

Behind the Veil: The Strategic Use of Religious Garb

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Abstract

There is anecdotal evidence that since the late 20th century young, educated, and urban Muslim women veil more frequently and strictly. Does this imply that the classical sociological theories of religion, which predict that modernization should cause a decrease in religious behaviours, do not apply to Islam? We investigate this question using structural equation modelling to analyse three datasets, one from Turkey, one covering 25 Muslim countries, and one from Belgium where Muslims are a minority. We find that averagely religious women conform to the classical theories' predictions. But among highly religious women the modernizing forces—education, occupation and higher income, urban living, and contacts with non-Muslims—*increase* veiling. We conjecture that for highly religious women modernizing factors raise the risk and temptation in women's environments that imperil their reputation for modesty: veiling would then be a strategic response, a form either of *commitment* to prevent the breach of religious norms or of *signalling* women's piety to their communities. Our findings have implications for cultural policy and Muslim integration in Europe.

The various head covers and dresses worn by Muslim women are collectively referred to as *veiling*. The names and styles differ across the Islamic world, but everywhere there is a range of veiling *types* of varying degree of strictness.¹

Veiling is generally taken, by the public and by social scientists alike, as a sign of religiosity. Yet, much anecdotal evidence indicates that from the late 20th century onward veiling spread chiefly among the highly educated, young, urban, middle-class women (El Guindi, 1981; Hoodfar, 1991). If true, these accounts would pose a challenging puzzle as to why veiling should be increasing precisely among the women who are *more* exposed to such 'modernizing' forces. But, to our

knowledge, there is no large-scale empirical study of veiling that corroborates or disconfirms these accounts.

In this article we investigate whether veiling is indeed more widespread among such highly educated, urban, middle-class women than the average Muslim women. In doing so, we test a number of theories, some of which explain why veiling, under certain conditions, could *increase*, as the exposure to modernizing forces increases. One such theory proposes that women decide to veil strategically, either with the intent to manage their impulses or to communicate their piousness to their communities, and that veiling would be a response to the 'temptations' posed by social circumstances. We test this and other theories with an innovative approach,

applying structural equation modelling (SEM) to three large-scale datasets, one from Turkey, one from Belgium, where Muslims are a minority, and one covering 25 Muslim countries. We believe that this is the first systematic test of the theories of veiling.

Veiling is not just an interesting phenomenon for social scientists, but the subject of extensive public controversy. Especially, its stricter forms are perceived by some as an affront to Western values, a sign of social backwardness, and women's subjugation—so much so that strict forms of veiling have been banned in several European countries. Veiling has been a contentious issue in the Muslim world too, for a much longer time and on an incomparably larger scale. For instance, compulsory de-veiling laws in Turkey and Iran and a voluntary de-veiling movement in Egypt in the first half of the 20th century were reversed in the late 20th century. After describing the theories, the hypotheses derived from them, and our findings, in the concluding section we address the implications of our results for cultural policy and Muslim integration in Europe.

Theories and Hypotheses

Veiling as an Outward Expression of Religious Beliefs

The well-established sociological theories of religion have been developed largely with reference to Christianity (see [Ruiter and Van Tubergen, 2009](#)). Nevertheless, we can use them to derive predictions on veiling prevalence and strictness among Muslim women, and test whether they can be successfully transposed to an Islamic context. The *scientific worldview theory* predicts that as education increases, scepticism towards religious beliefs also increases ([Need and De Graaf, 1996](#)). Education instils the ideas of scientific rationalism, the view that natural phenomena can be explained by science, weakening the authority of religious beliefs. In so far, as veiling is an outward expression of these beliefs it should decline accordingly. Similarly, *existential security theory* predicts that people in safe economic positions—with high education, high income, and stable employment—should rely less on religion and thus veil less ([Norris and Inglehart, 2004](#)). Additionally, one can expect veiling to be lower among younger and single women, in keeping with the evidence that religiosity is less widespread in these groups ([Tiliouine, Cummins, and Davern, 2009](#)). Finally, *social integration theory* ([Durkheim, \[1897\] 1951](#); [Need and De Graaf 1996](#)) predicts that veiling should be lower in urban areas than in rural areas—where tighter social ties and community feelings sustain higher levels of religiosity.

To summarize, the classical theories predict that veiling, both in terms of prevalence and strictness, will be lower among women who are more exposed to the secularizing effect of modernization and thus become less religious. These should include women who are educated, employed, earning a higher income, and are young, unmarried, and residing in urban areas. This set of predictions constitutes our first hypothesis (H1), which will enable us to test whether the secularizing effects posited by the classical theories are present also in a Muslim context.

Veiling as a Strategic Choice

Classical theories of religion focus on religious beliefs, and religious *behaviours*, such as veiling, are seen as the consonant outward expression of those beliefs: if the former decline the latter decline too. Yet, while as a general trend modernization may decrease religiosity, it may not cause universal secularization.² For women who remain religious, classical theories do not predict any change in veiling even if modernization increases (or perhaps they could predict a decrease in veiling, in so far as modernization, even if it does not decrease inner religiosity, may push religiosity into the private sphere and discourage its public displays). Yet, there are reasons to expect that for those who remain religious, modernizing forces could have *the opposite effect*: modernization increases women's exposure to contacts outside of their families through higher education and employment, and this could put women, especially younger, urban, and single women, at a greater risk of abandoning their traditional mores and restraint, or even just *to be believed* to be doing so. This increased 'risk and temptation' in the environment could induce women who care about their reputation for piety in their community, to veil or to use stricter types of veiling.

The motivations could be 2-fold. First, veiling could be a strategy directed towards the self, and used as a self-binding device against temptation ([Elster, 1979](#))—veiling would be at once a safeguard of women's modesty outside the home and a deterrent against ill-intentioned men's approaches. Second, veiling could be directed towards others as a strategy to communicate one's persisting piety in the face of modernization's challenges. The more women interact in risky and high-temptation environments the more opportunities they have to break religious norms, and thus the greater is the effort they need to employ to reassure their Muslim community that they remain pious and honourable.

These strategic uses of veiling are central to two theoretical contributions, by [Patel \(2012\)](#) and [Carvalho](#)

(2013). Patel models veiling as a *signal* that conveys information about women's religiosity to their community, in particular to potential husbands. Depending on the environment in which women interact, more conservative and constraining veils—that is, 'costlier' actions—might be needed to reliably signal their piety and separate them from deceptive signallers. In the signalling framework, the signallers do something that reveals with some probability their true type, in this case whether they are pious and how intensely so.

Carvalho, in addition to signalling, models veiling as a *commitment* strategy, which limits the opportunity and the temptation to break religious norms. In the commitment framework, women take actions to bind themselves so that even if they were inclined to misbehave they could not easily do so. When these actions are observable, as veiling is, they also inform the community of the propriety of the women. In the commitment approach, similarly to signalling, veiling is not necessarily a binary decision but has a continuous 'strategy space'—the higher is the temptation in the environment the more conservative veils would be used.

Both self- and other-directed strategic motivations, whether of the signalling or the commitment variety, predict that the demand for veiling will be highest among religious women who interact in risky and high-temptation environments. Assuming that the risk and temptation in the environment increases as modernizing forces increase, the commitment and signalling approaches predict that among religious women, the intensity of veiling should be *higher* the more they are exposed to modernizing forces. Hence, we expect that highly religious women who are more educated, employed, earn a higher income, unmarried, younger, and live in urban areas, can be predicted to veil more. This set of predictions constitutes our second hypothesis (H2).

H1 and H2 seem in contradiction. We argue, however, that they are complementary. The crucial twist is that H2 is conditional on *high religiosity*, thus refers not to the main effects (in the statistical sense) of the variables, but to their interactions with religiosity. If only the classical theories hold, we should find that the strictness of veiling will decrease with the modernizing factors across *all* levels of religiosity. If the strategic theories also hold, we should find that the modernizing factors will *increase* the intensity of veiling among the highly religious.

Both signalling and commitment are communication strategies aimed at inducing receivers to act in a way that benefits the signallers. These benefits are most obvious on the marriage market in which piety is a valuable

asset. Women who can reliably signal this asset have a greater chance to marry and marry a wealthier husband. Singerman (1997), for example, reports that in Egypt 'examination of a young man or woman's moral character and suitability for marriage begins before the engagement is publicly announced and continues until the consummation of the marriage' (p. 79). Moreover, 'one of the compliments a young woman can receive from members of the community is that she possesses *'il-Hishma* or modesty. [...] this word describes women who dress modestly and do not flirt or engage in casual conversation with young men' (p. 94). In addition, women's reputation affects not only their chances of marriage, but also reflects on the reputation of their whole family (p. 80).

Anthropological studies and in-depth interviews (MacDonald, 2000; Afshar 2008; Hoodfar, 1997: p. 197; MacLeod, 1992) lend support to a strategic use of veiling as a means to communicate women's piety. They show that in addition to complying with religious obligations the veil would be a means for women to mitigate community gossip and parental control, and to integrate in the economic and daily life outside their families while preserving their pious reputation. For example, Hoodfar (1997) reports that '[veiling] carried the notion of modernity without compromising the traditional and Islamic norms and values of modesty. [...] Since [veiled] women appear to follow the Islamic code, they can establish much more egalitarian relations with their male colleagues or clients without being accused of seduction' (p. 197). Patel's and Carvalho's models seem to be supported by these ethnographic accounts of veiling, but what we present below is the first systematic test.

Neighbourhood effects

The strategic (and classical) theories of veiling yield further interesting predictions about neighbourhood effects.

Social integration theory predicts that a woman's decision of whether and how strictly to veil should also be positively affected by how many and how strictly other women in her community veil. This effect could be due partly to a tendency to conform and partly to the cost in terms of social disapproval of breaking a religious norm, both of which grow as the strength of religious norms grows. If most women veil uniformly (this refers to *variation* in the environment) and strictly (this refers to *average* behaviour in the environment) in the relevant reference group—the whole population in Muslim countries and the Muslim co-ethnic minority in Western

countries—a woman can infer that religious norms are widespread and well enforced, and inappropriate behaviours are monitored and sanctioned. In such neighbourhoods where the average veiling is higher and veiling variation is lower, we can expect that veiling will be higher (H3a). If modernization weakens religious norms, we should then expect a decrease in veiling also via neighbourhood effects (i.e. by lowering average veiling and increasing veiling variance).

Social integration theory further predicts that in Western countries a neighbourhood's ethnic composition also matters: where natives numerically dominate, compared to areas in which natives are few, Muslim religious norms would be eroded. Similarly, among Muslim immigrants with more contacts with natives the adherence to religious norms should weaken (Fleischmann and Phalet, 2012; Maliepaard and Phalet, 2012; Brüning & Fleischmann, 2015). Therefore, in the Western context, veiling should *decrease* with the increase in the share of natives in a woman's neighbourhood, and the increase in the number of friends she has among natives (H3b).

At the same time, however, neighbourhood characteristics also affect the risk and temptation in the environment, and they too could have the opposite effect for highly religious women. Where religious norms are stronger, there are fewer opportunities and a lower motivation to break religious norms due to closer community monitoring and a higher likelihood of sanctions. According to the theories of veiling as a strategic choice (Patel, 2012; Carvalho, 2013), in such neighbourhoods highly religious women can feel more relaxed and veil less strictly. Conversely, where religious norms are weaker and risk and temptations in the environment are higher, religious women should veil more frequently and strictly. We thus expect an interaction between neighbourhood characteristics and religiosity: the positive effect of average veiling and the negative effect of veiling variation on veiling will decrease as religiosity increases (H4a). By the same logic, where Muslims are a minority, as the number of both non-Muslim natives and friends increase, religious norms should weaken and the risk and temptation in the neighbourhood should increase; as a result, highly religious women should veil more frequently and strictly (H4b).

One may also expect differences between Muslim-majority and Muslim-minority countries. In the latter, the fear of getting discriminated or stigmatized (Helbling, 2014) increases the cost of veiling, and, thus, its credibility as a signal. This would be another reason why the presence of natives may decrease veiling among the less religious but increase it among the highly religious immigrants. Additionally, the predicted positive

effect of living in an urban area (as opposed to rural) may be stunted in Muslim-minority countries as immigrants concentrate in urban areas where community control is stronger. We will briefly return to such potential differences after presenting our results.

Data and Method

We use three datasets. Two datasets contain information on veiling among Turkish women in two countries: one from Belgium, in which Muslim are a minority, and the other from Turkey itself; Turkey represents an interesting case for the study of veiling being a relatively secular country but with a Muslim majority. The Belgian dataset is from the Migration History and Social Mobility survey (conducted in 1994–1996), which uses a representative clustered random sample of municipalities with at least 100 Turkish or Moroccan men (Lesthaeghe, 2000). To facilitate comparison with the Turkish dataset, we use only female Turkish respondents ($N = 850$). The Turkish survey was conducted in 2007 ($N = 2,639$) by KONDA with a representative stratified random sample (KONDA, 2007).

The third dataset is the Pew World Muslims Survey, conducted in 2011–2012, in 25 Muslim countries in Africa, Asia, the Middle East, and Europe, with nationally representative samples in most countries ($N \sim 16,000$, PEW, 2013). When we analyse the Pew data, we will first restrict our attention to a subset of countries that at one point or other of their history have experienced some secular movement (see Table 3), where women have been exposed not just to religious customs and education, and are thus more likely to perceive veiling as a decision rather than an inescapable garb. From this subset we also exclude former communist and war-torn countries, that is, Palestine, Iraq, Afghanistan, and Iran where veiling is compulsory. After analysing this subset, we will then provide results with the full set of countries. This will allow us to ascertain whether our findings generalize to other countries in the Muslim world. Further details of the datasets are given in the [Supplementary Material](#).

Measures

The operationalization of some variables differs slightly depending on the survey. For example, the Belgian survey does not include veiling behaviour but the attitude towards veiling.³ However, each survey offers us information missing in another. The Belgian survey provides an opportunity to test the influence of the presence of non-Muslim natives on veiling attitude. Pew survey records veiling sub-optimally as explained below, but is

the survey of Muslim religious behaviour with the largest geographical coverage. Combined, the three surveys allow reasonable tests of all our hypotheses over a vast and diverse geographical reach.

Below we describe the variables whose measures are not straightforward, namely veiling, religiosity, and aggregate measures of veiling. [Supplementary Material](#) provides details of how we measure the other variables—education, work, income, marital status, age, urbanization, number of natives in neighbourhood, and native friends.

Veiling

The Turkish survey offers the most precise and robust measure of veiling: it asks not only whether a woman veils outside home but also in which of four forms of increasing strictness: no veil, headscarf, turban, and chador. The Belgium dataset measures attitudes towards veiling with the question: ‘Muslim women should cover their head when outside home’ (1 = completely disagree to 6 = completely agree). In the Pew dataset, the interviewer records whether the respondent was veiled during the interview, using four categories: no veil, hijab (similar to turban), niqab (similar to chador), and burqa. The Pew measure is likely to be an underestimate because a woman who veils in public may not veil (to the same extent) during the interview, in particular given that the interview was conducted inside the respondent’s home and the interviewer was a woman, as it seems to have been typically the case. We will revisit this issue in the results section.

Religiosity

We measure religiosity with a number of items.⁴ In the Turkish survey, we could use five items: self-reported religiosity plus four items asking how often a respondent performs *namaz*, fasts, prays, and reads the Quran. In the Belgian survey we measure religiosity with three items asking whether ‘religion plays an important role in life’, whether the respondent fasts, and the frequency of Mosque attendance. In the Pew survey, we measure religiosity with four items: frequency of prayer, reading the Quran, mosque attendance, and self-reported religiosity. A confirmatory factor analysis (CFA) of religiosity for the three surveys for which a latent religiosity measure is constructed indicates that our measures are good ([Supplementary Material](#) presents the CFA).

Aggregate measures of veiling

In each of the three surveys we calculate the average and the standard deviation of the variable ‘veiling’ as defined above per neighbourhood. There is a methodological discussion on whether one can use aggregate measures

of the dependent variable, especially the mean, to predict the dependent variable itself.⁵ Based on this discussion, when calculating those averages (and standard deviations) we exclude the subject herself because otherwise there would be an artificial relationship between veiling of a respondent and the average veiling in her neighbourhood. Excluding the subject does not fully solve the potential spuriousness of this relationship. For example, exogenous shocks that influence veiling in a neighbourhood, such as an Islamic mayor, could affect veiling of both a particular respondent and the other women in the neighbourhood. This issue, we believe, is less problematic in our case, for we are not so much interested in the association between average veiling and veiling of a respondent *per se*, as in the *interaction* between individual religiosity and the average veiling, which does not suffer from potential spuriousness to the same extent. We will revisit the issue of causal inference in the conclusions.

Method

We perform our statistical analyses within the SEM framework employing the software Mplus-6 ([Muthen and Muthen, 1998–2010](#)). These means offer us specific advantages. First, we can deal better with measurement error by treating religiosity as a latent variable measured by several items rather than constructing a factor score and treating the factor score as an observed variable. Next, some of the indicators of religiosity are categorical and Mplus allows categorical items to load on latent variables. Third, our hypotheses involve interactions of the latent variable, religiosity, with observed variables, such as education. Fitting models with latent interactions has been a challenge.⁶ Recent developments in Mplus have made latent interactions easier to handle.

For handling missing data we used different solutions depending on the survey ([Allison, 2001](#)). For the Turkish data, we do list-wise deletion because the missing data constitute only 4 per cent of all cases. For the Belgian and Pew data, in which missings constitute about 15 and 18 per cent of all cases, we imputed missings with the expectation-maximization algorithm (EM) and multiple imputation, respectively. We also performed a sensitivity analysis comparing list-wise deletion and EM imputation for the Belgian data, and results were effectively the same.

Results

Descriptive Analysis

In Turkey, 67 per cent of women veil in some form ([Table 1](#)).⁷ The most common form is the less restrictive

Table 1. Descriptives

	Turkey (N = 2,693)		Belgium (N = 850)			Pew Muslim World (N = 15,826)		
	Mean	Standard deviation		Mean	Standard deviation		Mean	Standard deviation
Veiling			Women should veil			Veiling		
No veil	0.330		Strongly disagree	0.168		No veil	0.451	
Headscarf	0.504		Disagree	0.186		Hijab	0.482	
Turban	0.155		Somewhat disagree	0.054		Niqab	0.043	
Chador	0.012		Somewhat agree	0.041		Burqa	0.024	
			Agree	0.292				
			Strongly agree	0.258				
Religiosity			Religiosity			Religiosity		
Self-report	2.730	0.654	Self-report	5.061	1.161	Self-report	2.591	0.682
Namaz	2.361	0.719	Mosque	3.858	1.089	Mosque	1.728	1.887
Fast	2.799	0.505	Fast	0.94				
Pray	2.775	0.458				Pray	4.443	2.214
Read Quran	1.974	0.822				Read Quran	3.442	1.382
			Belgian friends	0.56				
			Belgians in neighbourhood	2.799	0.969			
Income	0.823	0.751				Income (z-score)	−0.032	1.011
Age (three categories 1 = 18/28, 2 = 29/43, 3 = ≥44)	2.030	0.806	Age	29.750	8.206	Age	36.704	13.615
Education	6.276	3.762	Education	6.510	5.079	Education (z-score)	−0.090	0.992
Urban	0.701		Population (100,000)	2.487	1.577	Urban	0.534	
Single	0.163		Single	0.031		Single	0.305	
Work	0.220		Work	0.208				
Mean(veil)	1.835	0.415	Mean (veil)	3.610	0.727	Mean (veil)	1.639	0.371
Standard deviation (veil)	0.534	0.267	Standard deviation (veil)	1.878	0.290	Standard deviation (veil)	0.531	0.199

headscarf, and then turban. Only 1 per cent of Turkish women wear the chador. In Belgium, 60 per cent (4 + 29 + 26) of Turkish women agree that women should cover their heads when outside the home. The average positive attitude towards veiling among Turkish immigrants in Belgium is thus very similar to the average number of women who veil in Turkey. The Turkish and Belgian samples are also very similar in terms of education, age, and occupational status. In total, 56 per cent of the Belgian sample had native Belgian friends.

In the Pew survey ~56 per cent of women veiled in some form during the interview. The more extreme forms, niqab and burqa, were rather exceptional most likely because of how veiling was recorded. Religiosity indicators are not directly comparable to the other surveys since the Pew items have more response categories (see [Supplementary Material](#)). Compared to the other two, the Pew sample is slightly older, less urbanized, and includes more single women.

Tests of Hypotheses

We ran eight ordinal probit regressions predicting veiling on our three datasets: four models include only the main effects, the other four include the interactions with religiosity ([Tables 2 and 3](#)). Because our hypotheses involve a number of variables, we jointly test their coefficients.

The results strongly support H1 in all datasets (see [Table 4](#) for details). When considering single coefficients, in Turkey only the effect of age has a different direction than predicted, which, however, becomes insignificant once the interactions with religiosity are included (Model 2) (we return to the effect of age below when we present additional analyses). In Belgium, all coefficients are in the expected direction, except urbanization, as we conjectured at the end of the theory section. In the Pew data, all coefficients estimated for both the subset (M5) and for all countries (M7) are in the predicted direction.

Table 2. Ordinal probit SEM models predicting veiling in Turkey and in Belgium

	Turkey		Belgium	
	M1	M2	M3	M4
Structural part				
Main effects				
(R) Religiosity (latent)	3.138** (0.233)	5.175** (0.940)	2.342** (0.367)	2.410* (1.105)
Education	−0.107** (0.019)	−0.118** (0.021)	−0.858** (0.196)	−0.948** (0.259)
Work	−0.546** (0.156)	−0.420* (0.182)	−0.494* (0.205)	−0.692** (0.198)
Income	−0.208* (0.087)	−0.319* (0.129)		
Single	−0.846** (0.209)	−0.752** (0.253)	−0.920** (0.284)	−0.917** (0.346)
Age	−0.264** (0.088)	−0.109 (0.092)	0.002 (0.008)	0.009 (0.013)
Urban	−0.138 (0.108)	−0.264* (0.121)	0.206* (0.081)	0.147 (0.137)
# Belgians around			−0.117 (0.073)	−0.084 (0.097)
Belgian friend			−0.797** (0.153)	−0.973** (0.199)
Mean (veil)	2.079** (0.185)	2.460** (0.218)	0.681** (0.179)	1.182** (0.358)
Standard deviation (veil)	0.479** (0.227)	0.313 (0.234)	−0.561* (0.261)	−0.195 (0.729)
(Latent) interactions				
R × education		0.240** (0.064)		−0.439 (0.542)
R × work		1.620** (0.548)		−0.136 (0.815)
R × income		1.500** (0.453)		
R × single		1.597 (0.984)		−0.432 (1.087)
R × age		−0.565** (0.223)		−0.037 (0.040)
R × urban		0.896* (0.359)		0.575 (0.497)
R × # Belgians around				0.666* (0.308)
R × Belgian friend				1.651** (0.553)
R × mean (veil)		−1.336* (0.536)		0.911 (1.461)
R × standard deviation (veil)		2.922** (0.715)		6.410** (2.366)
Intercept				
t1	−0.194 (0.301)	0.167 (0.331)	−1.829** (0.341)	−3.042** (0.384)
t2	3.497** (0.323)	4.201** (0.377)	−0.256 (0.275)	−1.057** (0.347)
t3	6.986** (0.394)	7.823** (0.477)	0.144 (0.266)	−0.579 (0.367)
t4			0.432+ (0.256)	−0.238 (0.356)
t5			2.533** (0.402)	2.369** (0.683)
Measurement part				
Item loadings on R				
Self-report	1.000 ^a (0.000)	1.000 ^a (0.000)	1.000 ^a (0.000)	1.000 ^a (0.000)
Fast	5.389** (0.392)	5.424** (0.401)	3.973** (1.029)	3.555** (0.915)
Namaz	7.098** (0.510)	6.938** (0.488)		
Pray	4.253** (0.317)	4.149** (0.313)		
Quran	2.862** (0.181)	2.769** (0.182)		
Mosque			−0.830** (0.097)	−0.804** (0.075)
Variance of R	0.207** (0.016)	0.207** (0.016)	0.376** (0.066)	0.317** (0.043)
−Log-Likelihood	10,917.44	10,793.13	3,821.83	3,800.41
N	2,499	2,499	850	850

**P (two-sided) < 0.01.

*P (two-sided) < 0.05.

+P (two-sided) < 0.1.

^aLoading constrained to 1 for identification.

Standard errors are in parentheses. In all models, standard errors are robust with respect to non-normality and clustering at the neighbourhood level. Disturbance variances and intercept/thresholds of items in the measurement part are suppressed for brevity. All continuous variables are centred. The mean of the latent religiosity variable is constrained to be zero for identification, thus it is cantered by default. See Online [Supplementary Material SM8](#) for robustness checks.

Table 3. Ordinal probit SEM models predicting veiling in the Muslim world

	Pew (subset of countries ^a)		Pew (all countries ^b)	
	M5	M6	M7	M8
Structural part				
Main effects				
(R) Latent religiosity	0.348** (0.069)	0.495** (0.134)	0.337** (0.064)	0.414** (0.090)
Education	−0.095* (0.044)	−0.100* (0.046)	−0.160** (0.049)	−0.191** (0.052)
Income	−0.027 (0.037)	−0.026 (0.030)	−0.009 (0.034)	−0.024 (0.030)
Single	−0.139* (0.071)	−0.143* (0.073)	−0.175* (0.080)	−0.210** (0.079)
Age	0.019** (0.003)	0.019** (0.003)	0.019** (0.003)	0.021** (0.003)
Urban	−0.126+ (0.066)	−0.126+ (0.068)	−0.257** (0.079)	−0.279** (0.084)
Mean (veil)	2.444** (0.184)	2.525** (0.192)	3.036** (0.271)	3.105** (0.300)
Standard deviation (veil)	−0.909** (0.204)	−0.988** (0.202)	−0.701** (0.218)	−0.810** (0.277)
Latent interactions				
R × education		0.094* (0.048)		0.089* (0.041)
R × income		0.030 (0.048)		0.032 (0.029)
R × single		0.203** (0.060)		0.127** (0.029)
R × age		0.004 (0.003)		−0.002 (0.002)
R × urban		0.088 (0.092)		0.149** (0.046)
R × mean (veil)		−0.450+ (0.238)		−0.592** (0.155)
R × standard deviation (veil)		0.984* (0.427)		0.734* (0.288)
Intercept				
t1	0.358* (0.153)	0.437* (0.173)	−0.497** (0.106)	−0.007 (0.324)
t2	3.530** (0.237)	3.621** (0.229)	3.294** (0.299)	3.775** (0.389)
t3	4.501** (0.207)	4.593** (0.201)	4.440** (0.336)	4.922** (0.447)
Item loadings on R				
Self-report	0.154** (0.023)	0.155** (0.023)	1.079** (0.121)	1.081** (0.121)
Mosque	0.760** (0.081)	0.768** (0.080)	0.606** (0.107)	0.605** (0.107)
Pray	1.000 ^c (0.000)	1.000 ^c (0.000)	1.000 ^c (0.000)	1.000 ^c (0.000)
Quran	0.677** (0.070)	0.685** (0.068)	0.703** (0.077)	0.702** (0.076)
Variance of R				
−Log-Likelihood	49,473.115	49,449.674	113,618.196	113,504.490
N	6,989	6,989	15,826	15,826

**P (two-sided) < 0.01.

*P (two-sided) < 0.05.

+P (two-sided) < 0.1.

^aSubset includes Algeria, Bangladesh, Egypt, Indonesia, Jordan, Lebanon, Malaysia, Tunisia, Turkey, and Pakistan.^bIn addition to the previous subset, Afghanistan, Albania, Azerbaijan, Bosnia, Iran, Iraq, Kazakhstan, Kosovo, Kyrgyzstan, Niger, Palestine, Russia, Tajikistan, Thailand, and Uzbekistan are included.^cLoading constrained to 1 for identification, country fixed effects are controlled in the model (see the [Supplementary Material](#) for those fixed effects).Standard errors are in parentheses. In all models, standard errors are robust with respect to non-normality and clustering at the neighbourhood level. Disturbance variances and intercept/thresholds of items in the measurement part are suppressed for brevity. All continuous variables are centred. See Online [Supplementary Material](#) SM8 for robustness checks.

The results strongly support H2 in Turkey and in the Muslim world, but interestingly not in Belgium (see [Table 4](#)). Interactions with latent religiosity are generally in the direction predicted by the strategic theories and are jointly statistically significant in Turkey and in the Muslim world both in the smaller set and in all 25 countries. In fact, the results with the subset and with all countries are very similar, indicating that the observed patterns are general in the Muslim world. These results

show that, despite the fact that in the Pew data the *level* of veiling could be underestimated due to how it was recorded, the association of veiling with other variables holds remarkably well. The weakness of the measurement of veiling in the Pew survey should make the veiling measure more noisy in a direction that goes against H2, for women who are recorded as not veiling may in fact veil in public; thus, the fact that we find strong effects, consistent with our other results, is reassuring.

Table 4. Results of joint tests of coefficients involved in the hypotheses

	Coefficients tested (predicted sign)	Turkey (KONDA)	Belgium ^a (MHSM)	World Muslims ^b (Pew subset)	World Muslims ^b (Pew all)
Veiling as an expression of religious beliefs (classical theories)					
H1	Education (–), work (–), income (–), single (–), age (+), urban (–)	$\chi^2(6) = 125.31^{**}$	$\chi^2(5) = 80.67^{**}$	$\chi^2(5) = 26.48^{**}$	$\chi^2(5) = 29.94^{**}$
Veiling as a strategic choice (commitment and signalling theories)					
H2	Religiosity \times (education (+), work (+), income (+), single (+) age (–), urban (+))	$\chi^2(6) = 83.44^{**}$	$\chi^2(5) = 3.96$	$\chi^2(5) = 21.02^{**}$	$\chi^2(5) = 41.68^{**}$
Neighbourhood effects (predicted by classical theories)					
H3a	Mean(veil) (+), standard deviation (veil) (–)	$\chi^2(2) = 165.26^{**}$	$\chi^2(2) = 43.63^{**}$	$\chi^2(2) = 195.10^{**}$	$\chi^2(2) = 177.01^{**}$
H3b	Belgians around (–), Belgian friends (–)	N.A.	$\chi^2(2) = 29.29^{**}$	N.A.	N.A.
Neighbourhood effects (predicted by commitment and signalling theories)					
H4a	Religiosity \times [mean (veil) (+), standard devi- ation(veil) (+)]	$\chi^2(2) = 20.25^{**}$	$\chi^2(2) = 10.39^{**}$	$\chi^2(2) = 27.37^{**}$	$\chi^2(2) = 6.20^*$
H4b	Religiosity \times (Belgians around (+), Belgian friends (+))	N.A.	$\chi^2(2) = 9.68^{**}$	N.A.	N.A.

^{**} P (two-sided) < 0.01.

^{*} P (two-sided) < 0.05.

^aIncome missing in the dataset.

^bWork is missing in the dataset.

MHSM, Migration History and Social Mobility.

There is also an empirical way of evaluating the impact of the measure shortcoming: [Supplementary Material](#) shows that once we replicate the analyses using the Pew data on the Turkey cases only, we obtain results very similar to the ones we obtain from the Turkish data.

We will discuss possible reasons why H2 is not supported in Belgium in the concluding section.

A graphical representation of the interaction effects ([Figure 1](#)) helps us with the substantive interpretation of the results; for an averagely religious woman in Turkey the latent propensity to veil decreases by about 0.12 units for a year increase in education, but that effect changes with religiosity: a single standard deviation increase in religiosity neutralizes the effect of education on the latent propensity to veil $[(-0.12) + (0.45 \times 0.24) = -0.012]$, and an increase of two standard deviations in religiosity switches the sign of the effect of education. As for occupation, for an averagely religious woman having a job decreases her propensity to veil by about 0.42 points (equivalent to 4 years of education), but a single standard deviation increase in religiosity turns the

effect of job into *positive* and quite substantial (~ 0.33). All other interaction effects can be interpreted in the same way using [Figure 1](#).

As predicted, the average veiling in one's area is positively associated with the propensity to veil for the averagely religious women (H3a), while highly religious women seem much less responsive to the prevalence of veiling as this, we conjecture, makes the environment less threatening (H4a). ([Figure 1](#) shows effect sizes and [Table 4](#) statistical tests.) On the other hand, greater variation in veiling has either a negative or non-existent effect for the averagely religious women (H3a), while for the highly religious women it increases veiling (H4a).

To grasp what exactly variation vs. uniformity in veiling means, imagine a case in which half of the population does not veil at all and the other half wears the burqa. Compare this with the case in which all women veil and wear the hijab. The average veiling is the same in both cases, but the variation in veiling differs. The averagely religious woman will not veil in the first case, and wear the hijab in the second case. The highly

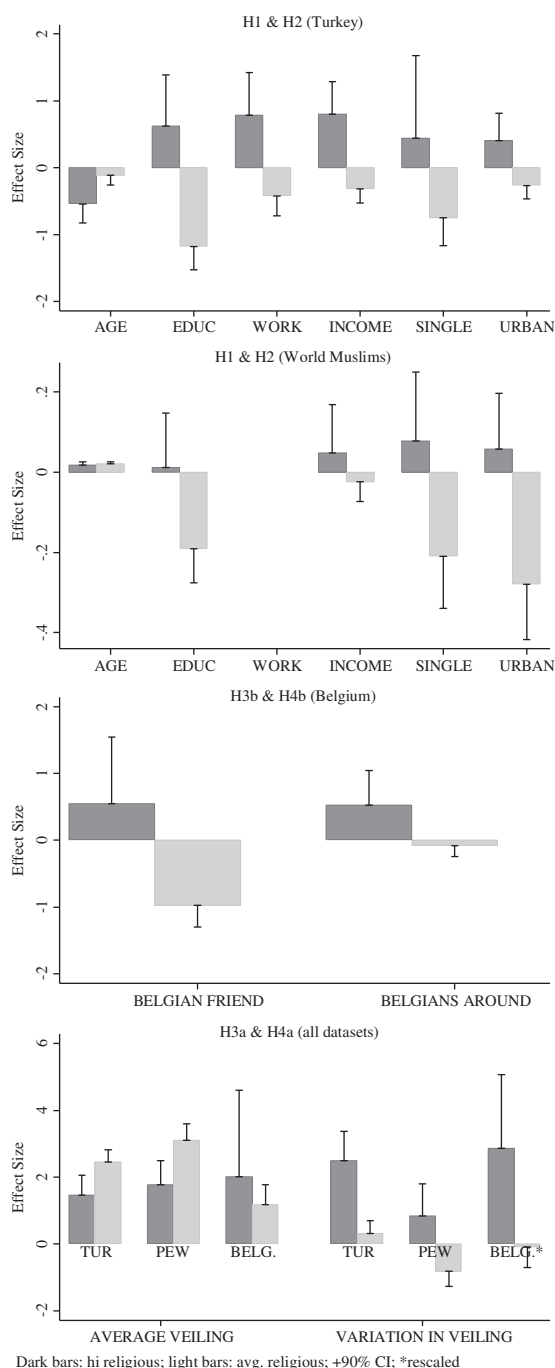


Figure 1. Interactions: effects of variables on the latent propensity to veil for averagely religious (light bars) and highly religious (dark bars, latent religiosity scores 1.64 standard deviations above the mean) women. For Turkey the effect of education refers to 10 years of education; for Belgium only significant interactions are included; Pew effects are based on all countries.

religious woman, by contrast, will wear the burqa in the first case and the hijab in the second case. By increasing the uncertainty in the environment, variation seems to push the highly religious to the extreme.

In Belgium, H3b is strongly supported: the number of Belgian friends and of native Belgians in one's neighbourhood both decrease veiling substantially and significantly. We also find support for H4b: while the number of natives in one's neighbourhood and having native friends decrease veiling for the averagely religious, both of them increase veiling among the highly religious (see Figure 1).

Additional Analysis: Types of Veiling

The models above rest on the proportional odds assumption (Long, 1997: ch5), which implies that all three ordered dichotomization of veiling (no veil vs. headscarf, turban, and chador; no veil and headscarf vs. turban and chador; no veil, headscarf, and turban vs. chador), would yield the same coefficients. For the Belgian and Pew data this assumption seems unproblematic (see Supplementary Material). But for the Turkish data we fitted additional models for different dichotomizations of the veiling variable to find out which form of veiling conforms more with our predictions, and to address the potentially problematic proportional odds assumption (respondents who wear the chador are too few to fit separate models for it).

Interestingly, the results on the headscarf (Table 5) are consistent with the classical theories of religion—H1 is supported by Models 9 and 10. However, except income, none of the interactions is statistically significant. By contrast, when the turban is contrasted with 'no veil and headscarf' (Models 11–14), the interaction terms are significant. Moreover, education, occupational status, and income themselves without interactions with religiosity, are not always good predictors of the turban. A particularly interesting finding is that while age is positively associated with the headscarf, it has a negative effect on turban. This is probably why the main effect of age is insignificant in Model 2.⁸ We return to these results in the next section.

Discussion and Conclusions

Our findings support remarkably well, across many different countries and data sources, the predictions of the theories of veiling as both an expression of religious beliefs and a strategic choice. While the forces of modernization (education, income, urbanization, contact with non-Muslim Europeans, etc.) decrease the propensity of

Table 5. Binary logistic regression models predicting different types of veiling in Turkey

	No veil/headscarf		No veil/turban		No veil+ headscarf/turban	
	M9	M10	M11	M12	M13	M14
(R) Latent religiosity	3.885** (0.376)	4.527* (1.964)	5.518** (0.686)	6.204* (2.675)	2.433** (0.248)	3.084** (1.034)
Education	−0.269** (0.030)	−0.266** (0.036)	−0.181** (0.042)	−0.148** (0.054)	0.039 (0.027)	0.010 (0.031)
Work	−0.622** (0.215)	−0.527* (0.236)	−0.523+ (0.271)	−0.965** (0.344)	−0.205 (0.235)	−0.270 (0.265)
Income	−0.483** (0.128)	−0.558** (0.164)	0.045 (0.159)	−1.062+ (0.549)	0.145 (0.102)	−0.008 (0.197)
Single	−1.291** (0.265)	−1.33** (0.257)	−.957** (0.344)	−.813* (0.394)	−0.309 (0.217)	−.248 (0.243)
Age	0.377** (0.128)	0.382** (0.146)	−0.480* (0.192)	−0.567* (0.239)	−0.660** (0.117)	−0.692** (0.136)
Urban	−0.844** (0.228)	−0.808** (0.281)	−0.603* (0.283)	−0.892** (0.319)	0.090 (0.192)	0.088 (0.207)
Mean (veil)	2.513** (0.292)	2.538** (0.339)	3.141** (0.367)	3.500** (0.488)	2.045** (0.296)	2.342** (0.325)
Standard deviation (veil)	−1.662** (0.384)	−1.53** (0.417)	0.791 (0.571)	1.155* (0.587)	1.913** (0.433)	1.784** (0.429)
R × education		0.000 (0.157)		−0.203 (0.232)		0.141** (0.068)
R × work		1.190 (0.855)		3.006* (1.205)		1.502* (0.690)
R × income		1.137+ (0.638)		4.695** (1.783)		1.223+ (0.713)
R × single		−1.066 (0.892)		−2.166 (1.274)		−0.096 (0.847)
R × age		−0.262 (0.558)		0.239 (0.800)		0.289 (0.269)
R × urban		0.245 (1.050)		0.972 (1.167)		−0.130 (0.497)
R × mean (veil)		−0.423 (0.952)		−0.871 (1.304)		−1.347* (0.684)
R × standard deviation (veil)		0.993 (1.465)		0.115 (2.114)		1.295 (0.908)
Intercept						
t1	0.988* (0.476)	1.097+ (0.575)	2.375** (0.577)	2.637** (0.688)	−0.004 (0.020)	−0.004 (0.020)
t2						
t3						
−Log-Likelihood	8,352.08	8,346.50	5,222.33	5,207.83	12,227.91	12,207.2
N	2,073	2,073	1,227	1,227	2,469	2,469

**P (two-sided) < 0.01.

*P (two-sided) < 0.05.

+P (two-sided) < 0.1.

Standard errors are in parentheses. In all models, standard errors are robust with respect to non-normality and clustering at the neighbourhood level. Measurement part of the model is suppressed for brevity.

veiling among averagely religious women, by subjecting highly religious women to riskier environments, especially young and single women, they *increase* the propensity of veiling. These findings show that, contrary to

the anecdotal accounts from which we began, as a *general trend* veiling decreases as modernization increases. However, the findings also imply that in *some* societies in which religiosity remains high enough, in line with

our starting puzzle, overall veiling could in fact increase (rather than remaining constant) as a result of modernization.

These results show that for the averagely and less religious the classical theories of religion, developed mostly in reference to a Christian context, generalize to the Muslim context. To account for the veiling behaviour of the highly religious, however, the commitment and signalling theories are needed, as veiling does not seem to be a mere expression of religiosity but the result of women's strategic decision. The strategic nature of veiling is also apparent when one considers the neighbourhood's effects: the lower the veiling prevalence and the higher the multiplicity of religious dress in a neighbourhood, the more relaxed the veiling of the averagely religious, but the stricter the veiling among the highly religious.

Compared to Muslim countries, there are interesting peculiarities in Belgium, our only case in which Muslims are a minority. Here the most important interaction effects of religiosity are with variables that capture contacts with native Belgians, that is, the number of Belgians in one's neighbourhood and whether one has native Belgian friends. Other variables, such as education and urbanization, do not interact with religiosity in predicting veiling. This could be due to the less precise measurement of veiling in the Belgian survey, but it could also be because where Muslims are a minority, inter-religious contact is a more significant risk and temptation factor for Muslims than that measured generically by education or occupational status. The latter conjecture is consistent with research, which has shown that contact with natives has profound effects on Muslim immigrants' religious behaviour (Maliepaard and Phaet, 2012; Brünig & Fleischmann, 2015).

Since the mid-2000s, in Turkey, the turban has become a sign of politicization of religion, and of free religious expression, whereas the headscarf resembles a traditional form of religiosity (Saktanber and Çorbacıoğlu, 2008). Our additional results reflect this change: we find that the use of the headscarf is very well predicted by the classical theories of religion, but it does not seem to serve strategic functions, which are instead served by the turban. The turban rather than headscarf seems to be the choice of the highly religious urban women who want to communicate their piety when exposed to modernizing forces.

The strategic theories we test in this article assume that veiling is a personal choice. However, veiling is often seen as a decision made by family or community on behalf of women rather than by women themselves, in other words as a result of patriarchal control (Shirazi

and Mishra, 2010). One could therefore object that since there is little room for women to choose their outfit, strategically or otherwise, our test would not be meaningful. Yet, even if the ultimate decision makers were not women themselves, one could argue that the theories still hold. It would then be the family who encourage veiling for strategic reasons, using their daughters to communicate their religious propriety. Our datasets do not include information on pressure within the family to veil, so we cannot pursue this empirically. But, interestingly, the Western narrative of veiling as women's subjugation is not supported by a number of ethnographic studies, which show that veiling is often a personal choice not forced by parents or community (Afshar, 2008; Koyuncu-Lorasdağı, 2009). Moreover, our findings suggest that among the highly religious women, veiling *increases* with education, income, employment, urbanity, among women that is who should be more resilient to family pressure.

We would now like to address the issue of causality. In our empirical strategy we measure our concepts as rigorously as possible. For example, we measure religiosity, our core independent variable, as a latent variable, which handles measurement error better than the traditional method of constructing a sum score. Moreover, we rely on three large-scale datasets from very different contexts, and draw implications from the theories over a wide array of distinct outcomes; thus, the remarkable convergence of our results in support of the predictions is reassuring. Nonetheless, we cannot rule out the typical drawbacks of cross-sectional analysis, reverse causality, and endogeneity; hence, our statistical evidence must be treated as associational not causal. One could argue that veiled women are more likely to get less education, opt out of the labour market, avoid big cities and environments with low levels of veiling, shy away from having contacts with non-Muslims, and so on. In future research stronger validation could be sought in controlled designs, such as longitudinal studies,⁹ or taking advantage of exogenous 'shocks', legal or political, that approximate the conditions of a natural experiment, or by testing the theories' implications on comparable behaviours in the same religion, such as beards for men, or on similar behaviours in other religions. We should stress, however, that while the conjectures of both reverse causality and endogeneity are plausible in theory, in our case they work *against* the hypotheses derived from strategic motivations (H2 and H4): they would bias our estimates in the opposite direction of that which we hypothesize, thus effectively imposing a more stringent test.

In addition to their scholarly interest, our findings have implications for Muslim integration and cultural

policy in Europe. The massive inflow of Muslim immigrants to Western countries and the rise of violent Islamist groups have made Muslim minorities a target of hostility and discrimination (Maliepaard, Lubbers, and Gijsberts, 2010; Adida, Laitin and Valfort, 2016). Veiling has come to visually symbolize these tensions and some forms have been banned in Belgium, Denmark, France, Italy, the Netherlands, Switzerland, and elsewhere (Helbling, 2014). Our results suggest, in fact, that in Europe veiling could be a sign of *integration* among the highly religious: as they have more native friends and live in areas dominated by natives; highly religious women tend to veil more, perhaps to keep their pious reputation while being integrated. Banning or shunning some forms of veiling would deprive them of a means that, contrary to populist cant, allow them more opportunity for integration rather than marking their differences.¹⁰ Not all that lies behind the veil is to be feared.

At the same time, banning the veil is likely to cause information inefficiencies. When no one veils because of an imposition it would simply take a greater effort for a woman who wants to signal her piety and her norm abidance; to do so, she will have to seek alternative ways, which may be more costly, less reliable, or cumbersome, and ultimately force her to stay at home.¹¹ The opposite extreme of imposing the adoption of the veil, paradoxically, could have the same effect by making veiling uninformative: a veil would stop being taken as the genuine expression of a woman's religiosity as it could simply be the outcome of complying with the law.¹² This would, in turn, destroy the signalling value of the veil, which would, again, force the highly religious to seek alternative ways of signalling their piety.

Notes

- 1 The traditional *headscarf* covers the head leisurely leaving some hair visible; the *turban* (aka hijab) hides both the head and the hair. The *chador* (aka niqab) is a large piece of cloth shrouding the whole body, leaving only the face visible; the most extreme form, the *burqa*, covers the face too. The Arabic word hijab means curtain but also refers to a specific, less conservative style, similar to the Turkish turban. For other Middle-Eastern styles see: http://www.nytimes.com/2016/05/04/world/what-in-the-world/burqa-hijab-abaya-chador.html?_r=0. Most Western scholars of religion disregard these different forms and measure veiling as a binary variable (e.g. the 2006 Dutch SIM data).

- 2 Explaining why *some* women remain highly religious despite modernization is beyond this article's scope. We assume that this is the case (and also confirm with the data, see e.g. Online [Supplementary Material 9](#) for a simple demonstration). No society goes (or has so far gone) completely secular even after reaching the most advanced levels of modernization.
- 3 Dutch-SIM data set measures both veiling intention and veiling (as a binary variable). Correlation between the two is 0.56 ($p < 0.01$). [Supplementary Material](#) shows the distribution of veiling intention across veiled and unveiled women and that intention is a good indicator of behaviour.
- 4 See Voas (2007) on measuring religiosity.
- 5 See Angrist and Pischke (2008:ch4) and Kuppens and Yzerbyt (2014).
- 6 See Marsh, Wen and Hau (2006).
- 7 These figures slightly differ from the ones reported in KONDA (2007) because we use only female respondents, whereas KONDA estimates also include men whose wives veil.
- 8 These additional models break down the data set into smaller subgroups. Hence, statistical power is lower than that in Models 1 and 2.
- 9 The Belgian survey is somewhat old (1994) and period effects could explain why we find no support for H2 in Belgium. We conjecture the value of veiling as a strategic device would grow as community segregation and discrimination increase, which is most likely to have occurred in Europe from the late 1990s onward (Adida *et al.*, 2016). Such dynamics could be captured by longitudinal studies.
- 10 Meyersson (2014) presents evidence that in Turkey the rule by an Islamic party increases the educational and occupational opportunities of Muslim women, in particular 'the pious and poor'.
- 11 See Carvalho's discussion of the consequences of a ban (2013: pp. 361).
- 12 See Aksoy and Gambetta (2015).

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Supplementary Data

Supplementary data are available at ESR online.

References

- Adida, C. L., Laitin, D. D. and Valfort, M. (2016). *Why Muslim Integration Fails in Christian-Heritage Societies*. Cambridge, MA: Harvard University Press.
- Afshar, H. (2008). Can I see your hair? Choice, agency and attitudes: the dilemma of faith and feminism for Muslim women who cover. *Ethnic and Racial Studies*, 31, 411–427.
- Aksoy, O. and Gambetta, D. (2015). Lifting the veil: is veiling a reliable signal of piety? *Oxford Working Paper*.
- Allison, P. D. (2001). *Missing Data*. Thousand Oaks: Sage.
- Angrist, J. D. and Pischke, J. (2008). *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton: Princeton University Press.
- Brünig, B. and Fleischmann, F. (2015). Understanding the veiling of Muslim women in the Netherlands. *Journal for the Scientific Study of Religion*, 54, 20–37.
- Carvalho, J. -P. (2013). Veiling. *Quarterly Journal of Economics*, 128, 337–370.
- Durkheim, E. [1897] (1951). *Suicide*. New York: Free Press.
- El Guindi, F. (1981). Veiling infitah with Muslim ethic: Egypt's contemporary Islamic movement. *Social Problems*, 28, 465–485.
- Elster, J. (1979). *Ulysses and the Sirens: Studies in Rationality and Irrationality*. Cambridge: Cambridge University Press.
- Fleischmann, F. and Phalet, K. (2012). Integration and religiosity among the Turkish second generation in Europe: a comparative analysis across four capital cities. *Ethnic and Racial Studies*, 35, 320–341.
- Helbling, M. (2014). Opposing Muslims and the Muslim headscarf in Western Europe. *European Sociological Review*, 30, 242–257.
- Hoodfar, H. (1991). Return to the veil. In Redclift, N., and Sinclair, M. T. (Eds.), *Working Women: International Perspectives on Labour and Gender Ideology*. New York: Routledge, pp. 104–124.
- Hoodfar, H. (1997) *Between Marriage and the Market: Intimate Politics and Survival in Cairo*. Berkeley, CA: University of California Press.
- KONDA Research and Consultancy. (2007). Religion, Secularism and the Veil in Daily Life, available from <http://www.konda.com.tr/html/dosyalar/ghdl&ct_en.pdf>.
- Koyuncu-Lorasdağı, B. (2009). The headscarf and resistance identity-building: a case study on headscarf wearing in Amsterdam. *Women's Studies International Forum*, 32, 453–462.
- Kuppens, T. and Yzerbyt, V. Y. (2014). Predicting variability: using multilevel modelling to assess differences in variance. *European Journal of Social Psychology*, 44, 691–700.
- Lesthaeghe, R. J. (2000). *Communities and Generations: Turkish and Moroccan Populations in Belgium*. Brussels: VUB University Press.
- Long, J. S. (1997). *Regression Models for Categorical and Limited Dependent Variables*. Thousand Oaks: Sage.
- MacDonald, M. (2000). Muslim women and the veil: problems of image and voice in media representations. *Feminist Media Studies*, 6, 7–23.
- MacLeod, A. E. (1992). Hegemonic relations and gender resistance: the new veiling as accommodating protest in Cairo. *Signs*, 17, 533–557.
- Maliepaard, M., Lubbers, M. and Gijsberts, M. (2010). Generational differences in ethnic and religious attachment and their interrelation. A study among Muslim minorities in the Netherlands. *Ethnic and Racial Studies*, 33, 45–472.
- Maliepaard, M. and Phalet, K. (2012). Social integration and religious identity expression among Dutch Muslims the role of minority and majority group contact. *Social Psychology Quarterly*, 75, 131–148.
- Marsh, H. W., Wen, Z. and Hau, K. T. (2006). Structural equation models of latent interaction and quadratic effects. In Hancock, G. R. and Mueller, R. O. (Eds.), *Structural Equation Modeling: A Second Course*. Greenwich, CT: Information Age, pp. 225–265.
- Meyersson, E. (2014). Islamic rule and the empowerment of the poor and pious. *Econometrica*, 82, 229–269.
- Muthen, L. and Muthen, B. (1998–2010). *Mplus User's Guide*, 6th edn, Los Angeles, CA: Muthen and Muthen.
- Need, A. and De Graaf, N. (1996). Losing my religion: a dynamic analysis of leaving the Church in the Netherlands. *European Sociological Review*, 12, 87–99.
- Norris, R. and Inglehart, R. (2004). *Sacred and Secular*. Cambridge, MA: Cambridge University Press.
- Patel, D. S. (2012). Concealing to reveal: the informational role of Islamic dress. *Rationality & Society*, 24, 295–323.
- PEW. (2013). The world's Muslims: religion, politics and Society. In *PEW Survey Report*, available from <<http://www.pewforum.org/files/2013/04/worlds-muslims-religion-politics-society-full-report.pdf>> [accessed 3 October 2014].
- Ruiter, S. and Van Tubergen, F. (2009). Religious attendance in cross-national perspective: a multilevel analysis of 60 countries. *American Journal of Sociology*, 115, 863–895.
- Saktanber, A. and Çorbacıoğlu, G. (2008). Veiling and headscarf-skepticism in Turkey. *Social Politics: International Studies in Gender, State & Society*, 15, 514–538.
- Shirazi, F. and Mishra, S. (2010). Young Muslim women on the face veil (niqab): a tool of resistance in Europe but rejected in the United States. *International Journal of Cultural Studies*, 13, 43–62.

- Singerman, D. (1997). *Avenues of Participation: Family, Politics, and Networks in Urban quarters of Cairo*. Cairo: American University in Cairo Press.
- Tiliouine, H., Cummins, R. A. and Davern, M. (2009). Islamic religiosity, subjective well-being, and health. *Mental Health, Religion & Culture*, 12, 55–74.
- Voas, D. (2007). Surveys of behaviour, beliefs and affiliation. In Beckford, J. and Demerath, N. J. (Eds.), *Handbook of the Sociology of Religion*. London: Sage, pp. 1281–50.
- Voas, D. and Fleischmann, F. (2012). Islam moves west: religious change in the first and second generations. *Annual Review of Sociology*, 38, 525–545.

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