

## Chapter 5

### Explaining Female Autonomy: The Case of Egypt

As already mentioned, the data used to test these hypotheses are taken from the 1988 EDHS. Along with information on women's autonomy, the EDHS also contains information on each woman's socioeconomic and cultural background, some information on her husband, her migration experience, and on other individual-level and household-level characteristics. In Section 5.1 we describe the dependent and independent indicators used in the analysis, in Section 5.2 the methodology used, and in Section 5.3 the results of the empirical analysis. The means and standard deviations for all indicators are given in Table 5.1. The correlations can be found in Appendix 1. Note that due to missing data on several of the variables, the summary statistics and the multivariate analyses are based on only 7,717 women, which represents 94% of the available unweighted sample of currently married women.

#### 5.1 Description of Variables

##### 5.1.1 Dependent variables

The dependent variables for the multivariate analysis are the three autonomy indices, i.e., customary autonomy, noncustomary autonomy, and realized autonomy. For ease of calculation and interpretation, each index is collapsed into three categories—low, medium, and high autonomy—which are defined separately for each index as shown below.

Note, however, that when used as independent instead of dependent variables, these autonomy indices are used in their original, uncollapsed form.

##### 5.1.2 Independent variables

###### Economic and modernization variables

It has been hypothesized earlier that relative to other women, women who live in the urbanized and developed regions of the country and in wealthier households, who have more education, who are employed for cash, who have greater exposure to nontraditional ways of thinking and doing things, who have educated husbands, and whose husbands are professionals or are involved in modern industry or modern services, are likely to have higher autonomy.

In order to capture the impact of living in urbanized and more developed regions on autonomy, dummies have been defined for the five major regions-cum-residence areas of the country: the Urban Governorates, urban Lower and urban Upper Egypt, and rural Lower and rural Upper Egypt. Although the sample of women is almost equally divided between urban and rural areas, about half of those who live in urban areas, live in the Urban Governorates. Early exposure to modernizing influences is included in the form of a dummy for area of residence (rural or urban) before the age of 12. Migration history is measured indirectly by the proportion of a woman's life spent in the place of interview. The respondent's education is measured by her number of years of schooling, and her husband's education level is measured by his number of years of schooling. On average, women in the sample had 4 years of schooling and their husbands

Autonomy category	Scores on index of:		
	Customary autonomy	Non-customary autonomy	Realized autonomy
Low	0 and 1	0 and 1	0 and 1
Medium	2 and 3	2 and 3	2
High	4	4 and 5	3 and 4

Table 5 1 Means and standard deviations for all variables included in the analysis of women's autonomy in Egypt

Variables	Means	Standard deviation
<u>DEPENDENT VARIABLES</u>		
Index of customary autonomy (range 0-4)	2.72	1.61
Index of noncustomary autonomy (range 0-5)	2.18	1.67
Index of realized autonomy (range 0-4)	2.23	1.19
<u>EXPLANATORY VARIABLES</u>		
<u>MODERNIZATION VARIABLES</u>		
<u>Household characteristics</u>		
<u>Region dummies</u>		
Urban Governorates	0.26	-
Urban Lower Egypt	0.11	-
Urban Upper Egypt	0.12	-
Rural Lower Egypt	0.27	-
Rural Upper Egypt	0.24	-
Socioeconomic index (range 0-24)	8.71	6.55
<u>Individual characteristics</u>		
Years of education	3.89	5.10
Hours spent watching TV per day	2.09	2.25
Lived up to age 12 in rural area	0.57	-
Proportion of life spent in place of interview	0.77	0.33
<u>Own employment</u>		
Currently employed for cash and earnings	0.12	-
At least half for self	0.03	-
More than half to family	0.09	-
Currently employed not for cash	0.08	-
Currently not employed	0.80	-
<u>Husband's characteristics</u>		
Husband's years of education	5.72	5.60
<u>Husband's profession dummies</u>		
Professional, managerial, technical, and clerical	0.17	-
Sales and service	0.24	-
Skilled and unskilled production	0.27	-
Agriculture	0.28	-
None or don't know	0.04	-
<u>CULTURAL VARIABLES</u>		
<u>Household characteristics</u>		
Household size	7.07	3.77
<u>Co-residence dummies</u>		
Husband's relatives living in household	0.27	-
Own relatives living in household	0.02	-
No relatives living in household	0.71	-
<u>Individual characteristics</u>		
Age	32.17	8.41
Respondent is Muslim	0.93	-
<u>Marriage and children</u>		
Age at first marriage	18.17	4.17
Married more than once	0.05	-
Husband is first cousin	0.27	-
Number of sons	2.09	1.76
Number of daughters	1.96	1.73

had 6 years. A woman's current exposure to the media is measured by the number of hours per day spent watching television. The husband's profession is also captured in terms of dummies. Agriculture and manual production (skilled and unskilled) are the major occupations among husbands, followed by sales and service occupations. Barely 17% of husbands are professionals or in clerical occupations. The reference category in the analysis is women whose husbands are in agricultural occupations. Note that this category also includes a negligible number of women (0.04%) whose husbands had unknown occupations.

No household income data are available in the EDHS. Instead, socioeconomic status is measured by an index based on the number of consumer durables owned by the household and the household's toilet facilities. This index is multiplicative and ranges from 0 for households that had no, or very primitive, toilet facilities, and none of eight possible durable consumer goods,<sup>1</sup> to 24 for households that had modern toilet facilities and all eight durable consumer goods.

In light of previous discussion about the necessity to distinguish between types of employment and the degree of control over earnings, women's current employment status<sup>2</sup> is captured by four dummy variables: employed for cash with control over earnings, employed for cash with little control over earnings, employed, but not for cash, and not employed. A woman is assumed to control earnings when she keeps at least half of her earnings for herself; she is assumed to have little control over earnings when she gives most of her earnings to her family. Only about two in ten women were currently employed: 3% worked for cash and had control over their earnings, 9% worked for cash with little control over earnings, and 8% were employed, but not for cash. Given the extremely small numbers of women that were employed, and the even smaller numbers in each professional category, it was not possible to include information on women's professions in the model.

### Cultural variables

The autonomy of women is likely to be related to factors that are at least in part culture specific, and others that are important because kinship structures make them so. Among these factors are age of the respondent, religion of the respondent, marriage patterns, postmarital residential arrangements, and number of children by gender.

While age of the woman is measured directly, a dummy is included for religion (Muslim=1). Women in the sample are on average 32 years, and nine out of ten are Muslim.

Three indicators of marriage arrangements are included: the age at first marriage, whether the respondent is married more than once, and whether she is married to a first cousin. On average women first married at the age of 18, 27% are married to a first cousin, and one in twenty have been married more than once. Since this sample contains only currently married women, currently divorced or widowed women who are not currently married are excluded.

Postmarital residential arrangements are measured by whether the respondent's household includes her own relatives, her husband's relatives, or no relatives. The majority of women did not have co-resident relatives. However, in keeping with patriarchal tradition, 27% did have husband's relatives living with them, but only 2% had their own relatives living with them.

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<sup>1</sup>The durable goods included were refrigerators, cars, televisions, videos, cassette recorders, electric fans, gas/electric cooking stoves, and washing machines.

<sup>2</sup>A women's premarital employment experience was originally included in the analysis, but was found to have no relationship with autonomy.

Household size is used as a proxy for type of household. The more members present in the household, the more likely it is to be an "extended household." On average the households to which the women belonged had about 7 people. Also, women on average had 4.1 children, of whom slightly less than half were daughters and a little more than half were sons.

All of the independent variables defined are hypothesized to have an effect on each of the three indices of autonomy; however, these indices are themselves moderately well correlated. Consequently, the total impact of any explanatory variable on each autonomy index of interest will potentially comprise a direct-effect component and an indirect-effect component. The indirect effect arises out of the explanatory variable's simultaneous impact on the other aspects of autonomy, which are in turn correlated with the given index. In order to understand both the direct and indirect effects of all explanatory variables, we estimate two different models for each autonomy index. In Model 1 each autonomy index is regressed on the economic, modernization, and kinship structure variables discussed above. The coefficients of this model will capture the "total effect" of each variable on the autonomy index. In Model 2 we add to Model 1 the other two autonomy indices. Doing so allows us to better isolate the direct effect of each variable on the index of interest and determine whether the impact of each explanatory variable on any given index is entirely captured and explained away by the level of the other autonomy indices. Model 2 also allows us to see how the three indices are related within a multivariate context.

## 5.2 Methods

The discrete and ordered form of the autonomy indices necessitates the use of Ordered Logit Regression techniques to evaluate alternative models. For a three-category dependent variable, following Greene's discussion (1993, pp. 672-6), the ordered logit model estimates a latent or unobserved variable  $y^*$  as a linear function of  $X$ , a vector of independent variables such that

$$y^* = \beta'X + \epsilon$$

where  $\epsilon$  is logistically distributed. Maximum likelihood procedures are used to estimate the  $\beta$ 's and one other unknown parameter  $\mu$  using values of the observed variable  $y$  such that

$$y = 0 \text{ if } y^* \leq 0$$

$$y = 1 \text{ if } 0 < y^* \leq \mu$$

$$y = 2 \text{ if } \mu \leq y^* .$$

The answers to questions about decision-making within the household and freedom of movement are assumed to measure different aspects of autonomy. However, in reality, all three aspects of autonomy are latent. Thus, for each autonomy index,  $y^*$  represents this unobserved measure of autonomy, whereas the actual scores on the index are values of the observed variable,  $y$ .

The estimated  $\beta$ 's in the ordered logit regression are not equivalent to a linear effect on the dependent variable of a marginal change in regressors. Consequently, we report the probability changes associated with the coefficients instead of the coefficients themselves. (See Appendix 2 for details.) If the regressor is continuous, the probability change can be interpreted as the percent change in probability of being in the low, medium, or high autonomy category of the dependent autonomy index due to a marginal change in the

regressor; if the regressor is a dummy variable, the probability change<sup>3</sup> can be interpreted as the percent change in probability of being in the low, medium, or high autonomy category of the dependent autonomy index due to a change in the dummy value from 0 to 1. Tables 5.2, 5.3, and 5.4 present the results for the three autonomy indices of customary autonomy, noncustomary autonomy, and realized autonomy.

## 5.3 Results

### 5.3.1 Multivariate Analysis of Customary Autonomy

The results presented under Model 1 in Table 5.2 tell us the estimated total effects (direct plus indirect), in terms of percent change in probability, on women's level of customary autonomy of each regressor. Women in both rural and urban Upper Egypt differ significantly in terms of their level of customary autonomy from women in urban Lower Egypt (the reference region), whereas women in rural Lower Egypt or in the Urban Governorates do not. Specifically, women in rural Upper Egypt have a 55% and 16% higher probability of being in the low and middle customary autonomy groups, respectively, and a 25% lower probability of being in the highest customary autonomy group as compared with women in urban Lower Egypt. The probability differences between women in urban Upper Egypt and urban Lower Egypt are similar, though somewhat smaller in magnitude.

A higher household socioeconomic status increases the probability of having a high level of customary autonomy and lowers the probability of having a medium or low level. Each additional year of the woman's own education and that of her husband's and each additional hour of exposure to the outside world through television viewing also increase the probability of scoring high on customary autonomy and reduce the probability of scoring at the medium or low level. As should be expected, the increase in the probability of being in the high category of customary autonomy due to a one-year increase in own education is almost four times that of a one-year increase in husband's education.

Women do not differ in their level of customary autonomy by their overall migratory experience. However, women whose childhood was spent in rural areas had a significantly higher probability of scoring at a low or medium level of customary autonomy and a lower probability of scoring high than women whose childhood was spent in urban areas.

Interestingly, having a husband who is a professional or is in the clerical, sales or service sector does not distinguish women in terms of their level of customary autonomy from women whose husbands are in the agricultural sector. However, the level of customary autonomy of a woman with a husband in manual production differs significantly from women in the reference group: on average, she has an 8% higher probability of scoring high and a 12% lower probability of scoring low.

As expected, the impact of women's employment on autonomy differs by whether women are earning cash or not and the extent of control of earnings. Women who earn and keep their earnings have a 23% higher probability of having a high level of customary autonomy, and a 35% and 20% lower probability of

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<sup>3</sup>Note the asymmetry between the probabilities reported for continuous and dummy variables. For continuous regressors, the percent change in probability of being in each of the low, medium, and high autonomy categories due to a marginal change in the regressor is mathematically constrained to sum to 0. For dummy regressors, it is the absolute difference in probability due to the dummy taking the value 1 instead of 0 of being in the low, medium, and high autonomy categories, which must sum to 0. The reported percent differences in probabilities reported for dummy variables are based on these absolute differences and need not add to 0.

Table 5.2 Percent change in probability calculated from ordered logit regression estimates for alternative models of the index of customary autonomy

Variables	Autonomy category	Percent change in probability of being in each customary autonomy category <sup>a</sup>	
		Model 1 Total effects	Model 2 Direct effects
<b>MODERNIZATION VARIABLES</b>			
<u>Household characteristics</u>			
Region of residence: (Ref. Categ. Urban Lower Egypt)			
Urban governorates	Low	-2.11	2.31
	Medium	-0.88	1.01
	High	1.25	-1.27
Lower Egypt:Rural	Low	9.80	7.12
	Medium	3.81	3.03
	High	-5.46	-3.81
Upper Egypt:Urban	Low	30.94***	36.92***
	Medium	9.81	12.51
	High	-16.13	-17.83
Upper Egypt Rural	Low	55.24***	46.69***
	Medium	15.93	15.91
	High	-25.32	-20.98
Socioeconomic level	Low	-5.4***	-26.***
	Medium	-2.1	-1.4
	High	7.5	4.1
<u>Individual characteristics</u>			
Years of education	Low	-1.19***	-37***
	Medium	-0.47	-2.1
	High	1.66	5.8
Hours watching TV	Low	-4.3**	0.7
	Medium	-1.7	0.4
	High	5.9	-1.0
Rural childhood	Low	12.82**	4.56
	Medium	5.17	2.00
	High	-6.77	-2.44
Proportion of life spent in the place of interview	Low	8.6	-1.01
	Medium	3.4	-0.55
	High	-1.20	1.56
<u>Own employment</u> (Ref. Categ. Not employed)			
Employed for cash and -Most earnings for self	Low	-34.64**	-28.23*
	Medium	-19.73	-15.76
	High	22.82	17.37
-At least half to family	Low	-1.23	11.69
	Medium	-0.51	4.74
	High	7.3	-6.23
Employed not for cash	Low	21.03***	20.04***
	Medium	7.15	7.59
	High	-11.46	-10.37

Table 5 2—cont

Variables	Autonomy category	Percent change in probability of being in each customary autonomy category <sup>1</sup>	
		Model 1 Total effects	Model 2 Direct effects
<u>Husband's characteristics</u>			
Years of education	Low	- 26 **	05
	Medium	- 10	03
	High	37	- 07
Profession: (Ref. Categ. Agriculture, and none or don't know) Professional, managerial, technical, or clerical	Low	-9.34	-3.46
	Medium	-4.15	-1.57
	High	5.72	1.96
Sales and services	Low	-2.19	.16
	Medium	-.92	.07
	High	1.30	-.09
Manual Production	Low	-12.42***	-7.53
	Medium	-5.55	-3.48
	High	7.84	4.38
<u>CULTURAL VARIABLES</u>			
<u>Household characteristics</u>			
Household size	Low	22 <sup>k</sup>	- 10
	Medium	.08	- 06
	High	- 30	16
Relatives co-resident (Ref. Categ. No relatives co-resident) Husband's relatives	Low	19.43***	6.50
	Medium	7.14	2.78
	High	-10.29	-3.49
Only wife's relatives	Low	-7.86	5.08
	Medium	-3.51	2.15
	High	4.72	-2.78
<u>Individual characteristics</u>			
Age	Low	- 23 ***	- 05
	Medium	- 09	- 03
	High	32	08
Muslim	Low	2.55	-3.89
	Medium	1.06	-1.71
	High	-1.45	2.27
<u>Marriage and children</u>			
Age at first marriage	Low	.04	- 10
	Medium	.02	- 06
	High	- 06	16
Married more than once	Low	9.62	7.17
	Medium	3.63	3.00
	High	-5.47	-3.90
Husband is a first cousin	Low	5.88	5.49
	Medium	2.34	2.36
	High	-3.34	-2.97

Table 5.2—cont.

Variables	Autonomy category	Percent change in probability of being in each customary autonomy category <sup>a</sup>	
		Model 1 Total effects	Model 2 Direct effects
Number of sons born	Low	1.41***	1.21***
	Medium	.55	.66
	High	-1.96	-1.87
Number of daughters	Low	1.07***	1.04***
	Medium	.42	.57
	High	-1.49	-1.60
<u>Other autonomy indices</u>			
Realized autonomy	Low	-	-1.99***
	Medium	-	-1.10
	High	-	3.09
Non-customary autonomy	Low	-	-9.89***
	Medium	-	-5.44
	High	-	15.33
Intercept		.92***	- .26
$\mu$		1.00	1.18
Log likelihood		-7010.91	-6342.82
Pseudo-R <sup>2</sup>		10	18

<sup>a</sup>For dummy variables, this gives the percent increase/decrease in probability of being in each autonomy category on account of being in the dummy category coded 1 instead of the category coded 0. These probabilities do not add to 0 (See text for explanation). For continuous variables, this gives the increase/decrease in the probability of being in each autonomy category per unit change in the explanatory variable. These probabilities should add to 0 with a margin of error due to rounding.

\*\*\* = coefficient on which probabilities are based is significant at probability < 1%

\*\* = coefficient on which probabilities are based is significant at probability between 1% and 5%

\* = coefficient on which probabilities are based is significant at probability between 5% and 10%

having a low or medium level of customary autonomy, respectively, than women who do not work at all (the reference category). Women who earn but do not control their earnings are no different from those who do not work. Women who are employed but do not earn cash are not more autonomous than women who do not work at all. Indeed, as compared with nonworking women, women who work but do not earn cash have a 21% higher probability of being in the low category of customary autonomy and an 11% lower probability of being in the high category. These results imply that if women work but do not earn cash for their work they are even more disadvantaged in terms of their level of customary autonomy than if they were not working at all.

Few of the cultural variables significantly affect the level of customary autonomy. However, women whose husband's relatives are co-resident have a 10% lower probability of having a high level of customary autonomy and almost a 20% higher probability of having a low level compared to women who have no

relatives co-resident. The presence of own relatives does not distinguish women from the reference group in terms of their customary autonomy.

As hypothesized, older women tend to have greater autonomy than younger women. However, contrary to expectations, a greater number of sons and daughters is associated with a significantly lower probability of scoring high on customary autonomy and a high probability of scoring low. Additionally, the marginal impact of an additional son is greater than the marginal effect of an additional daughter. Whereas each additional son is associated with a 2% decline in the probability of having a high level of customary autonomy, each additional daughter is associated with a 1.5% decline.

As discussed earlier, the impact of each regressor on the index of customary autonomy can be thought of as the sum of its direct and indirect effects. The indirect effect arises because a change in the regressor simultaneously impacts on both noncustomary autonomy and realized autonomy which are, in turn, correlated with customary autonomy. Adding noncustomary autonomy and realized autonomy to Model 1 almost doubles the pseudo- $R^2$  from 0.1 in Model 1 to 0.18 in Model 2. However, noncustomary autonomy has a much greater impact on customary autonomy than realized autonomy. In Model 2, a marginal increase in the index of realized autonomy increases the probability of being in the high category of customary autonomy by only 3% and decreases the probability of being in the low category by only 2%; the corresponding change in probabilities due to a marginal increase in index of noncustomary autonomy are 15% and -10%, respectively.

As explained above, in Model 2 the signs and magnitude of the coefficients represent only the direct effect of the regressors on customary autonomy. From this model we see that the negative relationship found in Model 1 between residence in Upper Egypt and customary autonomy is almost entirely due to the direct effect of such residence on customary autonomy. We also find that controlling for other autonomy indices explains away some of the effect of residence in rural Upper Egypt, but enhances the effect of living in urban Upper Egypt. Nonetheless, the negative impact on customary autonomy of living in urban Upper Egypt is less than the negative impact of living in rural Upper Egypt. Together these results suggest that a) there is a difference in norms about who should control decisions in matters related to children between Upper Egypt and the rest of Egypt, with the difference being more in rural than in urban Upper Egypt, and b) the impact of living in urban Upper Egypt on customary autonomy is the opposite of its effect on the other autonomy indices.

The socioeconomic level of the household and years of own education not only have significant total effects on customary autonomy but also have significant direct effects. However, the direct effects are half and one third, respectively, of their total effects seen in Model 1. Thus, whereas education of the woman and her socioeconomic class do directly affect her level of customary autonomy, a large part of the affect is through the positive impact of these modernization variables on the other dimensions of autonomy. However, controlling for the other autonomy indices explains the positive impact of television viewing and husband's education, and the negative impact of a rural childhood on customary autonomy.

Only a part of the total positive effect on customary autonomy of being employed and controlling earnings is explained away by controls for realized and noncustomary autonomy. On the other hand, almost all of the negative impact on customary autonomy of working without earnings is a direct effect. Notably, the direct effect on customary autonomy of working without earnings control, though still not significant, is much larger and opposite in sign to its total effect. Thus, employment directly translates into greater customary autonomy only when women also control their earnings.

Neither age nor the co-residence of husband's relatives affects noncustomary autonomy directly. However, the negative total effect of the number of sons and daughters on customary autonomy is almost

entirely due to a similarly strong direct negative effect, implying that among the three indices, customary autonomy is the one most affected by the number of sons and the number of daughters.

### 5.3.2 Multivariate Analysis of Noncustomary Autonomy

Table 5.3 presents the ordered logit estimates for alternative models of noncustomary autonomy. Note that for noncustomary autonomy, the direction (positive or negative) of impact of all regressors on the probability of being in the medium category is the same as the direction of impact of being in the high category. By contrast, for customary autonomy (and, as we shall see, for realized autonomy too) the direction of impact of each regressor on the medium category is the same as that for the low category. Substantively, this implies that the effect of each regressor is to alter most the probability of a woman having a low score in noncustomary autonomy and a high score in customary and realized autonomy.<sup>4</sup>

As before, the probabilities reported under Model 1 represent the total effect of regressors. In this model, in comparison with women living in urban Lower Egypt, women living in the Urban Governorates have an 18% higher probability of scoring high on noncustomary autonomy and those living in rural Upper Egypt have a 25% lower probability of scoring high on noncustomary autonomy. Women in all other areas do not differ significantly from women in urban Lower Egypt (the reference category) in terms of their scores on noncustomary autonomy. A woman who had a rural childhood had on average an 11% lower probability of scoring high on noncustomary autonomy.

As was the case for customary autonomy, most of the modernization variables tend to have the predicted impact, positive and significant, on the probability of also scoring high on the noncustomary autonomy index. Thus, the higher the socioeconomic index of the household, the number of years of own education, the number of hours of television viewing, and the number of years of husband's education, the higher the probability of scoring either high or medium, and the lower the probability of scoring low, on noncustomary autonomy. Again, one year of own education adds more to the probability of scoring high on noncustomary autonomy than an additional year of husband's education.

As compared with women whose husbands are in agriculture, women whose husbands are in professional, technical, or clerical jobs have a 20% higher probability of scoring high on noncustomary autonomy. Similarly, compared to women in the reference group, women whose husbands were in manual production had a 16% higher probability of scoring high on noncustomary autonomy. Having a husband in sales and service occupations did not distinguish women in terms of their level of noncustomary autonomy.

Although working with control over earnings distinguished women in terms of customary autonomy, it did not, contrary to expectations, distinguish them in terms of their noncustomary autonomy. Rather, women who were employed but did not control their earnings had a 23% higher probability of scoring high on noncustomary autonomy and a 16% lower probability of scoring low than women who did not work. Again, women who worked without earning had a significantly lower probability of scoring high on noncustomary autonomy than women who did not work. Consequently, only women who work with little control over earnings appear to have significantly higher levels of noncustomary autonomy than other women.

Women living in larger households tend to have a lower probability of scoring high or medium on noncustomary autonomy. The presence of the husband's relatives has a negative impact on women's scores

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<sup>4</sup>This follows from the mathematical requirement that changes, i.e., percent changes in probability for continuous variables and absolute changes in probability for dummies, over all categories of the dependent variable must sum to 0.

Table 5.3 Percent change in probability calculated from ordered logit regression estimates of alternative models of the index of noncustomary autonomy

Variables	Autonomy category	Percent change in probability of being in each noncustomary autonomy category <sup>d</sup>	
		Model 1: Total effects	Model 2: Direct effects
<b>MODERNIZATION VARIABLES</b>			
<u>Household characteristics</u>			
Region of residence. (Ref Categ Urban Lower Egypt)			
Urban governorates	Low	-12.87***	-13.78***
	Medium	2.87	3.70
	High	18.06	20.28
Lower Egypt Rural	Low	8.99	10.18
	Medium	-2.24	-2.89
	High	-10.31	-11.87
Upper Egypt:Urban	Low	-3.18	-13.36**
	Medium	.74	3.34
	High	4.04	19.27
Upper Egypt Rural	Low	24.76***	-3.78
	Medium	-6.60	1.05
	High	-25.14	5.02
Socio-economic level	Low	-68***	-38***
	Medium	20	15
	High	49	23
<u>Individual characteristics</u>			
Years of education	Low	-1.94***	-1.25***
	Medium	.56	.50
	High	1.38	.75
Hours watching TV	Low	-1.43***	-1.24***
	Medium	.41	.49
	High	1.02	.75
Rural childhood	Low	9.51*	7.88
	Medium	-2.10	-2.06
	High	-10.60	-9.22
Proportion of life spent in the place of interview	Low	2.08	1.54
	Medium	-.60	-.61
	High	-1.48	-.93
<u>Own employment</u>			
(Ref Categ : Not employed)			
Employed for cash and -Most earnings for self	Low	-12.80	-6.46
	Medium	2.41	1.68
	High	17.44	8.70
-At least half to family	Low	-16.48***	-15.96***
	Medium	3.03	3.80
	High	23.36	23.50
Employed not for cash	Low	13.82**	12.15*
	Medium	-3.86	-3.72
	High	-15.54	-14.15

Table 5.3—cont.

Variables	Autonomy category	Percent change in probability of being in each noncustomary autonomy category <sup>a</sup>	
		Model 1: Total effects	Model 2: Direct effects
<b><u>Husband's characteristics</u></b>			
Years of education	Low	-86***	-55***
	Medium	25	22
	High	61	33
Profession. (Ref. Categ.: Agriculture and none or don't know)			
Professional, managerial, technical, or clerical	Low	-14.12**	-11.28*
	Medium	2.90	2.94
	High	19.82	16.03
Sales and services	Low	-4.77	-2.15
	Medium	1.11	.60
	High	6.17	2.81
Manual Production	Low	-11.55***	-5.29
	Medium	2.62	1.47
	High	16.02	7.13
<b>CULTURAL VARIABLES</b>			
<b><u>Household characteristics</u></b>			
Household size	Low	77***	54***
	Medium	-22	-21
	High	-54	-32
Relatives co-resident (Ref. Categ.: No relatives co-resident)			
Husband's relatives	Low	28.16***	24.42***
	Medium	-7.31	-6.99
	High	-27.67	-25.25
Only wife's relatives	Low	-22.01**	-21.71*
	Medium	3.11	4.37
	High	32.21	33.31
<b><u>Individual characteristics</u></b>			
Age	Low	-62***	-51***
	Medium	18	20
	High	44	31
Muslim	Low	10.55	5.08
	Medium	-1.93	-1.28
	High	-11.29	-6.05
<b><u>Marriage and children</u></b>			
Age at first marriage	Low	38**	34**
	Medium	-11	-14
	High	-27	-21
Married more than once	Low	9.99	2.48
	Medium	-2.72	-0.71
	High	-11.56	-3.12
Husband is a first cousin	Low	2.45	1.10
	Medium	-0.60	-0.31
	High	-2.98	-1.40

Table 5.3—cont.

Variables	Autonomy category	Percent change in probability of being in each noncustomary autonomy category <sup>a</sup>	
		Model 1: Total effects	Model 2: Direct effects
Number of sons born	Low	72*	-43
	Medium	-.21	17
	High	-.51	.26
Number of daughters	Low	62	-14
	Medium	-.18	05
	High	-.44	08
<u>Other autonomy indices</u>			
Customary autonomy	Low	na	-12.73***
	Medium		5.07
	High		7.66
Realized autonomy	Low	na	-10.29***
	Medium		4.10
	High		6.19
Intercept		-.21***	-2.70***
$\mu$		1.92	2.28
Log likelihood		-7112.61	-6281.19
Pseudo-R <sup>2</sup>		0.15	0.25

<sup>a</sup>For dummy variables, this gives the percent increase/decrease in probability of being in each autonomy category on account of being in the dummy category coded 1 instead of the category coded 0. These probabilities do not add to 0 (See text for explanation). For continuous variables, this gives the increase/decrease in the probability of being in each autonomy category per unit change in the explanatory variable. These probabilities should add to 0 with a margin of error due to rounding.

\*\*\* = coefficient on which probabilities are based is significant at probability < 1%

\*\* = coefficient on which probabilities are based is significant at probability between 1% and 5%

\* = coefficient on which probabilities are based is significant at probability between 5% and 10%

on noncustomary autonomy; the presence of own relatives has a significant positive impact. As compared with women who have neither own nor husband's relatives co-resident, women who have their husband's relatives co-resident have a 28% lower probability of scoring high on noncustomary autonomy, and women who have their own relatives co-resident have a 32% higher probability of scoring high on noncustomary autonomy.

As expected, older women score higher on noncustomary autonomy than younger women. However, contrary to expectations, a higher age at first marriage is associated with a lower probability of scoring high or medium on noncustomary autonomy. The number of sons reduces the probability of scoring high on noncustomary autonomy, but this effect is only marginally significant.

Adding realized autonomy and customary autonomy to the total effects model for noncustomary autonomy increases the pseudo- $R^2$  by two thirds, from 0.15 to 0.25. The relationship of noncustomary autonomy with realized autonomy is similar in magnitude and direction to its relationship with customary autonomy. A unit increase in the index of customary autonomy increases the probability of scoring high on noncustomary autonomy by 8% and decreases the probability of scoring low by 13%. The corresponding probability changes for a unit increase in realized autonomy are 6% and -10%, respectively

Despite the increase in pseudo- $R^2$  between Models 1 and 2, we find that most of the significant effects of explanatory variables on noncustomary autonomy appear to be direct effects. This conclusion is reached by comparing the results of Model 2 with Model 1. Indeed, while the magnitude of probabilities changes for some regressors, the signs and significance for most remain unchanged. There are a few notable exceptions. Thus, controlling for the other aspects of autonomy, women living in rural Upper Egypt are no longer significantly different from those living in urban Lower Egypt. Instead, women in urban Upper Egypt have a significantly higher probability of scoring high on noncustomary autonomy. Thus, in terms of direct effects only, women in the Urban Governorates and urban areas of Upper Egypt have a higher level of noncustomary autonomy than women in urban Lower Egypt, and women in rural areas of both Upper and Lower Egypt are no different in terms of noncustomary autonomy from those living in urban Lower Egypt. The direct effect of having had a rural childhood is still negative, though no longer significant.

Controlling for customary autonomy and realized autonomy also explains away the significant differences in noncustomary autonomy between women whose husbands are in manual production and women whose husbands are in agriculture. The direct effect on a woman's noncustomary autonomy of having a husband in professional or clerical occupations is positive and significant but weaker than the total effect. Finally, note that the number of sons a woman has does not, on average, affect her level of noncustomary autonomy directly.

On the other hand, the direct effects of a higher socioeconomic level of the household, of a higher level of own and husband's education, television viewing, having a husband in professional or clerical occupations, being older, and having own relatives co-resident are all significant and positive. Similarly, the direct effects of household size and husband's relatives co-resident also remain significant and negative. These direct effects comprise at least half of the corresponding total effects. Thus, a large part of the impact on noncustomary autonomy of both modernization and cultural variables (especially hours spent watching television, and the presence of own relatives and husband's relatives) is direct and not through the other autonomy indices.

Finally, the impact on noncustomary autonomy of employment mediated by earnings found in Model 1 is also almost entirely a direct effect. Thus, even after controlling for both realized and customary autonomy, when compared with women who do not work at all, women who are employed for cash and give most of their earnings to their family have a 24% (this was 23% in Model 1) higher probability of scoring high and women who work without pay have a 14% (this was 16% in Model 1) lower probability of scoring high on noncustomary autonomy.

### **5.3.3 Multivariate Analysis of Realized Autonomy**

From Model 1, the total effects model, in Table 5.4 we see that women living only in rural Upper Egypt are significantly different in terms of their realized autonomy from women living in any of the other regions in Egypt. Women in rural Upper Egypt have a 33% lower probability of scoring high and a 59% higher probability of scoring low on realized autonomy compared with women living in urban Lower Egypt.

Table 5.4 Percent change in probability calculated from ordered logit regression estimates of alternative models of the index of realized autonomy

Variables	Autonomy category	Percent change in probability of being in each realized autonomy category <sup>a</sup>	
		Model 1: Total effects	Model 2: Direct effects
<b>MODERNIZATION VARIABLES</b>			
<u>Household characteristics</u>			
Region of residence: (Ref. Categ.: Urban Lower Egypt)			
Urban governorates	Low	9.37	14.29**
	Medium	2.01	2.97
	High	-6.73	-9.91
Lower Egypt:Rural	Low	-11.58	-15.31**
	Medium	-3.11	-4.32
	High	9.58	12.98
Upper Egypt:Urban	Low	7.72	5.39
	Medium	1.63	1.20
	High	-5.66	-3.97
Upper Egypt:Rural	Low	58.65***	52.85***
	Medium	6.89	7.06
	High	-32.63	-29.96
Socioeconomic level	Low	-50***	-33***
	Medium	-15	-11
	High	66	.44
<u>Individual characteristics</u>			
Years of education	Low	-1.36***	-.90***
	Medium	-.42	-.31
	High	1.78	1.21
Hours watching TV	Low	-.47**	-.13
	Medium	-.14	-.04
	High	.61	.17
Rural childhood	Low	2.00	-3.43
	Medium	.47	-.83
	High	-1.50	2.69
Proportion of life spent in the place of interview	Low	2.71**	1.74
	Medium	.83	.60
	High	-3.54	-2.34
<u>Own employment</u>			
Employed for cash and: (Ref. Categ.: Not employed)			
-Most earnings for self	Low	-25.02**	-20.92
	Medium	-8.87	-6.99
	High	21.54	17.61
-At least half to family	Low	-16.46**	-13.37*
	Medium	-4.99	-3.91
	High	13.72	10.92
Employed not for cash	Low	-17.70***	-22.06***
	Medium	-5.50	-7.33
	High	14.83	18.90

Table 5 4—cont

Variables	Autonomy category	Percent change in probability of being in each realized autonomy category <sup>a</sup>	
		Model 1 Total effects	Model 2 Direct effects
<u>Husband's characteristics</u>			
Years of education	Low	- 89 <sup>***</sup>	- 74 <sup>***</sup>
	Medium	- 27	- 26
	High	1 16	1 00
Profession (Ref. Categ. Agriculture and none or don't know)			
Professional, managerial, technical, or clerical	Low	3 50	10 42
	Medium	.79	2 19
	High	-2 62	-7 45
Sales and services	Low	- 42	1 76
	Medium	- 10	.42
	High	.32	-1 32
Manual Production	Low	-5 39	- 49
	Medium	-1 35	- 12
	High	4 27	.37
<u>CULTURAL VARIABLES</u>			
<u>Household characteristics</u>			
Household size	Low	86 <sup>***</sup>	68 <sup>***</sup>
	Medium	.26	.23
	High	-1 12	- 92
Relatives co-resident (Ref. Categ. No relatives co-resident)			
Husband's relatives	Low	13 60 <sup>***</sup>	6 00
	Medium	2 81	1 36
	High	-9 51	-4 37
Only wife's relatives	Low	-9 87	-2 84
	Medium	-2 77	- 72
	High	7 88	2 18
<u>Individual characteristics</u>			
Age	Low	- 09	.05
	Medium	.03	.02
	High	.11	- 07
Muslim	Low	40 83 <sup>***</sup>	41 44 <sup>***</sup>
	Medium	11 94	12 15
	High	-20 51	-20 71
<u>Marriage and children</u>			
Age at first marriage	Low	.13	.05
	Medium	.04	.02
	High	- 17	- 07
Married more than once	Low	17 90 <sup>**</sup>	17 85 <sup>**</sup>
	Medium	3 06	3 17
	High	-12 58	-12 46
Husband is a first cousin	Low	-1 63	3 50
	Medium	- 39	- 87
	High	1 26	2 72
Number of sons born	Low	.29	.04
	Medium	.09	.01
	High	.38	- 05

Table 5.4—cont.

Variables	Autonomy category	Percent change in probability of being in each realized autonomy category <sup>a</sup>	
		Model 1: Total effects	Model 2: Direct effects
Number of daughters	Low	56*	44
	Medium	17	15
	High	- 74	- 60
<u>Other autonomy indices</u>			
Customary autonomy	Low	-	-1.28***
	Medium		-.44
	High		1.71
Noncustomary autonomy	Low	-	-6.11***
	Medium		-2.10
	High		8.21
Intercept		1.32***	69***
$\mu$		1.39	1.48
Log likelihood		-7450.38	7184.12
Pseudo-R <sup>2</sup>		.10	.13

<sup>a</sup>For dummy variables, this gives the percent increase/decrease in probability of being in each autonomy category on account of being in the dummy category coded 1 instead of the category coded 0. These probabilities do not add to 0 (See text for explanation). For continuous variables, this gives the increase/decrease in the probability of being in each autonomy category per unit change in the explanatory variable. These probabilities should add to 0 with a margin of error due to rounding.

\*\*\* = coefficient on which probabilities are based is significant at probability < 1%  
 \*\* = coefficient on which probabilities are based is significant at probability between 1% and 5%  
 \* = coefficient on which probabilities are based is significant at probability between 5% and 10%

Realized autonomy is again positively associated with the socioeconomic status of the household, the years of own and husband's education and hours spent watching television. Unlike the other indices, scores on realized autonomy do not vary by the husband's occupation. Also, the longer a woman has lived in her place of interview, the lower her probability of scoring high on realized autonomy. Thus, the migration experience of a woman, which is not significantly related with both customary and noncustomary autonomy, is significantly associated with women's realized autonomy.

The realized autonomy of women is consistently positively related with being employed. Irrespective of whether women work for cash with or without control over earnings or work without earning, they have a higher probability of scoring high on realized autonomy than women who do not work at all. Notably, this is the only aspect of autonomy that is positively related to women working without cash earnings.

As was the case for the other measures of autonomy, larger households and co-residence of husband's relatives are both associated with a lower probability of a high score on realized autonomy. Realized autonomy does not vary by age. Interestingly, realized autonomy is significantly different between Muslim and non-Muslim (mostly Christian) women, with Muslim women having a probability of scoring high that is one fifth lower than that of non-Muslim women. Also, women who have been married more than once have a 13% lower probability of scoring high and an 18% higher probability of scoring low on realized autonomy. Note that neither customary autonomy nor noncustomary autonomy varied by either the religion or remarriage dummy variables.

The addition of controls for noncustomary and customary autonomy adds little to the pseudo- $R^2$  of Model 1. It is notable, however, that realized autonomy is affected more by noncustomary autonomy than by customary autonomy. A unit change in noncustomary autonomy increases the probability of scoring high on realized autonomy by 8% and decreases the probability of scoring low by 6%. The corresponding effects on realized autonomy of a unit change in customary autonomy are almost negligible, i.e., at 2% and -1%, though still significant.

The direct effects of region on realized autonomy are different from the total effects, as can be seen from Model 2. In comparison to women in urban Lower Egypt, women in the Urban Governorates in addition to women in rural Upper Egypt have a significantly lower probability of scoring high on realized autonomy. On the other hand, women in rural Lower Egypt have a 13% higher probability of having high realized autonomy and a 15% lower probability of having low realized autonomy.

Controlling for customary and noncustomary autonomy levels explains part of the effect of several of the modernization variables by either decreasing the percent change in probability, as in the case of the impact of the socioeconomic status of the household and years of education, or by completely explaining the effect, as in the case of the migratory experience of the woman and number of hours of television viewing. However, controls for noncustomary and customary autonomy explain only a small part of the impact of husband's education on women's realized autonomy. Note that the direct effect of a woman's husband's education on her realized autonomy is almost 80% as strong as the direct effect of her own education on her realized autonomy. Thus, the husband's education directly impacts a woman's realized autonomy almost as much as does her own education.

Once variation in the other autonomy indices is controlled, women who were employed and kept most earnings for themselves are no longer significantly more likely to score high on realized autonomy than women who do not work. Also, a part of the positive effect of working and not controlling income is explained. Thus, while the direct effect of all types of employment, like the total effect, is positive, the women most significantly different (i.e., having significantly higher levels of realized autonomy) from women who do not work are those that either give their earnings to their families or those who do not receive cash for the work they do.

The impact of the cultural variables on levels of realized autonomy changes little between Models 1 and 4 with the exception that the negative impact on realized autonomy of the co-residence of husband's relatives is explained away. Thus, on average, co-residence of husband's relatives does not directly affect women's realized autonomy; it affects it only by lowering their customary or noncustomary autonomy, or both.

Our expectation had been that realized autonomy would be affected more by kinship arrangements and less by individual-level factors. This assumption is upheld for the most part. A number of cultural variables have a significant effect on realized autonomy that did not affect other aspects of autonomy, and several individual-level factors, such as age and early exposure to urban living, do not affect realized

autonomy. Also, realized autonomy, more than the other aspects of autonomy, varies by household size and husband's education, but contrary to expectations it is negatively related to the co-residence of husband's relatives only indirectly.

#### **5.3.4 Comparison of Multivariate Results for All Autonomy Indices**

Although residence in the more urban and developed regions of the country was hypothesized to be associated with a higher level of autonomy, we do not find the different regions of residence to have a consistent impact on all aspects of autonomy. Indeed, some tend to be simultaneously associated with significantly higher levels of one aspect of autonomy and significantly lower levels of another aspect of autonomy. Specifically, women living in the whole of Upper Egypt have lower levels of customary autonomy than women living in other regions. For rural Upper Egypt only this negative effect on customary autonomy is strong enough to induce a negative indirect effect on noncustomary autonomy. Realized autonomy is also significantly lower among women in rural Upper Egypt. However, the significantly lower levels of customary autonomy in urban Upper Egypt are matched by higher levels of noncustomary autonomy there, so that the total effect of residence in urban Upper Egypt on noncustomary autonomy is not significant but the direct effect is. Women in urban Upper Egypt do not differ in terms of realized autonomy from women in urban Lower Egypt (the reference group). Residence in the Urban Governorates on the other hand is, simultaneously, positively related to levels of noncustomary autonomy, unrelated to levels of customary autonomy, and negatively related to realized autonomy. In summary, these results suggest that urban residence affects noncustomary autonomy positively and more than the region of the country does, residence in Upper Egypt affects customary autonomy negatively and more than the rural-urban division does, and realized autonomy varies in no predetermined fashion with either region or rural-urban residence.

Both the socioeconomic status of the household and the number of years of education of the respondent have an independent and positive effect on all three aspects of autonomy. However, on average, a woman's husband's education level has a significantly positive direct impact on only her levels of noncustomary autonomy and realized autonomy and not on her level of customary autonomy. The results also suggest that a woman's realized autonomy varies more with her husband's education than does her noncustomary autonomy. In addition, a woman's realized autonomy is almost equally affected by her own and her husband's level of education, whereas noncustomary and customary autonomy are affected much more by a woman's own level of education than by her husband's level of education.

Of the three autonomy indices, only the level of realized autonomy is unaffected directly and indirectly by the husband's profession. Further, women whose husbands are in sales and service do not differ with respect to their scores on any autonomy index from women whose husbands are in agriculture. Having a husband in the professional, managerial, technical, or clerical professions, as hypothesized, increases the probability of having higher levels of noncustomary autonomy but does not directly affect customary autonomy. Finally, women whose husbands are in manual production have a higher probability of scoring high on both the indices of customary autonomy and noncustomary autonomy. Given that the direct effect is not significant for either dimension of autonomy, we conclude that the belief that women should have a decision-making role in the traditional sphere and the belief that women should have a decision-making role in the non-traditional sphere are mutually reinforced if a woman's husband is in manual production.

Exposure to the outside world through television viewing directly affects only a woman's level of noncustomary autonomy and only indirectly affects customary and realized autonomy. This suggests that continued exposure to new ideas leads to high levels of all aspects of autonomy primarily through changing women's views on women's roles in areas not traditionally in their control. On the other hand, the lack of early exposure to urban living as measured by the dummy "rural childhood" appears to affect women's opinions about women's decision-making roles in all spheres (traditional and nontraditional) simultaneously,

so that the total effect of a rural childhood on both noncustomary and customary autonomy is negative and significant, but the direct effects are not. Realized autonomy, on the other hand, is unaffected by early exposure to rural living.

The migration experience of a woman does not affect her expressed beliefs about women's decision-making roles, but does affect the probability of her having a high level of realized autonomy. This suggests that migration acts primarily to increase autonomy not by changing beliefs and norms, but by forcing greater freedom of movement on women. However, since we do not have information on how many times a woman may have moved or the duration of stay anywhere other than the present place this conclusion remains speculative.

We hypothesized earlier that women who are employed will have greater autonomy than women who are not employed but that the strength of this relationship would be mediated by whether women earn cash or not for the work they do, and, if they do earn cash, whether they have control over their earnings or not. Our analysis reveals that the validity of these hypotheses depends on which aspect of autonomy is being examined. Only realized autonomy is consistently higher among women who are employed (irrespective of earnings) as compared with women who are not employed; customary and noncustomary autonomy are significantly lower among women who are employed as compared with women who are not employed if the employment is not for cash. Indeed, working without earning is simultaneously associated with higher realized autonomy but a lower probability of believing that women should have decision-making control. Greater control over earnings also does not necessarily imply higher autonomy: only customary autonomy is significantly higher among women who earn and keep most of their earnings for themselves. Working with control over earnings has a significant positive effect on realized autonomy only indirectly, whereas noncustomary autonomy does not differ between women who work and have control over earnings and those who do not work at all. On the other hand, both realized autonomy and noncustomary autonomy are significantly higher among women who earn but give most of their earnings to their families.

The consistently positive impact of employment, irrespective of earnings and earnings control, on realized autonomy coupled with only an inconsistent effect on customary and noncustomary autonomy suggests that employment per se may not directly affect women's beliefs about women's roles in decision-making, and that the positive effect on realized autonomy of employment is independent of women's beliefs about autonomy. Perhaps the positive association of employment with realized autonomy is due mainly to the fact that employed women require greater freedom of movement, a factor not mediated by earnings. On the other hand, working without cash earnings may negatively affect women's opinions on women's decision-making roles, because such work makes women's positions more vulnerable. Specifically, work without pay may remove women from their traditional domestic roles, roles that are imbued with prestige and that have culturally sanctioned routes of access to resources, without assuring them of other sources of prestige or compensating them with greater access to, or control over, resources.

Explaining the contrary effects of earnings control on autonomy is confounded by the fact that control over earnings is defined not in terms of who decides what to do with earnings but in terms of how earnings are disbursed, i.e., whether women give most of their earnings to their families or keep most for themselves. Critical information on who decides that the woman's earnings should be kept for herself or given to the family and who decides the actual disbursement of this income is not available. Nonetheless, a possible explanation for women who earn and do not control their earnings favoring women's decision-making control in nontraditional areas may be that it is precisely the fact that these women are earning and yet not controlling earnings that may make them want more control in nontraditional areas. Importantly, the fact that women who control their earnings do not differ in their views on noncustomary autonomy from women who do not work, but have much greater customary autonomy, suggests that control over income may primarily translate into a desire for greater control over the area for which women are traditionally responsible.

The size of the household does not directly affect levels of customary autonomy, but significantly reduces both the level of noncustomary and realized autonomy. This negative association of household size with autonomy can have at least two possible explanations. On the one hand, household size is likely to be positively associated with non-nuclear families, especially when controlling for the numbers of children. As discussed earlier, to the extent that living in non-nuclear families is the more traditional arrangement, women in larger households are more likely to have traditional power expectations and limited freedom of movement. On the other hand, the greater the number of people in a household the less likely it is that decision-making powers will rest solely in the hands of the respondent or her husband. The much stronger impact of household size on realized autonomy as compared with customary or noncustomary autonomy further suggests that women's freedoms and powers are inhibited by large households even more than women's opinions about such freedoms and powers.

Simultaneously, however, the dummy variables indicating who constitutes the household in which women live affect only women's noncustomary autonomy. As expected, the co-residence of husband's relatives reduces the probability that women will have a high or medium level of noncustomary autonomy, whereas the co-residence of own relatives increases the probability that women will have a high or medium level of noncustomary autonomy. The fact that realized autonomy does not differ by the presence of husband's relatives perhaps suggests that the co-residence of husband's relatives does not *cause* women to have lower levels of realized autonomy, but that women who have more traditional views with regard to women's roles and decision-making powers are the ones who are more likely to be found living with their husband's relatives and less likely to live with their own.

The remaining cultural variables either do not directly affect any dimension of autonomy or affect only one. Thus, noncustomary autonomy is significantly associated only with age and age at first marriage, customary autonomy only with the numbers of sons and daughters, and realized autonomy only with being Muslim and being remarried. Specifically, older women, as hypothesized, are more likely to express opinions favoring women's decision-making input in nontraditional spheres than younger women. However, the older the woman at the time of her first marriage, the lower her probability of scoring high on noncustomary autonomy. There is no obvious explanation for this last result, but it does suggest that we cannot always assume that in every culture a high age at marriage will necessarily increase women's autonomy. Especially in an analysis in which the correlates of an older age at marriage (factors such as education and employment) are being controlled, an older age at first marriage may negatively affect cultural perceptions of self-worth with consequent effects on autonomy.

Given the greater prevalence of *purdah* among them, Muslim women are, not surprisingly, found to have lower realized autonomy than non-Muslim women. However, remarried women are also found to have lower realized autonomy than women married only once. Thus, our expectation of the greater autonomy of remarried women, based on the assumption that divorce (or loss of a husband) and remarriage require a woman to make decisions for herself, does not appear to be culturally appropriate. Instead, a culture-specific explanation needs to be sought which takes into consideration Islamic divorce laws, the more typical circumstances of divorce in Egypt, the extent of stigmatization of divorced or widowed women in Egyptian society, and the associated context-specific insecurities of women who have undergone divorce or lost a husband.

Finally, among all the cultural variables, a woman's level of customary autonomy is associated significantly only with the numbers of sons and daughters she has ever had. This result is unexpected on two counts. On the one hand, it is unexpected because the number of sons even more than the number of daughters reduces the probability of scoring high on autonomy. Given that some son preference has been documented for Egypt, our expectation was that having sons should at least give rise to a greater sense of self-worth and also place women in a better position to take control over their lives. In addition, we did not expect

that the one dimension of autonomy to be negatively related to numbers of children would be customary autonomy, which is the dimension concerned with control over decisions related to children. Perhaps causality runs the other way: a low level of female control over decisions regarding children (especially control over contraception) being responsible for larger numbers of both daughters and sons. Nonetheless, this result underscores the findings of other researchers that high fertility is more typical of women with low autonomy.

Judging from the pseudo- $R^2$ , the modernization and cultural model best explains variations in noncustomary autonomy and least explains variations in realized autonomy. Further, whereas region and urbanization do not always have the expected result on various aspects of autonomy, all other modernization variables tend to be positively associated with autonomy, especially noncustomary autonomy. Finally, noncustomary autonomy appears to affect both realized autonomy and customary autonomy more than they affect each other or noncustomary autonomy. In other words, women who reveal high levels of noncustomary autonomy are much more likely to also have high levels of the other two aspects of autonomy than if they reveal high levels of either customary or realized autonomy.