

Attitudes to legal authority in adulthood: inter-individual differences and intra-individual stability

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Abstract

This paper considers whether and how attitudes towards legal authority change over time in the British adult population. We apply latent trajectory and autoregressive models using the 1996, 2000 and 2012 sweeps of the British Cohort Study of 1970; after controlling for gender, education, occupational social class, interest in politics and religion, we found that from the age of 26 to the age of 42, the cohort becomes more liberal regarding obedience to the law, the death penalty and stiffer sentencing, but more authoritarian regarding censorship; moreover, individual-level characteristics are associated with inter-individual differences over time, in particular: as occupational social class and level of education increase, attitudes tend to be more liberal; interest in politics is positively associated with less authoritarian attitudes; those who define themselves as non-religious tend to be more liberal; the effect of gender varies by attitude: females are more authoritarian towards censorship, but more liberal regarding capital punishment and stiffer sentencing. The analyses reported here give support at the micro level to the hypotheses of relative consistency and stability of attitudes to legal authority, as well providing evidence for important social cleavages.

Introduction

In his summary of the literature on socio-political attitudes, Duckitt (2001) observed that these are usually organised around two “relatively orthogonal dimensions” (Ibid, p. 46): the first is variously labelled as authoritarianism, social conservatism and traditionalism; the second counterposes economic conservatism and belief in hierarchical power on the one hand, and egalitarianism, humanitarianism and social welfare on the other hand. This paper focuses on a particular aspect of the continuum authoritarianism/liberalism, namely attitudes to legal authority.

Various scholars have viewed socio-political attitudes as being associated with people’s general ideological position. For instance, Jost et al. (2004) found people’s self-positioning on the widely used Right-Left continuum to be a strong predictor of voting behaviours in the American National Election Study from 1972 to 2004. In the context of the United States’ party system, 'Right-Left' is represented by the dimension 'Conservative-Liberal' and Jost, Federico & Nappier (2009) have argued that conservatives experience the need for social order and social conformity—attributes strongly associated with authoritarian attitudes. On the other hand, liberals tend to favour change of the (conservative) status quo; thus the difference between liberals and conservatives centres on the issues of hierarchy, authority and inequality. Other authors (Sidanius & Pratto, 1999; Ho et al., 2012) have also hypothesised that authoritarian and social dominance attitudes affect inter-group attitudes, i.e. one’s disposition towards members of the out-groups as defined by ethnicity, immigration status, religion, for instance, which in turn has been found to affect the individual’s affinity for radical right-wing populist parties (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; Berning & Schlueter, 2016; Jost, 2006; Rokeach, 1968; Wilson, 1973).

A key question is whether such socio-political attitudes and ideological positions are subject to notable intra-individual change or are relatively stable over the life course. Cross-sectional aggregate analysis (for example, Phillips & Simpson, 2014) support intergenerational change by population replacement on one hand, whilst research based on panel data (Dinas, 2013; Jennings & Stoker, 2006; Stoker & Jennings, 2008) on the other

hand tried to integrate the mechanism of change over the life course and generational replacement. In this paper we discuss how attitudes towards legal authority, seen as a key component of the social conservatism-liberalism scale (Altemeyer, 1996; Duckitt & Sibley, 2010) are defined and measured, their change over time and their relation to demographic and socio-economic characteristics. Hence, our broad research questions are: 1) do attitudes towards legal authority change over time in a life course perspective and, if so, to what extent and in what way 2) To what extent are socio-economic characteristics (gender, occupation, education, religion and interest in politics) related to changes in attitudes towards legal authority over time?

Attitudes toward authority: definition

Weber's (1954) tri-partite definition of authority consists of three ideal types of authority: charismatic, traditional, and legal-rational authority. Within this perspective we explore people's attitudes towards the Weberian legal-rational authority where legitimacy is seen as coming from legal norms, order and jurisdictional controls. Spencer (1970) analysed Weber's typology in light of the concept of attitudes towards legitimacy and proposed two types of legitimacy: 1) affectual legitimacy, for which "norms and authority are tinged with awe and reverence", and 2) reasoned legitimacy, for which "norms and authority are accepted because of their rational relation to basic values" (Ibid, p. 133). In turn, Spencer also posited that reasoned legitimacy can be of formally or substantively rational; under formal rationality, legality is the basic value-orientation for the individual and authority is accepted because it is formally defined as such, whereas the legality value under substantive rationality is secondary to its congruence with extra-legal values.

Since Adorno et al.'s (1950) measurement of the authoritarian personality through the Fascism scale (F-scale), there have been numerous attempts to capture the concept of attitudes to legal authority, many of which are bound up with broader concepts like social conformity and resistance to change. Wilson and Patterson's (1968) Conservatism scale (C-scale) aimed to measure positive attitudes to 50 items pertaining to the two core aspects of conservative ideology—namely, resistance to social change and maintaining inequality, as

well as more peripheral aspects of it, i.e. to those malleable and historically changing associations (Jost, Glaser, Kruglanski, & Sulloway, 2003). Altemeyer's (1981) Right-wing Authoritarianism (RWA) scale primarily measures resistance to change, in terms of commitment to tradition, to authority and opposition to political protest and rebellion. Altemeyer's definition of RWA identifies three main dimensions: a) submission to the authorities, b) aggressiveness, and c) adherence to social conventions. Schwartz's (1992) proposed theory consists of ten basic values ordered along two orthogonal continua: Self-enhancement/Self-transcendence and Openness to Change/Conservatism; as Duckitt et al. (2013) highlights, Schwartz's higher order value "Conservation" mirrors Altemeyer's three dimensions.

Drawing on the above approaches, here we endorse the definition of authoritarian attitudes from Duckitt's work, as "support or opposition for the subordination of individual freedom and autonomy to the collective and its authority" (Ibid, p. 843); in particular, we refer more precisely to the concept of attitudes to *legal* authority, and define these as positive or negative evaluations of the controls and sanctions applied by the state on its citizens. We therefore conceptualise attitudes to legal authority as a continuum, with each individual's position on that continuum representing their view on the relative importance of social control as exerted by the legal system and individual self-expression.

Components of attitudes towards legal authority, their change over time and covariates

Attitudes towards the death penalty, severity of punishment for criminals, and police funding are viewed as measures of issue-based conservatism and related mostly to the peripheral aspects of authoritarian attitudes (Jost et al., 2003). These peripheral aspects are "likely to vary considerably in their ideological relevance across time" (Ibid. 2003, p. 342), depending on interactions between societal and individual circumstances, which then define their relevance compared to other socio-political issues of the time.

Significant associations between attitudes to authority and individual-level characteristics have been found previously. Social class is a key correlate of authoritarianism and conservatism in the literature (Napier & Jost, 2008; Paterson, 2008). Congruent with

Duckitt's (2001) review of the psychological literature, Lipset (1960) found that disadvantaged social classes tend to be more liberal on the welfare state and income taxation, but more conservative and authoritarian on immigration legislation and ethnic minorities. In validating Lipset's hypothesis, de Regt et al. (2012), using a modified version of Altemeyer's RWA scale in the European Value Survey (EVS) 2008, showed that individuals belonging to the working class are more authoritarian, even after allowing for cross-country differences in socio-political contexts and social-development pathways. Jost et al. (2004) report similar socio-economic class differences in RWA, political and economic conservatism.

At the individual level, other correlates of authoritarianism in the literature are: educational level, often seen as a key moderator of the relationship between attitudes and social class, with lower education associated with higher conformism and authoritarianism (Lipset, 1960; de Regt et al., 2012; Schoon, Cheng, Gale, Batty, & Deary, 2010; Zakrisson & Ekehammar, 1998), and life-long learning associated with attitude change towards more liberal stances (Bynner, Schuller, & Feinstein, 2003; Preston & Feinstein, 2004); gender, with most studies finding either higher authoritarianism for males or no gender effect (Poortman & Van Tilburg, 2005; Pratto, Stallworth, & Sidanius, 1997; Whitley & Aegisdottir, 2000); high socio-political participation and low cynicism which are associated to more liberal stances on moral issues (Singh & Dunn 2015; Bynner & Ashford 1994); and age, with attitudes tending towards more conservative and authoritarian positions as age increases (Danigelis, Hardy, & Cutler, 2007). Finally, the relationship between religion and socio-political attitudes has been much researched, with studies trying to understand how one influences the other (L. R. Jacobs & Shapiro, 2011; Putnam & Campbell, 2010), and/or account for the impact of socialization processes on both (Pearce & Thornton, 2007; Voas & Crockett, 2005).

The British context and the population of reference

We used the British Cohort Study 1970 (BCS70). Less than half of the cohort members stayed in education after the age of 16 and those who joined the labour market in the

recession of the early 1990's faced the possibility of joining an increasingly large pool of the unemployed youth, or taking part in the Government's Manpower Services Commission's training schemes (Ferri, Bynner, & Wadsworth, 2003). Beck (1986) argues that global shifts driven by technological change required young adults to find their ways without the traditionally set employment routes based on class, gender, ethnicity and place, so that "for a generation born in the 1970s the routes to adulthood were becoming more *individualised*" (Bynner et al. 1997, p.2). Under this dispersive and competitive labour market, those who did not have and did not manage to secure the necessary level of human and social capital found themselves at the margins of society. Together with global technological developments, British society went through a cultural and political shift centred on reforms of the welfare state. After the victory of the Conservative Party in 1979 and for the next eighteen years of Conservative government, the UK's welfare systems were subjected to privatisation. This social context reflected new processes of the structuration of individual identity and politics, which were also increasingly shaped by the spread of the individualist consumerism promoted by the mass media. Famously in 1987, the then UK Prime Minister Margaret Thatcher said: "There is no such thing as society. There are individual men and women, and there are families"¹, which seemed to capture the individualist *Zeitgeist*. Similarly, mechanisms of formation of political attitudes traditionally based on party allegiances passed on from parents to children were said to have been replaced by transient issue-based politics, the influence of peers and increasing cynicism towards the political institutions, with the consequent weakening of socio-economic background cleavages in the definition of political identity (Banks et al., 1992). This shift reflects the fragmentation of party-line-based politics, in favour of a 'new politics' defined by grassroots movements such as feminism, environmentalism and more general human rights activism, which called for a new way of studying political participation (Marsh, 1979).

¹ Interview of Margaret Thatcher by Douglas Keay, *Woman's Own*, 31 October 1987, pp. 8–10.

The scope of the present work is focused particularly on examining how attitudes towards authority have evolved over time for the 1970 birth cohort in Britain, as well as how gender, educational qualification, occupational social class, religious beliefs and interest in politics relate to these same attitudes over time for this cohort.

Our use of a panel study allows for the analysis of individual-level change in attitudes toward authority. Contrary to this approach, the widely-used aggregate, repeated cross-sections approach is suitable to only enquire into change over time for population groups (Lynn, 2009). Our analysis aims to fill this gap.

Methodology

Data and measures

We used data from the 1970 British Cohort Study (BCS70) (see Plewis et al. 2004 for thorough description) to evaluate intra-individual development in attitudes towards legal authority. The BCS70 is a longitudinal birth cohort study that follows all babies born in Great Britain in a single week in 1970 throughout their lifetime.

Cohort members were asked to respond to four questions related to attitudes to authority in three sweeps of the BCS70: 1996 (n = 9,003), 2000 (n = 11,261) and 2012 (n = 9,842). The wording of the four items was: “The law should be obeyed, even if a particular law is wrong” (Obey the Law); “Censorship of film and magazines is necessary to uphold moral standards” (Censorship); “For some crimes the death penalty is the most appropriate sentence” (Death Penalty); “People who break the law should be given stiffer sentences” (Stiffer Sentences – only asked in 1996 and 2000). All items were measured on five-point Likert scales, and were coded so that higher values represented more liberal opinions.

The sample distribution of the responses to these items across the three time points is shown in Table 1.

Table 1 Distribution of responses to Attitudes to legal authority items by Sweep, Valid cases and Total sample

Item and sweep	Answer category (% over Valid cases)					Valid cases	Total
	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree		
Obey the Law							
1996	8.10	48.47	23.21	17.48	2.74	8832	9003
2000	11.47	38.93	22.67	23.59	3.35	11112	11261
2012	6.32	43.19	30.12	18.08	2.29	8605	9841
Censorship							
1996	13.30	49.53	13.79	18.50	4.88	8905	9003
2000	11.63	41.96	22.76	17.77	5.88	11106	11261
2012	19.25	45.16	21.09	10.75	3.75	8643	9841
Death penalty							
1996	37.61	31.07	11.95	9.42	9.95	8860	9003
2000	32.56	36.00	12.11	11.83	7.50	11107	11261
2012	27.04	36.28	12.03	12.96	11.69	8621	9841
Stiffer sentences							
1996	30.24	42.00	20.53	6.26	0.98	8901	9003
2000	31.94	38.21	24.40	4.80	0.65	11112	11261

Table 1 shows a majority of the CMs opting for the response categories Strongly Agree and Agree, with a minimum of 49.51% for the item Obey the Law in 2012 to a maximum of 72.24% for Stiffer Sentences in 1996.

Table 2 shows the descriptive statistics for the covariates considered in this study and which will be used in the next modelling steps.

Methods

The aim of our analysis was to model the patterns of change/stability in the response variables. We had three goals: First, to evaluate the latent dimensionality of the four items, to see if they could be regarded as indicators of a single 'authoritarian attitudes' construct or whether they reflected a more complicated set of related attitudes. Second, we wanted

to then model the evolution of these attitudes within individuals over time. Third, we added covariates as predictors of these latent attitudes and their development.

Table 2 Descriptive statistics for covariates across the three waves

Covariate	1996	2000	2012
Sweep Total, N	9,003	11,261	9,841
Gender, N	9,003	11,261	9,841
% Female	54.40	51.40	52.00
% Male	45.60	48.60	48.00
Education, N	8,399	11,226	9,834
% Lower than NVQ2	23.21	21.87	19.42
% NVQ2 and above	76.69	78.13	80.58
Occupational Class, N	6,792	9,071	8,269
% Unskilled/Skilled Manual	33.33	33.92	30.79
% Non-Manual	66.67	66.08	69.21
Religion*, N	8,722	11,195	8,550
% Christian and other religions	37.41	74.10	50.23
% Non-religious	62.59	25.90	49.77
Interest in Politics, N	8956	11192	8676
Mean	1.18	1.08	1.29
SD	0.81	0.87	0.86

Notes: *= Item wording varied across sweeps; respectively, in 1996: “Do you belong to a religion?”; in 2000: “What is your religion?” and in 2012: “Do you now see yourself as belonging to any particular religion?”

Latent dimensionality

We used Item Response Theory (IRT) models (Moustaki, Jöreskog, & Mavridis, 2004) to identify the latent dimensionality in the data. IRT is similar to conventional factor analysis (Lohelin, 1987) in that it posits one or more continuous latent variables as unobserved causes of the observed pattern of item responses—however, it does not assume continuous and normally distributed observed variables as it takes into account the ordinal nature of the responses. Specifically, we used two-parameter, normal ogive IRT models (Lord, 1965). With just three of the four questionnaire items available for the three time points, we

considered just two types of structure for the assumed latent “attitudes to legal authority” trait: a) all items reflect a single trait; b) each item reflects a separate attitude.

Change over time

We used latent growth curve models (LGCM) (Bollen & Curran, 2006) to model the intra-individual trajectories of attitude change as well as the between-individual differences in these trajectories. LGCMs posit latent intercept and slope growth factors as the latent causes of observed trajectories of the responses over time. Each individual is hypothesised to be located at a particular point on the latent intercept and slope distributions, which together define the initial level of his or her attitude in 1996 (intercept) and rate of change over time (slope). An individual’s position on the latent intercept and slope does not itself change over time, therefore LGCMs can be interpreted as modelling stable, trait-like influences on the level and change in attitudes. We also used an extension to the LGCM framework, whereby the level of the observed attitude at one time point can depend directly on the level of the same attitude at the previous time point. This extended model, the Autoregressive Latent Trajectory (ALT) model (Bollen & Zimmer, 2010), broadens the ‘trait’ interpretation of the LGCM to include time-specific ‘state’ influences as well. As with the IRT models, no restrictive assumptions of normality are made for the observed indicators in these LGCMs and ALTs, which are assumed to have only an ordinal distribution.

Predictors of attitudes

The final models that we fitted and reported here included the variables shown in Table 2 as predictors of the latent growth factors developed in the previous modelling step.

Model estimation. All analyses were run using Mplus version 7.2 (Muthén & Muthén, 1998). Models were estimated using Weighted Least Squares (WLSMV). In order to minimise issues of missing data when using the WLSMV estimator, we supplemented model estimation using Multiple Imputation (Asparouhov & Muthen, 2010).

Model comparison and evaluation. The adequacy of the models' global fit to the data was assessed using model fit indices as suggested by Hu and Bentler (1999). The Comparative Fit index (CFI) and Tucker-Lewis index (TLI) were used, with a cut off value of at least 0.95 taken to indicate close fit. The Root-Mean-Square Error of Approximation (RMSEA) was used with a threshold value of 0.06. We also assessed local model fit using measures of R-square.

Results

Latent dimensionality. Table 3 presents the goodness-of-fit statistics and factor loadings of the unidimensional IRT models for each sweep modelled separately. Despite marginally adequate CFI, the other model fit indices in Table 3 indicate a lack of close fit between model and data. The factor loadings highlight the importance of the variable 'Stiffer Sentences' in the definition of the scale of attitude to authority for the years 1996 (0.823) and 2000 (0.855); however, this variable was not measured in 2012, when 'Censorship' (0.684) played a main role, instead. For the first two sweeps of data the items 'Death Penalty' and 'Stiffer Sentences' seem to characterise a first dimension of attitudes towards authority, with higher estimated loadings, whilst the role played by the other two items is not as relevant. However, when the item 'Stiffer Sentences' was abandoned in 2012, both 'Obey the Law' and 'Death Penalty' contribute very weakly to the measurement of the latent construct, with loading values equal to 0.235 and 0.242, respectively. Overall, there is little evidence at the cross-sectional level to support the hypothesis of a single latent dimension of attitudes towards authority in any sweep.

Attitude change over time. Given that the cross-sectional evidence for a unidimensional measure of the latent attitude was weak, we posited a less restrictive model that allowed each of the attitude questions to change individually over time. In this model there were therefore no latent attitude variables, but rather four parallel latent growth processes, one for each observed attitude. To parameterize these models, measurement invariance over time was assumed, as recommended by Muthén & Muthén (1998). Fit indices for this model were good, as shown in Table 4 (Model A).

Table 3 Goodness-of-fit statistics, estimated standardised factor loadings with their standard errors (S.E.) for the unidimensional scale of attitudes to authority, for the sweeps 1996, 2000 and 2012, British Cohort Study 1970

Goodness of fit	Sweep		
	1996	2000	2012
<i>CFI</i>	0.951	0.949	- ^a
<i>TLI</i>	0.854	0.847	- ^a
<i>RMSEA</i>	0.114	0.109	- ^a
<i>(90% C.I.)</i>	(0.102-0.127)	(0.098-0.120)	
<i>Number of free parameters</i>	20	20	15
Factor loadings (S.E.)			
<i>Obey the Law</i>	0.368 (0.012)	0.365 (0.011)	0.235 (0.026)
<i>Death Penalty</i>	0.578 (0.013)	0.497 (0.012)	0.242 (0.026)
<i>Censorship</i>	0.347 (0.012)	0.330 (0.011)	0.684 (0.068)
<i>Stiffer Sentences</i>	0.823 (0.015)	0.855 (0.016)	- ^b
N	8,982	11,115	8,716

Notes: CFI=Comparative Fit index; TLI=Tucker-Lewis index; RMSEA=Root Mean Square Error of Approximation; C.I.=confidence interval; d.f.=degrees of freedom; S.E.=standard error; ^a= values not available as the model does not feature 'Stiffer Sentences' for the 2012 sweep (this is a 'just identified' model with no degrees of freedom); ^b=item not available for this sweep.

Form of change over time. The form of the change over time is captured by the latent growth factors, the estimates of which are also shown in Table 4, Model A.

The latent growth slope factors capture the average rate of linear change (mean) and heterogeneity in this rate (variance) of the attitude trajectories over time. Only three slopes were estimated because at least three measurement occasions are required to statistically identify them, and only two occasions were available for 'Stiffer Sentences'. All the latent slope means had statistically significant but small absolute values, reflecting only small changes in attitudes per year. For 'Obey the Law' and 'Death Penalty' this net change was positive, implying a liberalisation of these attitudes over time, at roughly twice the rate for 'Death Penalty' compared to 'Obey the Law'. The latent slope mean for 'Censorship' was negative, implying that this attitude was on average becoming less liberal over time, at a faster rate than the rate of change of 'Death Penalty'.

Table 4 Model fit indices and estimated parameters for the Latent Growth Curve Model (LGCM, Model A) and the Hybrid LGCM/Autoregressive Latent Trajectory (ALT) model (B).

		Model A: Latent Growth Curve Model		Model B: Hybrid Autoregressive Latent Trajectory	
CFI		0.970		0.975	
TLI		0.968		0.972	
RMSEA		0.046		0.043	
(90% C.I.)		(0.044 - 0.048)		(0.041 - 0.046)	
Item		Latent Growth Curve Parameters			
		Intercept	Slope	Intercept	Slope
Obeys the Law	Mean	0	0.005	0	0.008
	(SE)	(- ^d)	(0.001)	(- ^d)	(0.001)
	Variance	0.634	0.002	1.729	0.006
	(SE)	(0.014)	(0.000)	(0.104)	(0.001)
Censorship	Mean	0	-0.015	0	-0.025
	(SE)	(- ^d)	(0.001)	(- ^d)	(0.002)
	Variance	0.650	0.001	1.853	0.003
	(SE)	(0.012)	(0.000)	(0.100)	(0.001)
Death Penalty	Mean	0	0.011	0	0
	(SE)	(- ^d)	(0.001)	(- ^d)	(- ^d)
	Variance	0.689	0	12.045	0
	(SE)	(0.007)	(- ^d)	(0.757)	(- ^d)
Stiffer Sentences	Mean	0	- ^e	0	- ^d
	(SE)	(- ^d)		(- ^d)	
	Variance	0.587	- ^d	1.398	- ^d
	(SE)	(0.009)		(0.053)	
Item		Model B: Autoregressive parameters			
Death Penalty					
2000 → 2012	Est (SE)	0.890 (0.012)			
1996 → 2010	Est (SE)	-0.229 (0.014)			

Notes: N=13,217; CFI=Comparative Fit index; TLI=Tucker-Lewis index; RMSEA=Root Mean Square Error of Approximation; C.I.=confidence interval; d.f.=degrees of freedom; Est.=estimate; S.E.=standard errors; ^d= Parameters constrained for model identification.

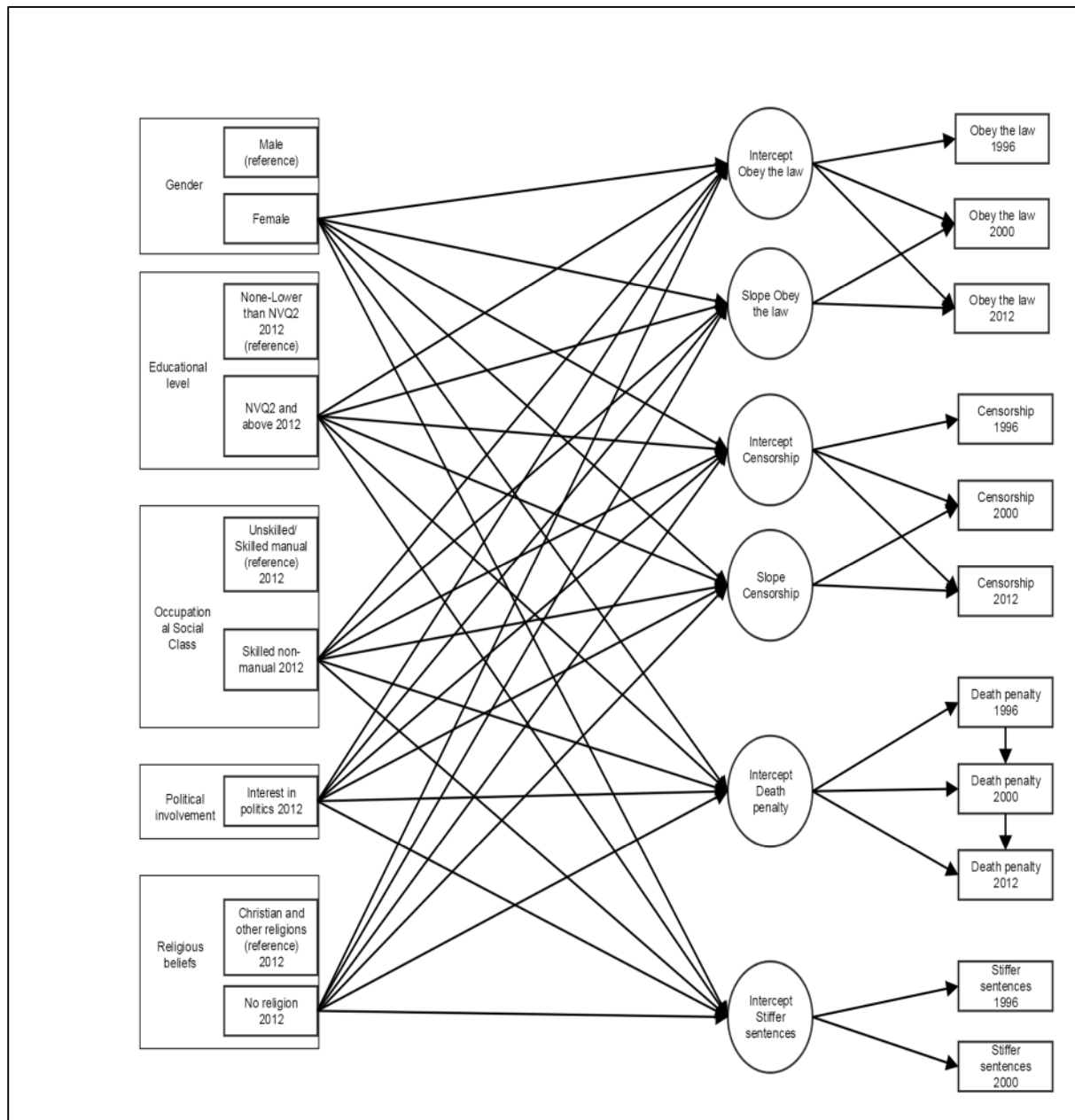
The variance of individual trajectories around these average slope values was significant for 'Obeys the Law' and 'Censorship' but the variance of the 'Death Penalty' was not significant so we fixed the slope variance for this growth factor to zero.

State-based change. The LGCM represented change over time as due to stable characteristics of individuals with regard to their propensity to change, i.e. trait-based

differences. Despite the overall adequacy of the global model fit, the local, item-based fit statistics (item R-squares and residual covariances) showed that this specification did not appear to adequately represent change in the 'Death Penalty' item; we, therefore, amended the LGCM to allow for a different driver of change in this item: State-Dependence. We added a simple autoregressive structure for this item, regressing each observation on the previous time point, resulting in an Autoregressive Latent Trajectory model (Bollen & Zimmer, 2010), based on probit regressions.

Model B in Table 4 shows the results for this hybrid LGCM/ALT. In terms of global model fit, the hybrid ALT model had marginally better fit than the previous LGCM. Comparing the latent growth parameters across Model A and Model B in Table 4, the variances of all the growth factors have increased, as well as the mean slopes; this indicates that Model B reflects larger inter-individual differences both for the initial levels of the attitude items as well as for their rate of change. Moreover, it shows higher values of the rate of change towards increasing liberal attitude for 'Obey the Law' and 'Death Penalty', and decreasing liberal attitude for 'Censorship'. Hence, due to the better fit of Model B to our data and the larger R-square values for 'Death Penalty', we retained this for further analyses with covariates. The LGCM/ALT results have two main implications: first, although the amount of change is on average small per year, the cumulative changes across the 18 years of the data are clearly important; second, the changes are different for different items, with trait-based linear change occurring for attitudes relating to social conformity ('Obey the Law' and 'Censorship') and state-dependent change occurring for attitudes towards 'Death Penalty'.

Figure 1 Theoretical conditional latent growth curve model for the attitudes to authority items from 1996 to 2012, the British Cohort Study 1970



Note: Intercept and slope growth factors are correlated with each other and across items; the curved arrows representing such correlations have been excluded from Figure to avoid clutter.

Predictors of change. For our final model we added predictors of the latent growth factors. These comprised dummy variables for the socio-demographic characteristics reported in Table 2, with male, no education/NVQ-equivalent level 1, unskilled/skilled-manual, and Christian/Other religions as the reference categories. The final predictor was a continuous measure of interest in politics (mean-centred). Where these measures were available for more than one sweep, i.e. where the predictor itself was time-varying, we elected to use the latest measure available².

Figure 1 shows a path diagram of the final model. Circles denote the latent growth factors, boxes the observed variables—predictors on the left and latent variable indicators on the right. The covariates predict both the mean level (latent intercepts) and, for ‘Obey the Law’ and ‘Censorship’ the rate of change over time (latent slopes).

The model was estimated via Multiple Imputation (MI) of 10 imputed data sets, using a Markov-Chain-Monte Carlo (MCMC) algorithm with 100 iterations, based on Gibbs sampling, and the final number of cases equals 10676. The model was a good fit to the data (RMSEA = 0.031, CFI = 0.986, and TLI = 0.980). Table 5 shows the regressions of the latent growth factors on covariates.

In Table 5, Panel (A) shows the conditional means of the latent growth factors, and the proportions of variance in these growth factors accounted for by the predictors. Compared to the unconditional LGCM/ALT model in the previous section (Table 4), the rate of change in latent attitudes towards Obey the law and Censorship were slightly more extreme (i.e. further from zero) in this model. Looking at the R-square values in Table 5 we can see that the covariates’ predictive power was generally much larger for the intercept growth factors, varying from 7.8% for Stiffer sentences to 17% for Censorship, compared to the slope factors, where R-square was 1.6% for Obey the Law and 4.2% for Censorship (the predictors

² We also ran models using values from 2000 and 1996, with the same substantive findings.

were not used for the slope of Death Penalty, which had its variance fixed to zero (as per the previous model) and so had no variance to be predicted).

As this is a conditional model, i.e. the latent growth factors are regressed upon covariates, this is interpreted to mean that the individuals with the baseline categories for the predictors (i.e. religious males in low skilled occupations with few qualifications and an average level of interest in politics) tended to become even more liberal with regard to obeying the law, however even more conservative with regard to Censorship over time, compared to the whole sample.

The coefficients in Panel (B) of Table 5 show that the most consistent predictor of attitudes was Interest in politics, which was positively related with more liberal views in the first sweep (i.e. positive coefficients for the latent intercepts), but also with a trend towards becoming more conservative over time (i.e. negative coefficients for the latent slopes) regarding the two items for which the latent slopes could be computed: Obey the Law and Censorship. Being non-religious had a similar pattern of effects, associated with more liberal attitudes in 1996, but related to increasing conservatism over time, significantly only for Obey the Law.

Non-manual occupation was associated with more conservative attitudes to 'Obey the Law' but more liberal attitudes towards the other items, with no significant effects on trends over time. Greater education was associated significantly with more liberal attitudes towards the Death Penalty and Stiffer Sentences, but was also related to a move towards conservatism of views towards Censorship over time.

Females had more conservative views on Censorship and Stiffer Sentences in 1996 and more liberal views on the Death Penalty, but female's views became more liberal over time compared to males on Censorship.

Table 5 Conditional estimates for the regression slopes of the growth factors on observed predictor variables

	Obey the Law		Censorship		Death Penalty	Stiffer Sentences
	I	S	I	S	I	I
Panel (A)						
Mean(unstan.)	0.000 ^a	0.010	0.000 ^a	-0.031	0.000 ^a	0.000 ^a
(S. E.)		0.004		0.005		
Panel (B)						
Predictors	St. Est	St. Est	St. Est	St. Est	St. Est	St. Est
Female	-0.025	-0.017	-0.306	0.163	0.110	-0.054
(S. E.)	0.037	0.003	0.046	0.003	0.079	0.033
NVQ 2 and Above	0.006	0.017	0.025	-0.055	0.096	0.038
(S. E.)	0.058	0.004	0.061	0.004	0.091	0.044
Non-manual Occupation	-0.074	0.037	0.063	0.018	0.131	0.049
(S. E.)	0.050	0.004	0.045	0.003	0.097	0.050
Interest in Politics	0.145	-0.078	0.122	-0.071	0.273	0.224
(S. E.)	0.028	0.002	0.025	0.002	0.055	0.021
Non-religious	0.189	-0.096	0.178	0.000	0.024	0.106
(S. E.)	0.050	0.003	0.053	0.004	0.072	0.037
R-square	0.061	0.016	0.170	0.042	0.131	0.078

Note: N = 10,676. Unstan. = unstandardized; Bold = significant at $p < 0.05$; ^a = parameter fixed to zero to identify the model; I=intercept; S=slope; St. Est.=standardised estimate; S. E.= standard errors for *non-standardised* coefficients. Baseline categories for covariates were Male, NVQ1 and below, Manual or Unskilled Occupation and Religious.

The autoregressive parameters for the conditional model, i.e. the regression of the observed Death Penalty items on one another, were weaker—though still significant—compared to the previous unconditional model (as shown in Table 5): for 2012 on 2000 it was 0.388, down from 0.890 in the unconditional model, and for 2000 on 1996 it was -0.086, up from -0.229 in the unconditional model. These differences implied that some of

the reactive, state-based changes in attitudes towards the death penalty were heterogeneous in their effects across groups defined by the covariates.

Discussion

This study aimed to examine change of attitudes towards legal authority over time from an individual perspective, in order to assess whether the hypotheses and findings available from research based on cross-sectional aggregate data were confirmed at the micro-level of analysis.

Four items (Obey the Law, Censorship, Stiffer Sentences and Death Penalty) were used to represent the facet of authoritarianism discussed by Duckitt (2001; 2010). However, our analysis showed little support for the hypothesis that the four items are indicators of a unidimensional latent construct. Thus, we opted for a model of four parallel growth processes that considered the items of attitudes to legal authority as specific measures of issue-based attitudes to authority.

The growth models showed linear change on average from 1996 to 2012 towards more liberal opinions regarding obedience to the law and the death penalty, and towards more authoritarian opinions on censorship of film and magazines. The model of the Death Penalty item was enhanced by adding an autoregressive component to the simple, linear trends that were adequate for the other items, and this allowed for an initial trend towards more authoritarian stances from 1996 to 2000, which thereafter moved towards more liberal stances than the initial levels at age 26.

These findings support the hypothesis of attitudes as relatively stable traits over the life course, although affected by individual circumstances and life experiences (Banaji & Heiphetz, 2010; Jost, 2006). One surprising result is the increasing level of conservatism represented by the opinion on censorship; a result that might be a period effect related to the advent of the internet (Banks et al., 1992; Wiggins & Bynner, 1993; Wiggins, Bynner, & Parsons, 1997) and of the consequent pervasiveness of variegated sources and types of

information, or perhaps an age effect arising from concerns of parenthood (Depken II, 2006).

With regard to predictors of change, being female was associated with more liberal views on the death penalty, and more conservative views on censorship and stiffening sentences; however, females over time also become more liberal than males regarding censorship issues. These differences confirm the relevance of gender in the cultural definition of conservatism (Pratto et al., 1997; Whitley & Aegisdottir, 2000), suggesting the need for further analyses at the item level to identify how different dimensions of authoritarianism relate to gender.

Cohort members with higher levels of education tended towards more liberal opinions on the death penalty and sentencing, whilst their attitude to censorship tended to become more authoritarian. Occupational social class only had a significant effect on the initial levels of attitudes, with people in non-manual occupations being more liberal on censorship, the death penalty and sentencing (Billig, 1984; Lipset, 1960; Napier & Jost, 2008; Paterson, 2008), but surprisingly more authoritarian on obeying the law; this specific result warrants further investigation. It may reflect a cohort-specific phenomenon, e.g. the effect of growing up in the 1980s or the socio-economic context of the mid 1990s, and comparison with different cohorts should shed some light on this.

Interest in politics is positively associated with more liberal views across the four items (Denny & Doyle, 2008; Duriez, Van Hiel, & Kossowska, 2005), as well as with a slower change over time regarding obeying the law and censorship. Finally, in agreement with previous research, religious differences are significant, with those defining themselves as non-religious being more liberal across the four measures (Altemeyer & Hunsberger, 1992; Norris & Inglehart, 2004); moreover, our analysis highlights that people who declare themselves to be religious become more liberal at a faster pace than the religious, indicating a more significant change towards more liberal views amongst religious people.

The findings relating to politics may have roots that run deeper than just a topic of intellectual interest. For example, authoritarianism has been cast by some as a personality

trait, (Costa & McCrae, 1988), and in some studies is considered as a moderator in the relationship between educational level and political attitudes (Osborne & Sibley, 2015). Another relevant research strand on covariates of socio-political attitudes looks at the effect of intelligence and ability measures on liberalism (Deary, Batty, & Gale, 2008; Flouri, 2004; Schoon et al., 2010). Hence, a potential development would be to introduce personality and/or intelligence measures, as well as mediation analysis into the modelling framework presented here.

There are some technical limitations in this study. First, the availability of three measurement occasions for three of the four items only together with a relatively small number of items compared to socio-psychological research based on more elaborate measures of authoritarianism (Altemeyer, 1981; Wilson, 1975), might raise some objections. However our choice to carry out the analysis on single items has been amply justified, and has allowed a powerful analysis of change. Second, the availability of only three time points allows testing of only linear change. Further measurement points for the outcomes are needed in order to better assess the shape of change. Moreover, model estimates were derived from data sets generated through MI, which may lead to concerns of bias related to the violation of the MAR assumption. However, to test sensitivity the same models were run also on complete cases, and the only differences of note were some larger standard errors for the estimates derived from the latter, suggesting negligible bias due to the imputation.

Finally, previous studies have shown that compared to the previous British cohort study—the National Child Development Study 1958 (NCDS)—the 1970 cohort is more polarised in its political attitudes (Bynner et al., 1997; Plewis et al., 2004; Wiggins et al., 1997). Moreover, results from the 1996 sweep of the BCS70 suggest that this cohort showed larger support for gender equality than the 1958 cohort; but less liberal opinions than the 1958 cohort on law and order issues, the death penalty and censorship (Ferri et al., 2003). Further developments of the work presented here may look into cross-cohort comparison based on the application of the theoretical models proposed here to the previous (NCDS) and the latest birth cohort (the Millennium Cohort Study, when this cohort members will reach

adulthood), as to assess differences in both the aggregate- and the individual-level processes of change in socio-political attitudes.

Concluding remarks

Political psychology and related disciplines seemed, in the past, to weaken in line with the end-of-ideology hypothesis developed by Converse (1964), which claimed that ordinary citizens' political attitudes lacked over-time consistency and coherence, hence undermining the hypothesis of attitudes as schemata, as contrarily postulated by those authors interested in attitude-behaviour relationships (Allport, 1935). Recent historical events such as 9/11, the Iraq war, the resurgence of the far-right Parties in the West, as well as environmental policy controversies, have rejuvenated interest in socio-political attitudes and authoritarianism in particular, with methodological developments able to reinstate the importance of research programmes on individual differences in political orientation. The analyses reported here give support to the hypotheses of life course stability of attitudes to legal authority from early to later adulthood, as well as providing evidence of important social cleavages.

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