however do not support a strong association between age at first marriage and a specific figure of IFS in Turkey and in Bangladesh. In the first case there is a weak result that shows odds are higher by 20 to 30 percent for preferring IFS of 3 children over replacement level when the respondent first marriage occurs within the second and third inter-quartiles then when they marry younger. In Pakistan, where the population is the least exposed to the tenets of DI, mature marriage seems to be associated with preference for a medium size family composed of three to four children. In the first case, the ORs are more than twice, and in the second case they are 60 to 80 percent higher. This strong association might reflect what is perceived as the optimum family size in the Pakistani social context.

Achieved fertility operates only once the respondent has two children or more except in one case related to Turkey. Turkish women who have one child are less likely to express preference for a large family of four or more children (OR=0.38). Noteworthy also is the singularity of Pakistani population where the association of respondent's parity and her imagined family size is significant only with regard to IFS of four or five and more children. Pakistani women of parity two or three are likely to disapprove IFS over four children by three quarters to half the odds of one who have a parity of two children or less. In Turkey a parity of two or more children reduces the odds of preference for below replacement fertility by more than half. This might be a coherent rationalization supported by the responses of those who prefer larger IFS. Indeed the odds are more than double for Turkish women of parity 3 or 4 and more to show preference for IFS of 3

children, and they are more than 2.5 for preference of IFS of 4 and more children if the women have an achieved fertility of four and more. In the case of Bangladeshi women, achieved fertility has strong negative association with IFS for all parities of 2 or higher. The odds for IFS of 3 children are reduced by 3 quarters to one half if the respondent is of parity 2 to 4 or higher. They are reduced in similar proportion for preferring four children, and reduced by 90 to 95 percent for IFS of five or larger.

Experience with abortion, current use of FP, and with source of knowledge about FP are only marginally significant in all cases. First, none of the three is statistically significant in the case of Pakistan. Current use of family planning increases by about 30 percent the odds for a preference for below replacement IFS but at the inconclusive level of statistical significance of 90 percent. Experience with abortion increases the odds for IFS of 3 children by 44 percent in Bangladesh. Also if the respondent acquires information about family planning in the public sector the odds of preference for a large family size of five or more children are lower by 44 percent than if she gets information in the private sector. The singularity of this finding to Bangladesh underscores the comparative efficacy of family planning programs in this country.

Respondent's life style can be characterized through the three baseline DHS questions about access to television, radio, and newspapers. More insight can be gained from country specific questions in each country. We first underline the fact that like abortion, FP, and source of knowledge about FP which can also be interpreted as life style indicators, television, radio, and newspaper variables are only marginally significant for IFS in Turkey and Bangladesh. They did not matter at all in the case of Pakistan.

Watching television once a week reduces the ORS for IFS of 3 children and 4 children or more by 40 to 44 percent in Bangladesh and in Turkey. Note the presence of an ambiguous association of reading the newspapers once a week and IFS. It reduces the odds for IFS of 5 or more children and, in the same time, increases the odds more than five times for giving a non-numeric response to the questions about IFS. We can only raise questions about these observations. Is it that newspapers are sending messages at odds with the message spread through television?

Second, each one of Bangladesh and Pakistan's surveys provide one country specific question about women's freedom. In the first case respondents are asked if they decide alone about how to spend money or someone else decide how to spend money. This question can be equated with the question about who do the budgeting in the Turkish case. Decision about spending money is not significant in both cases. It might have negative bearing on preference for below replacement level IFS in Turkey. If the husband is involved in budgeting the association with below replacement level IFS has an OR=0.74 at the 90 percent confidence level. The country specific question included in Pakistan's survey asks whether the respondent could go to the hospital alone. It offers a 3-alternative response. The first alternative is a straight "yes", the second is "it depends", and the third is "no" she needs company to go to hospital. In the present analysis the responses are collapsed into two alternatives only, yes and no. This question is very informative about the strength of the seclusion system discussed previously. The association of this variable with IFS is only significant in the case of IFS=3 children wherein the odds of preferring a family size of three children is increased by 58 percent if the respondent can go to hospital alone. Remember that three children is a small family

size in the Pakistan's socio-demographic context. This question is comparable to the country specific question in the Turkish survey which asks whether the respondent goes shopping or not. If the respondent goes shopping the odds for IFS=3 children which is now a large family size are 21 percent lower. Note the gradation in the perception of women's freedom of movement implied by these two questions. Indeed this freedom is context dependent. In Turkey where the strict seclusion system is lose if not a thing of the past, woman's shopping is the appropriate marker while in Pakistan a woman needs more serious reasons to go to public places. Even in this case a companion might be needed.

Finally there are two more country specific questions in the Turkish data that merit attention. They refer more profoundly to the characteristics of the matrimonial system. Respondents are asked whether they have had a family arranged marriage or not. And in the case a respondent has had both a civil and religious marriages, she is asked to tell whether the two occurred on the same day. I discussed in the methods section the meaning of these questions in the Turkish context. The association of experiencing an arranged marriage with IFS is significant in the expected direction with 35 percent lower odds for preference for family size of four children or more versus preference for a replacement level fertility. A borderline significance is also observed of IFS=3 children in the same direction as the previous one. As noted above, celebration of religious ceremony and civil marriage on the same day can be interpreted as an indicator of the strength of support to the secular project as opposed to religious conservatism. Same day celebration of religious and civil marriage ceremonies increases the odds for IFS below replacement fertility by 26 percent.

The previous discussion focused on the ascribed and acquired objective attributes so to speak. We turn now to examining the associations with IFS of respondent's values and Beliefs. There are only two questions specific to Pakistan and Bangladesh. A question about whether husband approves or disapproves FP is present in both questionnaires. Its content is comparable to the country specific question on the Turkish questionnaire which asks whether husband thinks FP is against religion or not. A second question about respondent aspirations for her daughter's education is a country specific to Pakistan. It has no equivalent in the Turkish of Bangladeshi questionnaires. Aspirations for daughter's education with IFS is not statistically significant except in reducing the likelihood of non-numeric response by about three thirds if the respondent's envision her daughter having middle/high school or higher education. So is the case with husband's approval of FP which reduces the likelihood of a non-numeric response by about half if the husband approves FP than otherwise in both Bangladesh and Pakistan.

Examined one variable at a time, the Turkish country specific variables for values and beliefs are statistically significant only for the extreme values of IFS, that is below replacement and four or more children except for two cases where they are significant for an outcome of 3 children. Both cases are markers of strong traditional family values. If the respondent agrees that husband's infecundity is not acceptable ground for divorce the odds are 59 percent higher for preferring IFS of 3 children and 89 percent higher for an IFS of four or more children. Tolerance for mother-in-law interference into the marital relationship of the couple is an indicator of internalization of the norms of the extended traditional family. Therefore one should expect a positive association of this variable with the IFS. The first model shows that the odds are 22 and 36 percent lower for preferring a

3-children, and 4+ children family size respectively, versus 2 children if the respondent agrees that mother-in-law interference constitutes valid ground for divorce. If the husband agrees that FP is not against religion the odds for preference of IFS of 4 or more children are 43 percent lower. Respondent's belief that FP is not against religion translates into an OR=1.83 for an IFS of 3 children.

Three strong markers of gender equality are also associated with preference for a family size lower than replacement level. If the respondent believes that men are not wiser than women her likelihood of preferring a below replacement family size is 42 percent higher. If she finds it normal that a woman can argue with her husband or condone divorce on ground of marital discord the odds for her preferring an IFS less than two children are lower by about one third. If the husband agrees that FP is not against religion or the respondent does not know his opinion the odds are about 40 percent lower for preferring a large family size of four or more children. The association of the values and beliefs variables with the IFS is significant at best at 95 percent confidence level except for the husband's agreement that FP is not against religion.

Linear combinations of independent variables (Table 9) meant to take the previous comments to a higher level of conceptual abstraction. It aims to test the combined effect of variables grouped by reference to the attributes they refer to as lifestyle, gender equality, marital relationship, religious belief, and couple's infecundity. The association of these cultural dimensions with IFS is not statistically significant.

When summarized through PCA approach into complex constructs, values and beliefs add meaning to the story told on the basis of simple variables analysis. The following comments describe these associations for each one of the four principal

components as displayed in table 9. Not withstanding the methodological caveat discussed in the methods section, the four principal components provide a convenient summary of the findings and are highly significant in the expected direction. The pattern of association of IFS with the dimensions of variation in attitudes to reproductive behavior runs in the expected direction. Moral individualism has ORs that are 5 and 12 percent lower for IFS of three children and four or more children versus replacement level. Pragmatism is significant at 99 percent confidence level also in the opposite direction with odds that are 10 percent lower on average for IFS of four or more children as opposed to replacement level of total fertility rate. Association of fundamentalism with IFS is significant with 9 percent more chance of preferring 3 children than 2 children.

Table 6
Multinomial logistic regression for ideal family size (omitted category: two children or less)-
Bangladesh 1993-1994 (Barishal = omitted region)

Variables		3 children		4 children		5+ children		Non-numeric	
		O.R.	(C. I.)	O.R.	(C. I.)	O.R.	(C. I.)	O.R.	(C. I.)
Socio-demographic background									
5-year age		n.s.s.		**0.83+**	0.69-1.00	n.s.s.		n.s.s.	
Chittagong		n.s.s.		**2.44+**	1.03-5.74	n.s.s.		n.s.s.	
Dhaka		n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Khulna		**0.36***	0.20-0.65	**0.18+**	0.05-0.70	**0.00***	0.00-0.00	**0.22+**	0.06-0.90
Rajshani		**0.66+**	0.44-0.99	**0.36+**	0.16-0.81	n.s.s.		0.44	0.18-1.08
Urban residence		n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Muslim		n.s.s.		n.s.s.		**8.14***	2.02-32.8	**0.32+**	0.11-0.87
Responde education	Primary	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
	Secondary	n.s.s.		n.s.s.		**0.00***	0.00-0.00	**0.20+**	0.05-0.85
	Higher	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Husband education	Primary	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
	Secondary	n.s.s.		**0.26+**	0.09-0.76	n.s.s.		n.s.s.	
	Higher	n.s.s.		n.s.s.		**0.00***	0.00-0.00	n.s.s.	
Respond Occupatio	Agriculture	n.s.s.		n.s.s.		**0.00***	0.00-0.00	n.s.s.	
	white collar	n.s.s.		**0.49+**	0.28-0.88	n.s.s.		n.s.s.	
Husband occupatio	Agriculture	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
	white collar	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Nuptiality, fertility, and reproductive behavior									
Age at 1st marriage	2nd Quartile	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
	3rd Quartile	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
	4th Quartile	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Number children ever born	2nd Quartile	**0.25***	0.13-0.48	**0.31***	0.14-0.70	**0.11+**	0.02-0.63		
	3rd Quartile	**0.60***	0.41-0.88	**0.26***	0.12-0.53	**0.05***	0.02-0.14	**0.40***	0.21-0.77
	4th Quartile	**0.50***	0.31-0.81	**0.42***	0.23-0.75	**0.05***	0.01-0.38	**0.43+**	0.19-0.98
Ever had abortion		**1.44+**	1.02-2.04	n.s.s.		n.s.s.			
Current user of FP		n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Lifestyle behavioral									
Can go to hospital alone		-		-		-		-	
Spending decision	Respondent	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
	R + Else	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Read newspaper 1/week		n.s.s.		n.s.s.		**0.00***	0.00-0.00	**5.24+**	1.21-22.7
Watches TV 1/week		**0.51***	0.31-0.83	n.s.s.		n.s.s.		n.s.s.	
Listen to radio 1/week		n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Values, beliefs and exposure to FP promotion									
Knows modern FP		-		-		-		-	
Source of Know		n.s.s.		n.s.s.		**3.56***	1.15-11.1	n.s.s.	
Husband OK FP	Yes	n.s.s.		0.47	0.21-1.06	n.s.s.		**0.41+**	0.17-0.99
	Don't know	0.40	0.15-1.03	n.s.s.		n.s.s.		n.s.s.	
Attitude Toward daughter education	Primary	-		-		-		-	
	Middle/Sec.	-		-		-		-	
	Higher	-		-		-		-	
	All she can	-		-		-		-	

* 99 percent confidence level + 95 percent confidence level n.s.s. not statistically significant - No data

Table 7
Multinomial logistic regression for ideal family size (omitted category: two children or less)- Pakistan 1990-1991 (Punjab = omitted region)

Variables		3 children		4 children		5+ children		Non-numeric	
		O.R.	(C. I.)	O.R.	(C. I.)	O.R.	(C. I.)	O.R.	(C. I.)
Socio-demographic background									
5-year age		n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Sindh		**0.46***	0.30-0.71	**0.45***	0.34-0.61	n.s.s.		0.71	0.49-1.03
New Frontier		n.s.s.		**0.62**	0.40-0.95	n.s.s.		n.s.s.	
Balochistan		n.s.s.		n.s.s.		**11.1***	3.31-37.3	**6.89***	2.14-22.2
Urban residence		n.s.s.		0.70	0.46-1.07	**0.54+**	0.33-0.89	**0.59+**	0.36-0.97
Muslim		-		-		-		-	
Responde ducation	Primary	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
	Secondary	n.s.s.		n.s.s.		**0.37***	0.18-0.75	**0.34***	0.20-0.58
	Higher	n.s.s.		**0.37+**	0.14-0.99	n.s.s.		**0.36+**	0.14-0.94
Husband education	Primary	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
	Secondary	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
	Higher	**2.11+**	1.01-4.41	n.s.s.		n.s.s.		n.s.s.	
Respond occupatio	Agriculture	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
	White collar	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Husband occupatio	Agriculture	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
	White collar	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Nuptiality, fertility, and reproductive behavior									
Age at 1st marriage	2nd Quartile	**2.11+**	1.14-3.90	**1.83+**	1.02-3.29	1.76	0.93-3.34	1.61	0.95-2.71
	3rd Quartile	**2.19***	1.29-3.72	**1.62+**	1.02-2.59			1.43	0.94-2.17
	4th Quartile	n.s.s.		1.62	0.95-2.77				
Number children ever born	2nd Quartile	n.s.s.		**0.32**	0.16-0.64	**0.25***	0.12-0.52	**0.16***	0.08-0.32
	3rd Quartile	n.s.s.		**0.42**	0.23-0.77	**0.26***	0.14-0.50	**0.21***	0.12-0.38
	4th Quartile	n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Ever had abortion		-		-		-		-	
Current user of FP		n.s.s.		n.s.s.		n.s.s.		0.52	0.33-0.82
Lifestyle behavioral									
Can go to hospital alone		**1.58+**	1.08-2.33	n.s.s.		n.s.s.		n.s.s.	
Spending decision	respondent	-		-		-		-	
	R + Else	-		-		-		-	
Read newspaper 1/week		n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Watches TV 1/week		n.s.s.		n.s.s.		n.s.s.		**0.61**	**0.40-0.95**
Listen to radio 1/week		n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Values, beliefs and exposure to FP promotion									
Knows modern FP		n.s.s.		n.s.s.		n.s.s.		**0.50+**	0.28-0.89
Source of Know		n.s.s.		n.s.s.		n.s.s.		n.s.s.	
Husband OK FP	Yes	**1.83+**	1.14-2.92	n.s.s.		0.67	0.42-1.06	**0.54***	0.36-0.82
	Don't know	n.s.s.		n.s.s.		n.s.s.		1.51	0.94-2.41
Attitude Toward daughter education	Primary	n.s.s.		n.s.s.		n.s.s.		0.54	0.28-1.06
	Middle/Sec.	n.s.s.		n.s.s.		n.s.s.		**0.33***	0.16-0.67
	Higher	n.s.s.		n.s.s.		n.s.s.		**0.34***	0.17-0.68
	Other	n.s.s.		n.s.s.		n.s.s.		n.s.s.	

* 99 percent confidence level + 95 percent confidence level n.s.s. not statistically significant - no data

Table 8
Multinomial logistic regression for ideal family size (omitted category: 2 children), Turkey 1993

Variables		One or no children		Three children		Four or more children	
		O.R.	(C. I.)	O.R.	(C. I.)	O.R.	(C. I.)
		Socio-demographic					
Respondent's age		**1.14***	1.04-1.25	n.s.s.		n.s.s.	
Urban residence		n.s.s.		n.s.s.		n.s.s.	
Kurdish ethnicity		n.s.s.		**1.50+**	1.06-2.12	**2.86***	2.02-4.06
Other Ethnicities		n.s.s.		n.s.s.		**2.61***	1.27-5.35
Respondent education	Primary	n.s.s.		n.s.s.		0.75	0.58-0.98
	Secondary	n.s.s.		**0.55***	0.38-0.80	n.s.s.	0.38-0.80
	Higher	n.s.s.		0.55	0.27-1.09	n.s.s.	0.27-1.09
Husband's education	Primary	**0.60+**	0.36-0.99	n.s.s.		n.s.s.	
	Secondary	**0.43***	0.24-0.75	n.s.s.		n.s.s.	
	Higher	n.s.s.		n.s.s.		n.s.s.	
Respondent occupation	Agriculture	n.s.s.		n.s.s.		0.72	0.51-1.01
	White collar	n.s.s.		n.s.s.		n.s.s.	
Husband occupation	Agriculture	n.s.s.		n.s.s.		n.s.s.	
	White collar	1.27	0.98-1.64	1.18	0.98-1.42	n.s.s.	
		Nuptiality, fertility, and reproductive behavior					
Age at first marriage	2st inter-Q	n.s.s.		1.37**	1.09-1.72	n.s.s.	
	3rd inter-Q	n.s.s.		1.23	0.98-1.54	n.s.s.	
	4rt inter-Q	n.s.s.		n.s.s.		n.s.s.	
Number of children ever born	1 child	n.s.s.		n.s.s.		**0.38***	0.22-0.67
	2 children	**0.41***	0.25-0.66	n.s.s.		0.61	0.37-1.02
	3 children	**0.47***	0.29-0.77	**2.30***	1.64-3.23	n.s.s.	
	4+ children	**0.36***	0.21-0.63	**2.01***	1.35-3.00	**2.61***	1.54-4.39
Current use modern fp		1.30	0.99-1.71	n.s.s.		n.s.s.	
Ever had abortion		n.s.s.		n.s.s.		n.s.s.	
Marriages same day		**1.26+**	1.04-1.53	n.s.s.		n.s.s.	
Marriage not arranged		n.s.s.		0.86	0.72-1.01	**0.65***	0.51-0.84
		Lifestyle behavioral					
Respondent shopping		n.s.s.		**0.79+**	0.65-0.96	n.s.s.	
Husband shopping		0.76	0.57-1.02	n.s.s.		n.s.s.	
Respondent budget		n.s.s.		n.s.s.		n.s.s.	
Husband budget		0.74	0.53-1.03	n.s.s.		n.s.s.	
Read newspaper 1/week		n.s.s.		n.s.s.		n.s.s.	
Watches television 1/week		n.s.s.		n.s.s.		**0.66***	0.49-0.88
Listen to radio 1/week		n.s.s.		n.s.s.		n.s.s.	
		Values and beliefs					
Resp. FP not against rel.		n.s.s.		n.s.s.		n.s.s.	
Husb. FP not against	Agree	n.s.s.		n.s.s.		**0.57***	
	Don't know	n.s.s.		n.s.s.		**0.62+**	
Men not wiser than women		**1.42+**	1.04-1.94	n.s.s.		n.s.s.	
Husb. not beat disob. wife		n.s.s.		n.s.s.		n.s.s.	
Women argue with		**0.73+**	0.54-0.99	n.s.s.		n.s.s.	
Not ok married men out		n.s.s.		n.s.s.		n.s.s.	
Husband drinks divorce		n.s.s.		n.s.s.		n.s.s.	
Marital discord divorce		**0.70+**	0.49-0.99	n.s.s.		n.s.s.	
Husb. aggressive divorce		n.s.s.		n.s.s.		n.s.s.	
Unfaith husband divorce		n.s.s.		n.s.s.		n.s.s.	
Husb infecund no divorce		n.s.s.		**1.59+**	1.11-2.27	**1.89+**	1.14-3.14
Wife infecund no divorce		n.s.s.		n.s.s.		**0.63+**	0.42-0.94
Mother-in-law divorce		n.s.s.		**0.78+**	0.62-0.99	**0.64+**	0.44-0.92

* 99 percent confidence level + 95 percent confidence level n.s.s. not statistically significant

Table 9
Models 1A & 1B: Multinomial logistic regression for ideal family size (Omitted category: 2 children). Principal components (panel A) and linear combinations of variables (panel B) as explanatory variables Turkey 1993

Variables	One or no children		Three children		Four or more children	
	O.R.	(C. I.)	O.R.		O.R.	(C. I.)
A. Principal Components of Values and Beliefs						
Com 1 (Moral Individualism)	n.s.s.		**0.95+**	0.90-1.00	**0.88***	0.81-0.95
Component 2 (Conformism)	n.s.s.		n.s.s.		n.s.s.	
Component 3 (Pragmatism)	n.s.s.		n.s.s.		**0.90***	0.83-0.97
Comp 4 (Fundamentalism)	n.s.s.		**1.09+**	1.01-1.17	n.s.s.	
B. Linear Combination of Variables						
Lifestyle	n.s.s.		n.s.s.		n.s.s.	
Gender equality	n.s.s.		n.s.s.		n.s.s.	
Marital relationship	n.s.s.		n.s.s.		n.s.s.	
Religious belief	n.s.s.		n.s.s.		n.s.s.	
Couple Infecundity	n.s.s.		n.s.s.		n.s.s.	

* 99 percent confidence level + 95 percent confidence level n.s.s. Not statistically significant

B. Current use of family planning (FP) We start the discussion of this part from where we left it in the previous section. We discuss first the explanatory variables then return to the control variables.

Examined one variable at a time, none of the values and beliefs is unambiguously significant except for husband's religious beliefs. These variables highlight one single important conclusion. Husband's belief family planning is not against religion is a strong determinant of respondent's use of traditional (OR=1.80) and modern (OR=2.62) methods of FP. By contrast, respondent's belief FP is not against religion is not significant while in the case she doesn't know whether it is against or not, the odds are 1.99 and 1.93 to be a user of traditional or modern methods of FP. This can be interpreted that wives rely on their husband's knowledge. This finding is reflected in the linear combinations of values and beliefs. Linear combination of religious beliefs is a dimension that matters for current use of FP. The odds are 76 percent higher for current

use of traditional methods vs. folkloric or no use among couples who believe FP is not against religion compared to those who believe FP is partially or totally against religion.

Principal components are highly significant in the expected direction. Indeed, association of Moral Individualism (first component) and current practice of FP is significant at 99 percent confidence level with 12 percent increase in the odds per unit of this variable's scale. The same association is also significant at 95 percent confidence level with regard to current use of traditional methods of FP. Pragmatism's (third component) association is also significant at the 99 percent confidence level but in the opposite direction with odds that are 15 and 13 percent lower respectively.

Lifestyle variables are important indicators of population characteristics when approached along the lines of the polarized discourse about modernity versus traditionalism (Aykan & Wolf 2000). Women's lifestyle comes with no surprises in relation to current use of FP. More empowered women and more exposed to television have higher odds of being current users of traditional FP and even higher their odds for being users of modern FP. Television is also associated with use of modern methods of FP in Pakistan. Reading newspaper once a week has no effect on current use of FP, so is listening to the radio with regard to use of modern methods. The latter even lowers the odds of using traditional methods of FP. This is to be contrasted with the strong association of this variable with use of traditional methods in Bangladesh. Respondent's participation in household responsibilities such as shopping and budgeting increases the odds for use of both traditional and modern methods by 38 percent. This is also no surprise since these are indicators of women's empowerment within the household that is likely to increase access to sources of contraception and strengthen their leverage for

making personal choices. While the association of husband's shopping with use of modern and traditional methods of FP is borderline significant to not significant, association of husband's budgeting is the strongest of all covariates. Indeed the odds are 137 and 177 percent higher for a woman to be a current user of modern and traditional methods of family planning versus folkloric/no use when her husband is taking care of the family budget than otherwise. This seems a counter intuitive finding since it suggests consolidation of a patriarchal setting where large family size is valued. A plausible explanation is that husband's budgeting simply means this is a nuclear family where the couple shares household responsibilities and decisions as opposed to the extended traditional family where household head is likely to be the husband's father or older brother. It is in this last case that couple's decisions, including practice of contraception, are influenced by the patriarchal rule in a society Emmanuel Todd (1984) describes as absolutely patrilineal. Husband's empowerment in the context of extended traditional families which constitute less than 35 percent of households (Aykan and Wolf 2000) is wife's empowerment by proxy.

The results for education support an extensively documented positive association of women's education and FP especially beyond primary educational level (Cochrane 1979; Caldwell 1982; United Nations 1987, 1995; Cleland and Rodriguez 1988; Jejeebhoy 1995; Jeffery and Basu 1996; National Research Council 1999; Bongaarts 2003). In the case at hand it is especially conclusive for use of modern methods of FP with increasing ORs with each level of education. The OR is 36 percent higher for primary education level with an increment about double and about nine times this value for secondary and higher education. Perhaps a Turkish oddity is that women with higher

education are also twice more likely to be current users of traditional methods of FP while the association is not significant at lower educational levels. These findings are without common measure in the two other countries. Women's education is only significant at the secondary and higher educational levels in Pakistan though with odds ratios that are double to four times the odds of those without education for use of both traditional and modern methods. Respondent's education is significant only in the case of primary education where it doubles the likelihood of using a traditional method. Husband's education is as important as woman's education in Turkey for both types of methods. It has no bearing on the matter in Pakistan, and only significant if a husband has a higher level of education in Bangladesh. in which case the OR=7.19 for using traditional methods than none of folkloric only.

Both respondent and husband's occupations also show non-significant associations in the case of Turkey except for one case. It is a highly significant association between respondent's who are in the agriculture or independent occupations and current use of traditional methods of FP with 48 percent more chance in the expected direction that is use of traditional methods of FP compared to non use or use of folkloric methods. This weak association confirms the total non-significance observed in the cases of Pakistan and Bangladesh.

Being of Kurdish ethnicity in Turkey lowers the odds of using traditional and modern methods of FP by more than half. Being a Muslim in Bangladesh has no bearing on current use of FP even though Muslim respondents show a higher propensity for large family sizes that parallel Kurdish comparative preference for large IFS.

Respondent's age works in the expected direction, at 99 percent confidence level, older women odds are on average 35 and 25 percent lower for use of modern FP and traditional methods of FP for every five years of age. In Pakistan only does age of respondent have a similar association with use of modern methods of FP.

Unlike in the cases of Bangladesh and Pakistan, patterns of nuptiality and achieved fertility are important determinants of current use of FP in Turkey. Previous experience with abortion however is not a significant determinant of current use of FP unlike the case of Bangladesh where it is strongly associated with use of traditional methods of FP. Mature marriage is highly associated with use of both methods of FP in Turkey. But the strongest determinant of all is the respondent's parity where the odds are in the order of tens and hundreds. This is an unequivocal message that we are in presence of a parity dependent fertility regime. Celebration of civil and religious marriage ceremonies on the same day is associated with lower odds for current use of traditional methods and modern methods of FP (0.82 and 0.85). This variable might classify respondents among those couples who dare at all to have a religious ceremony versus those who do not. If this is true then the outcome responds to expectations since then celebration of marriage ceremonies in the same day becomes a proxy for religious conservatism. Another variable used as proxy for traditional matrimonial system is arranged marriage. It turns out non-significant for contraceptive use.

A question the rather polarized debate about fertility decline would suggest is "so, is it ideational or structural?" As a control variable, urban versus rural residence has un-conclusive statistical significance for the current use of FP. This confirms the results about Bangladesh wherein urban residence is not significant for current use of FP. It is

also not significant for current use of modern methods of FP however it is positively associated with Pakistani women's use of traditional methods of FP.

Table 10
Multinomial logistic regression of current use of fp with "folkloric/no use" as omitted category, Bangladesh 1993-1994

INDEPENDENT VARIABLES		Traditional methods of FP			Modern methods of FP		
		O.R.	Confidence interval		O.R.	Confidence interval	
		Socio-demographic					
5-year age		n.s.s.			n.s.s.		
Chittagong		**0.24+**	0.07	0.84	**0.41***	0.24	0.73
Dhaka		**0.43+**	0.19	0.97	n.s.s.		
Khulna		n.s.s.			n.s.s.		
Rajshani		n.s.s.			n.s.s.		
Urban residence		n.s.s.			n.s.s.		
Muslim		n.s.s.			n.s.s.		
Respondent's education	Primary	**2.11+**	1.06	4.19	n.s.s.		
	Secondary	n.s.s.			n.s.s.		
	Higher	n.s.s.			n.s.s.		
Husband's education	Primary	n.s.s.			n.s.s.		
	Secondary	n.s.s.			n.s.s.		
	Higher	**7.19***	2.41	21.39	n.s.s.		
Respondent's occupation	Agriculture	n.s.s.			n.s.s.		
	White Collar	0.58	.33	1.02	n.s.s.		
Husband's occupation	Agriculture	n.s.s.			n.s.s.		
	White Collar	n.s.s.			n.s.s.		
		Nuptiality, fertility, and reproductive behavior					
Age at first marriage	2nd Quartile	n.s.s.			**0.31***	0.20	0.50
	3rd Quartile	n.s.s.			n.s.s.		
	4th Quartile	n.s.s.			n.s.s.		
Number of children ever born	2nd Quartile	**0.36+**	0.15	0.86	n.s.s.		
	3rd Quartile	n.s.s.			n.s.s.		
	4th Quartile	n.s.s.			n.s.s.		
Ever had abortion		**2.03***	1.22	3.36	n.s.s.		
		Lifestyle behavioral					
Read newspaper once a week		n.s.s.			n.s.s.		
Watches television once a week		n.s.s.			n.s.s.		
Listen to radio once a week		**1.89+**	1.13	3.17	n.s.s.		
Can go to hospital alone		**-**			-		
		Values, beliefs and exposure to FP promotion					
Government source of knowledge FP		**0.00***	0.00	0.00	**2.70***	2.00	3.64
Husband approves FP	Yes	n.s.s.			**4.81***	2.38	9.72
	Don't know	n.s.s.			n.s.s.		
Numeric ideal family size		n.s.s.			n.s.s.		
Daughter's Schooling	Primary	-			-		
	Middle/Secondary	-			-		
	Higher	-			-		
	Other	-			-		

* 99 percent confidence level + 95 percent confidence level n.s.s. not statistically significant - No data

Table 11
Multinomial logistic regression for current use of fp with "folkloric/no use" as omitted category, Pakistan 1990-1991

INDEPENDENT VARIABLES		Traditional methods of FP			Modern methods of FP		
		O.R.	C.I.		O.R.	C.I.	
		Socio-demographic					
5-year age		n.s.s.			**0.84+**	0.72	0.99
Sindh		n.s.s.			n.s.s.		
New Frontier		**0.52+**	0.29	0.93	n.s.s.		
Balochistan		**0.25***	0.11	0.59	n.s.s.		
Urban residence		**2.30***	1.26	4.20	n.s.s.		
Muslim		-			-		
Respondent's education	Primary	n.s.s.			n.s.s.		
	Secondary	**2.29+**	1.11	4.72	**2.04***	1.23	3.38
	Higher	**4.27***	1.60	11.37	**3.69***	1.47	9.25
Husband's education	Primary	n.s.s.			n.s.s.		
	Secondary	n.s.s.			n.s.s.		
	Higher	n.s.s.			n.s.s.		
Respondent's occupation	Agriculture	n.s.s.			n.s.s.		
	White Collar	n.s.s.			n.s.s.		
Husband's occupation	Agriculture	n.s.s.			n.s.s.		
	White Collar	n.s.s.			n.s.s.		
		Nuptiality, fertility, and reproductive behavior					
Age at first marriage	2nd Quartile	n.s.s.			n.s.s.		
	3rd Quartile	n.s.s.			n.s.s.		
	4th Quartile	n.s.s.			1.70	0.93	3.12
Number of children ever born	2nd Quartile	**0.03***	0.01	0.08	**0.04***	0.02	0.09
	3rd Quartile	**0.29***	0.15	0.55	**0.29***	0.15	0.54
	4th Quartile	0.60	0.33	1.09	n.s.s.		
Ever had abortion		-			-		
		Lifestyle behavioral					
Read newspaper once a week		n.s.s.			n.s.s.		
Watches television once a week		n.s.s.			**1.69+**	1.10	2.57
Listen to radio once a week		n.s.s.			n.s.s.		
Can go to hospital alone		1.53	0.94	2.50	n.s.s.		
		Values, beliefs and exposure to FP promotion					
Government source of knowledge FP		**0.00***	0.00	0.00	n.s.s.		
Husband approves FP	Yes	**4.99***	2.50	9.94	**8.19***	4.42	15.17
	Don't know	n.s.s.			n.s.s.		
Numeric ideal family size		**2.53***	1.40	4.59	**2.18***	1.42	3.33
Daughter's Schooling	Primary	0.43	0.18	1.04	n.s.s.		
	Middle/Secondary	n.s.s.			n.s.s.		
	Higher	n.s.s.			**2.29+**	1.10	4.73
	All she can	n.s.s.			n.s.s.		

* 99 percent confidence level + 95 percent confidence level n.s.s. not statistically significant - No data

Table 12
Multinomial logistic regression of current use of FP. "folkloric/no use" as omitted category
Turkey 1993

INDEPENDENT VARIABLES		Traditional methods of FP			Modern methods of FP		
		O.R.	Confidence interval		O.R.	Confidence interval	
		Socio-demographic					
5-year age		**0.75***	0.70	0.80	**0.65***	0.61	0.70
Urban residence		n.s.s.			**1.38+**	1.07	1.77
Kurdish ethnicity		**0.36***	0.23	0.57	**0.48***	0.34	0.68
Other Ethnicities		0.64	0.39	1.07	n.s.s.		
Respondent's education	Primary	1.27	1.00	1.62	**1.36***	1.08	1.70
	Secondary	n.s.s.			**1.64***	1.14	2.36
	Higher	**3.05***	1.49	6.24	**4.21***	2.07	8.58
Husband's education	Primary	**1.92***	1.33	2.77	**1.69***	1.24	2.31
	Secondary	**1.85***	1.24	2.74	**1.58+**	1.10	2.28
	Higher	1.71	0.95	3.07	**2.03***	1.28	3.23
Respondent's occupation	Agriculture	**1.48***	1.16	1.88	n.s.s.		
	White collar	0.71	0.50	1.02	n.s.s.		
Husband's occupation	Agriculture	n.s.s.			n.s.s.		
	White collar	n.s.s.			n.s.s.		
		Nuptiality, fertility, and reproductive behavior					
Respondent's age at first marriage	2nd inter-quartile	n.s.s.			n.s.s.		
	3rd inter-quartile	**1.65***	1.27	2.13	**1.43***	1.12	1.83
	4th iner-quartile	**1.89***	1.49	2.40	**1.80***	1.42	2.29
Number of children ever born	1 child	**9.21***	5.82	14.6	**26.8***	16.1	44.54
	2 children	**32.2***	20.7	50.1	**121.5***	72.2	204.6
	3 children	**41.8***	25.9	67.5	**176.7***	100.9	309.5
	4 children & more	**39.9***	24.3	65.4	**207.6***	115.7	115.7
Ever had abortion		n.s.s.			n.s.s.		
Marriage ceremonies same day		**0.82***	0.71	0.95	**0.85+**	0.74	0.97
Marriage not arranged		n.s.s.			n.s.s.		
		Lifestyle behavioral					
Respondent shopping		**1.38***	1.12	1.70	**1.38***	1.11	1.71
Husband shopping		n.s.s.			**1.26+**	1.03	1.54
Respondent budget		**1.34***	1.07	1.67	**1.51***	1.23	1.84
Husband budget		**2.77***	2.10	3.67	**2.37***	1.86	3.03
Read newspaper once a week		n.s.s.			1.18	0.97	1.45
Watches television once a week		**1.42+**	1.08	1.87	**1.84***	1.38	2.47
Listen to radio once a week		**0.80***	0.66	0.97	n.s.s.		
		Values and beliefs					
Respondent not against FP	Agree	n.s.s.					
	Don't know	**1.99***	1.42	2.80	**1.93***	1.33	2.79
Husband FP not against religion		**1.80***	1.25	2.60	**2.62***	1.77	3.89
Men not wiser than women		n.s.s.			n.s.s.		
Husband cannot beat disobedient wife		n.s.s.			n.s.s.		
Women can argue with husband		n.s.s.			n.s.s.		
Not ok married men to go out		n.s.s.			n.s.s.		
Husband drinks divorce		n.s.s.			n.s.s.		
Marital discord divorce		n.s.s.			n.s.s.		
Husband aggressive divorce		n.s.s.			n.s.s.		
Unfaithful husband divorce		n.s.s.			n.s.s.		
Husband unfecund, no divorce		n.s.s.			n.s.s.		
Wife unfecund, no divorce		n.s.s.			n.s.s.		
Mother-in-law interfering, divorce		n.s.s.			n.s.s.		

* 99 percent confidence level + 95 percent confidence level n.s.s. Not statistically significant

Table 13
Models 2A and 2B: multinomial logistic regression for current use of FP with (A) principal components of values and beliefs (omitted category: folkloric/no use), and (B) linear combination of values and beliefs variables

INDEPENDENT VARIABLES	Traditional methods of FP			Modern methods of FP		
	O.R.	Confidence interval		O.R.	Confidence interval	
A. Principal components of values and beliefs						
1rt component (Moral Individualism)	**1.06+**	1.00	1.12	**1.12***	1.06	1.18
2nd component (Conformism)	n.s.s.			n.s.s.		
3rd component (Pragmatism)	**0.15***	1.08	1.22	**1.13***	1.07	1.21
4th component (Fundamentalism)	n.s.s.			n.s.s.		
B. Linear combination of variables						
Lifestyle variables	n.s.s.			n.s.s.		
Gender equality variables	n.s.s.			n.s.s.		
Marital relationship variables	n.s.s.			n.s.s.		
Religious belief variables	**1.76***	1.39	2.23	n.s.s.		
Infecundity variables	n.s.s.			n.s.s.		

* 99 percent confidence level + 95 percent confidence level n.s.s. Not statistically significant

5. Synthesis and policy implications Modeling IFS aims to explain the differential in ideational variation with regard to marital fertility. Only two background variables, ethnicity and religion when available, have strong associations with large IFS. There seems to be a threshold for couple's education to affect IFS downward. Non obstante the ethnic divide, the only significant characteristic for a small IFS is a mature marriage and an educated husband. Both are characteristics of what DI posits as desirable attributes of modern family. Modeling Current Use of FP, on the other hand, aims to put the discussion of the causal relationships on the ground of actual reproductive behavior

To sum up, women's values and beliefs matter less for family planning and fertility reduction than does their education and their empowerment through changes of patterns of lifestyle, living arrangements, and education. Husband's education and other background characteristics remain important determinants of IFS and FP. However, more important than women's values and beliefs are the beliefs of their partners, especially

religious beliefs, as determinants of both IFS and FP. Exposure to FP promotion is significant only in Bangladesh. This tells volume about the differences in implementation of FP policy. Model of current use of FP uncovers a strong characteristic of the shift to parity dependent fertility in Bangladesh. Except for regional disparities, all other socio-economic variables do not matter for the outcome.

With regard to the likelihood of using modern methods of FP, it does not matter how old is a woman in Bangladesh, how much education she and her husband have, what occupation she and her husband do, what is their religion or whether they live in urban or rural area. Moreover even how many children she has does not matter much for that matter as long as she has had a mature marriage. What does matter much is exposure to sources of knowledge about family planning, and husband's approval of its practice. This conclusion is in line with Cleland's thesis which posits, on the basis of Bangladesh's experience, that a well crafted FP program is susceptible to drive fertility down even within the context of poverty (Cleland et al. 1993, 1994).

A take home message from the crossover of the results of IFS and FP models: In a Muslim context of the last decade of the twentieth century, women's values and beliefs translate into quantifiable ideal family size, but the behavioral changes required to achieve this ideal remain dependent on men's beliefs and attitudes.

Further research needs to include contextual variables that account more precisely for the living arrangements of the couple. in order to elucidate the mechanisms through which the seemingly Turkish oddity operates on the outcomes of interest. The following message can be taken from the crossover of the results of IFS and FP models. In a Muslim context of the last decade of the twentieth century, women's values and

beliefs translate into quantifiable ideal family size, but the behavioral changes required to achieve this ideal remain dependent on men's beliefs and attitudes.

A general policy recommendation would be to dissociate FP policy from other developmental policies. A policy which targets fertility reduction shall not depend necessarily on the achievements of overall socio-economic development. Moreover, in a Muslim social context FP will be more successful if its goals are dissociated even from other policy objectives related to family matters. A typical example is women's empowerment which is often associated with FP and which constituted a dominant theme in the 1994 UN conference in Cairo. The risk of impeding achievement of the demographic objectives is high especially when such association implies challenge to men's position and prerogatives. FP promotion shall target the couples rather than women in reproductive age only. It should not be perceived as a treat to the stability and integrity of the family unit. In other terms, it seems that a FP program which does not target directly to change the family structure is readily adopted.

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