

How three Narratives of Modernity justify Economic Inequality

Larsen, Christian Albrekt

Published in:
Acta Sociologica

DOI (link to publication from Publisher):
[10.1177/0001699315622801](https://doi.org/10.1177/0001699315622801)

Publication date:
2016

Document Version
Accepted author manuscript, peer reviewed version

[Link to publication from Aalborg University](#)

Citation for published version (APA):
Larsen, C. A. (2016). How three Narratives of Modernity justify Economic Inequality. *Acta Sociologica*, 59(2), 93-111. <https://doi.org/10.1177/0001699315622801>

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal -

Take down policy

If you believe that this document breaches copyright please contact us at vbn@aub.aau.dk providing details, and we will remove access to the work immediately and investigate your claim.

How three narratives of modernity justify economic inequality

Christian Albrekt Larsen, Department of Political Science, Aalborg University, Denmark

Forthcoming in 2016 in Acta Sociologica

Abstract

The acceptance of income differences varies across countries. This article suggests belief in three narratives of modernity to account for this: the “tunnel effect”, related to perceptions of generational mobility; the “procedural justice effect”, related to the perceived fairness in the process of getting ahead; and the “middle-class effect”, related to perceptions of the social structure of society. The importance of the suggested narratives is tested by means of the ISSP 2009 module, which includes 38 countries. The finding is that belief in the three narratives can account for a considerable part of the cross-national variation. Beliefs in procedural justice and the existence of a middle class society clearly go together with high acceptance of current income differences. The “tunnel effect” is more complex. In general, belief in generational mobility goes together with acceptance of current income differences. But personal experience of such upward social mobility actually lower acceptance of current income differences, especially if overall generational mobility in society is believed to be backward. The framework explains most country-cases, which points to the existence of general patterns. But the models also indicate that the Philippines, and to a lesser extent the US and France, are special cases.

Keyword

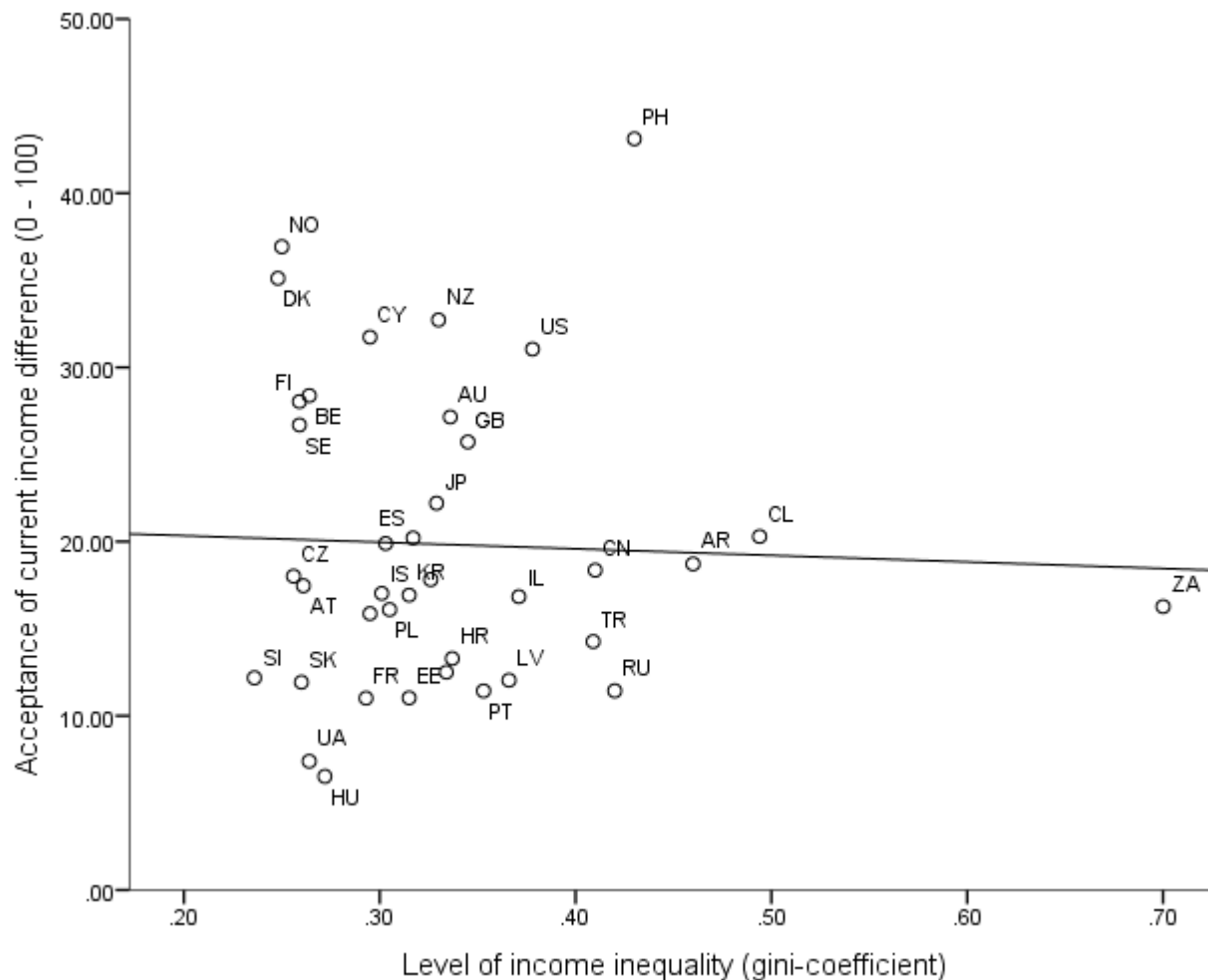
Income inequality, tunnel effect, procedural justice, middle class, American exceptionalism.

Introduction

Economic inequality within countries has increased within the last three decades. The increased inequality in the US, UK and other OECD countries is well-documented (OECD, 2011; Piketty, 2014), and new data sources reveal it is a global phenomenon (e.g. Milanovic, 2011). The consequences of this development are widely discussed (e.g. Wilkinson and Pickett, 2010) and one of the central questions is how the masses will react. The classic Meltzer and Richard model suggests public discontent, the formation of social movements such as “Occupy Wall Street”, and potential revolutions (Meltzer and Richard, 1981), a fear that e.g. led China to withhold estimates of gini-coefficients when inequality surpassed the US level (Riskin, 2014). Many regime changes have indeed been rooted in economic inequalities, but there are as many exceptions to the rule (Haggard and Kaufman, 2012). That public discontent does not transform itself into regime changes can be given multiple explanations. More puzzling is the fact that one cannot even find a clear link between the level of inequality and public discontent. As a small prelude Figure 1 shows the level of income inequality (gini-coefficients) in the 38 countries from the 2009 International Social Survey Program (ISSP) on x-axis. At the one extreme we find equal countries such as e.g. Denmark (DK), Norway (NO) and Slovenia (SI). At the other we find unequal countries such as South Africa (ZA), Chile (CL) and Argentina (AR) (gini-coefficients provided by OECD, Eurostat, World Bank). On the y-axis is shown the public acceptance of current income differences on a 0–100 scale. The index is based on the aggregation of responses to the following statement: “Income differences in UK are too high” [UK replaced with relevant country]. If a country scores 0, it means that every respondent in the country “agreed strongly” with the statement. If the country scores 100, it means that everybody “strongly disagreed” with the statement (“don’t know” answers were excluded).ⁱ Thus, a higher score means a higher (on average) acceptance of current income differences. In practice, most people in most countries tend to “agree” with the

statement. This supports the proposition that few citizens are able to ignore income differences. But as demonstrated in Figure 1, there is 1) considerable variation between the countries and 2) no relationship between the actual income differences and the perception of current income differences being too high (in Figure 1, the correlation is as low as -0.04). National studies have also failed to establish any clear link between changes in level of inequality over time and changes in discontent (McCall and Kenworthy, 2009). This is a classic puzzle and has been the point of departure of much comparative empirical research (Janmaat, 2013). Why some publics tolerate income differences better than other publics is also the question this article sets out to explore.

Figure 1: Actual income distribution (gini-coefficients) and acceptance of current income differences (lowest 0 – highest 100).



Source: ISSP 2009. Gini-coefficients (OECD, Eurostat and World Bank).

Country marks: Argentina (AR), Australia (AU), Austria (AT), Belgium (BE), Bulgaria (BG), Chile (CL), China (CH), Taiwan (TW), Croatia (HR), Cyprus (CY), Czech R. (CZ), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Germany (GE), Hungary (HU), Iceland (IS), Israel (IL), Japan (JP), South Korea (KR), Latvia (LV), New Zealand (NZ), Norway (NO), Philippines (PH), Poland (PL), Portugal (PT), Russia (RU), Slovak Republic (SK), Slovenia (SI), South Africa (ZA), Spain (ES), Sweden (SE), Switzerland (CH), Turkey (TR), Ukraine (UA), Great Britain (GB), United States (US).

The article is divided into eight sections. The first section presents previous research and highlights the distinction between a cultural and modernist tradition. The second section pushes the research field forward by suggesting the importance of three narratives connected with modernity. The following sections test these propositions by means of the latest wave of ISSP data on social inequality. Section three introduces this data and the applied methods. Section four provides descriptive statistics, while section five provides effect sizes and significance tests. Section six elaborates on the complex effect from generational mobility while section seven discusses the limits of the suggested approach by studying the presence of deviant cases. Finally, section eight summarizes the findings and discusses the results.

Cultural versus a modernist tradition to cross-national differences

Following Janmaat's review (2013), comparative studies of acceptance of economic inequality can be divided into a cultural and modernist tradition. In the former tradition, the absence of any clear link between the level of inequality and discontent with economic inequality has led researchers to highlight the presence of national peculiarities which make some publics more or less tolerant of economic inequality. The most dominant theme has been the presence or absence of American "exceptionalism" (Kelley and Evans, 1993; Lipset, 1997; Stolle and Rochon, 1999). Compared to the eleven other countries in the International Social Justice Survey fielded in 1991 (Kluegel and Miyano, 1995), the US did indeed stand out as an exceptional case. A number of follow-up studies based on ISSP data from 1999 also continue to focus on American exceptionalism – but often with an argument that the US is not so exceptional (e.g. Osberg and Smeeding, 2006). As argued by Sachweh (2012), the sparse,

primarily American and French, qualitative research has also focused on American exceptionalism, e.g. Lamont's description of American workers making harsher judgments of the poor than French workers (2000). Another dominant theme has been whether the welfare regime as suggested by Esping-Andersen (1990) influences – or at least correlates – with acceptance of income inequality. Svallfors (1997) and others (e.g. Kjærsgård, 2012) have provided evidence that, as measured by attitudes to wage differences alone, citizens of social democratic welfare regimes are the most egalitarian, while no clear distinction is found between liberal and conservative welfare regimes (e.g. Larsen, 2006). Such findings give leverage to the old idea of the presence of a passion of equality in the Nordic countries (Graubard, 1986). A final example of the cultural approach is Whyte's (2010) study of the Chinese' acceptance of current income differences; a number of passages argue that the Chinese' unique negative experience with Mao's attempt to create total equality fosters acceptance of the current income differences.

The main shortcoming of the cultural approach is that it often fails to document that a given country really is unique. And this shortcoming becomes more and more evident as the number of countries available in international surveys increases. The ISSP data from 2009 (see Figure 1) do indicate relative high acceptance of income differences in the US. But the acceptance is not extremely high. The Philippines (PH) has both higher economic inequality and a higher acceptance of current income differences. One could also say that higher acceptance of income differences can be found in South Africa (ZA). The acceptance of current income differences in South Africa is lower than in the US, but its more extreme level of income differences should be taken into account. Thus, from simple summary statistics, one cannot conclude that the US is exceptional. The Nordic cultural uniqueness can also be questioned. As illustrated in Figure 1, there is actually an extraordinarily high acceptance of current income differences particularly in Denmark (DK) and Norway (NO) which have not been

addressed in previous studies (often the focus has been on Sweden, where tolerance of income difference is lower). In fact, Norwegians and Danes have higher acceptance of current income differences than have Americans. This does not mean that Norwegians and Danes accept higher income differences than Americans in absolute terms. But even taking the actual income differences into account, Norway and Denmark are still among the countries with an extraordinary high acceptance of income differences. As for China, there are other developing countries such as Chile, Argentina, South Africa and the Philippines which without a cultural revolution have even higher acceptance of current income differences.

In the modernist tradition, the absence of any clear link between the level of inequality and discontent with economic inequality is primarily a matter of countries being at different stages in the modernization process (Inglehart and Welzel, 2005). The basic argument is that acceptance of income differences will increase as free markets and democracy generate prosperity and justice. Empirically, the main focus has been whether acceptance of income differences in Eastern Europe has converged with that of Western Europe. As predicted by the modernist approach, the fall of communism was followed by higher acceptance of income differences (e.g. Gijssberts, 2002). However, the ISSP social inequality module from 1999 demonstrated that this was not a lasting effect; free markets and democracy were not a guarantee for acceptance of income inequality (see Janmaat, 2013, for an overview). And the same pattern can be found in the 2009 data. The lowest acceptance of current income differences in 2009 were found in Hungary (HU), the Ukraine (UA), Slovenia (SI) and the Slovak Republic (SK) (see Figure 1). Despite fairly low income differences – by comparative standards – the acceptance of the income differences is low. Slovenia for example has a level of income

inequality (gini 0.24) around the level found in Denmark and Norway (gini 0.25), but comparatively many more of its citizens “agree” with the statement that current income differences are too high.

The main shortcoming of the modernist approach is the deterministic effects assigned by it to free market economy and democracy. Maybe free markets and democracy do create more affluent and just societies, but in order to influence public opinion such qualities need to be perceived. And this is not a trivial process. Diagnosing the state of society is a cultural and political battlefield where the public are constantly exposed to positive and negative assessments that interact with their own experiences. Following this line of reasoning, this article focuses on the importance of public beliefs. More concretely, it suggests that belief in three narratives about modernity is pivotal to explaining cross-national differences in acceptance of income inequality. This could be seen as a middle-ground between the cultural tradition, which highlights national cultural peculiarities, and the modernist tradition, which highlights general patterns related to free markets and democracy.

Three central narratives of modernity

Using the term narrative, the article positions itself in the constructivist camp and shares its interest in how ordinary citizens make sense of and justify society (e.g. Boltanski and Thévenot, 2006). The suggestion is that public beliefs in three narratives connected to free market economy and democracy is a fruitful way to understand the cross-national differences. In the American and French revolutions, and the liberalism and socialism that followed, one finds some of the most classic stories about modernity (sometimes labelled ‘master narrative’ by postmodernists). It is stories about progress, it is stories about justice and equality and it is stories about a less class divided society. The aim of the article is to

pinpoint some of the pivotal narratives and demonstrate how beliefs in these help to explain the cross-national difference in acceptance of current income differences.

The first suggested pivotal narrative of modernity is the idea of society being “on the move forwards”. This kind of optimism is found both in liberal and socialist thinking. It is well captured by the term “tunnel effect” suggested by Hirschman and Rothschild in their classic article of 1973 on tolerance towards income inequality in the course of economic development. Using the following analogy, they argue that acceptance of income inequality initially might be substantial: “suppose that I drive through a two-lane tunnel, both lanes going in the same direction, and run into a serious traffic jam... I am in the left lane and feel dejected. After a while the cars in the right lane begin to move. Naturally, my spirits lift considerably, for I know that the jam has been broken and that my lane’s turn to move will surely come any moment now. Even though I still sit still, I feel much better off than before because of the expectation that I shall soon be on the move” (Hirschman and Rothschild, 1973). Thus, the argument is that people are able to tolerate income differences if they believe other people are on the move forward (upwards) and that they themselves or their close relatives (especially their children) will be able to do so in the future. The inspiration from the American case is obvious: an integral part of the “American dream” was that whole generations could become better and better off – including those at the bottom of society (Hochschild, 1995). It is also well-captured by the first part of the slogan “a rising tide lifts all boats” made famous by John F. Kennedy. This simple idea is well recognized in theoretical debates and has been included in both qualitative and quantitative research on the US case. But for unknown reasons comparative research has largely ignored this effect and the ISSP data contains no direct measure of degree of (perceived) overall mobility of society. However,

the article suggests a proxy for the tunnel effect, which is distinct from (perceived) procedural justice and still more nuanced than simple growth rates (see below).

The second suggested pivotal narrative of modernity is that of procedural justice in the distribution of societal positions (Rawls, 1999). The narrative of procedural justice is easily spotted in the “American dream”, and in liberalism in general. The argument is that free markets make no differences; in contrast to unequal treatment at pre-modern markets controlled by the aristocracy. The narrative of procedural justice was also prominent in the French revolution; though with a stronger emphasis on the role of the state. In the Declaration of the Rights of Man of the citizen (1789) it is stated in article six that “[the law] must be the same for all, either that it protects, or that it punishes. All the citizens, being equal in its eyes, are equally admissible to all public dignities, places and employments, according to their capacity and without distinction other than that of their virtues and of their talents.” Especially, the Nordic countries are famous for having state institutions that provide this kind of (perceived) procedural justice (Rothstein, 1998). Using the analogies above one can say that if everyone is “stuck” – or moves forward at the same pace as in the rising tide slogan – then procedural justice is high. The problem arises, to use again Hirschman and Rothschild’s example, when some cars move while others stand still. I might accept sitting in one place if I believe that the right to move is randomly assigned or follow another kind of procedural just logic. And, the other way around, I might become furious if particular cars (e.g. the fancy ones) are given special privileges to move. This effect has received the most attention in previous research (see Janmaat, 2013, for an overview) and the article uses the standard measures provided in the ISSP survey.

The third suggested pivotal narrative of modernity is the idea that a free market and a democratic state can create a less class divided society; often positively labelled a middle-class society.

The strong preference for a middle-class society is also nicely captured by the narrative of the American dream. This narrative is filled with symbols of working-class citizens being able to attain a middle-class living standard, e.g. their own car, house in a suburban area and two children (Fiske et al., 2007; Larsen, 2013). And this dream is not particularly an American one. Throughout the world, and especially in the emerging economies, one often finds the same aspirations of creating a middle-class society (Gough and Therborn, 2010). This leads to the prediction that citizens are much more tolerant towards current income differences, if they think they live in a middle-class society. Lipset (1997) famously argued that socialism never got a foothold in the US because many Americans believed that they already lived in the classless society. As we shall see, this is also a key to understand the high tolerance in Denmark and Norway and the low tolerance reported for Eastern Europe: many Scandinavians believe that the middle-class utopia has been reached, while most Eastern Europeans are convinced it has not. In a fascinating – but so far little-explored – ISSP question, the public was asked what kind of society they preferred. The respondents were given five different options and the striking finding is that in all countries a majority prefer a society described as a “society with most people in the middle”. This kind of society is in all countries even preferred above a society described as “many people near the top, and only a few near the bottom”) (see Sachweh and Olafsdottir, 2010, for analysis of result from Sweden, US and Germany). The article makes use of a follow-up question where it is asked which of these five societies the respondent thinks he or she lives in.

Data and method

The ISSP from 2009 provides the most recent and comprehensive data for analyzing the public's acceptance of income differences.ⁱⁱ The main strength of the ISSP survey is that it includes many countries, which permits testing for the existence or absence of general patterns. As argued by Janmaat "...only research using a wide selection of countries, including both developed and developing ones, can properly assess which of the two theses [modernization or culture] has the upper hand in explaining cross-country differences in views of inequality" (2013:384). More specifically the key question of this article is to what extent the public's beliefs in the three narratives are able to explain the cross-national acceptance of income inequality shown in Figure 1.

The first step is to operationalize the degree of public belief in the three suggested narratives. The "tunnel effect" is not directly measured in any comparative survey but a rough proxy has been constructed by means of two ISSP questions about position in society. The ISSP survey asked where the respondent would position themselves in society on a scale from 1 ("the bottom", lowest position) to 10 ("the top", highest). Thereafter they were asked to position, on the same scale, the family they grew up in. Their own (perceived) position minus the (perceived) position of the family they grew up in gives a very simple measure of (perceived) upward mobility on a scale from -9 (the unlikely situation where the respondent is now positioned at the very bottom, 1, but grew up in a family positioned at the very top, 10) to +9 (the opposite situation). This is naturally an individual-level phenomenon, which does not capture Hirschman & Rothschild's "tunnel-effect" well. In their framework the important feature was not personal experience of mobility. The important feature was whether others cars have started to move. Therefore the article uses the average of how all respondents within a given country responded to this question as a proxy for the belief in general upward (or downward) generational

mobility. It is a disadvantage that this measure can only be applied at the aggregative level but it is a novel operationalization that has explanatory power. As we shall also see, this does not mean that personal experience of mobility does not matter. It does. But depending on context such personal experiences can both increase and decrease acceptance of current income differences (see further elaboration in section six).

The beliefs in the narrative of procedural justice were measured by five questions about what it takes to get ahead in the country's society. In the models is used a summary measure of how much importance the respondents attributed to "coming from a wealthy family", "having well-educated parents", "knowing the right people", "having political connections" and "giving bribes" on a scale from 0 to 100. A respondent scored 0 if he or she answered "essential for moving ahead" on all five questions. This would indicate the lowest possible level of (perceived) procedural justice. A respondent scored 100 if he or she answered "not important at all" on all five questions.ⁱⁱⁱ

The belief in the "middle-class" narrative was measured by a dummy variable indicating whether the respondent thought his or her society was a middle-class society (1) rather than one of four other described societies (0).^{iv} This is also a novel operationalization, which has not been used before to account for tolerance of income differences.

The direction and impact of the variables were tested in linear multilevel regression models. Linear models are favored due to the easy interpretation of coefficients and the possibility to report amount of explained variations across levels and across countries. But all results have been confirmed by multi-level ordered logistic models (using the meologit procedure available in Stata 13; see online appendix^v). The perceptions of procedural justice and of living in a middle-class society

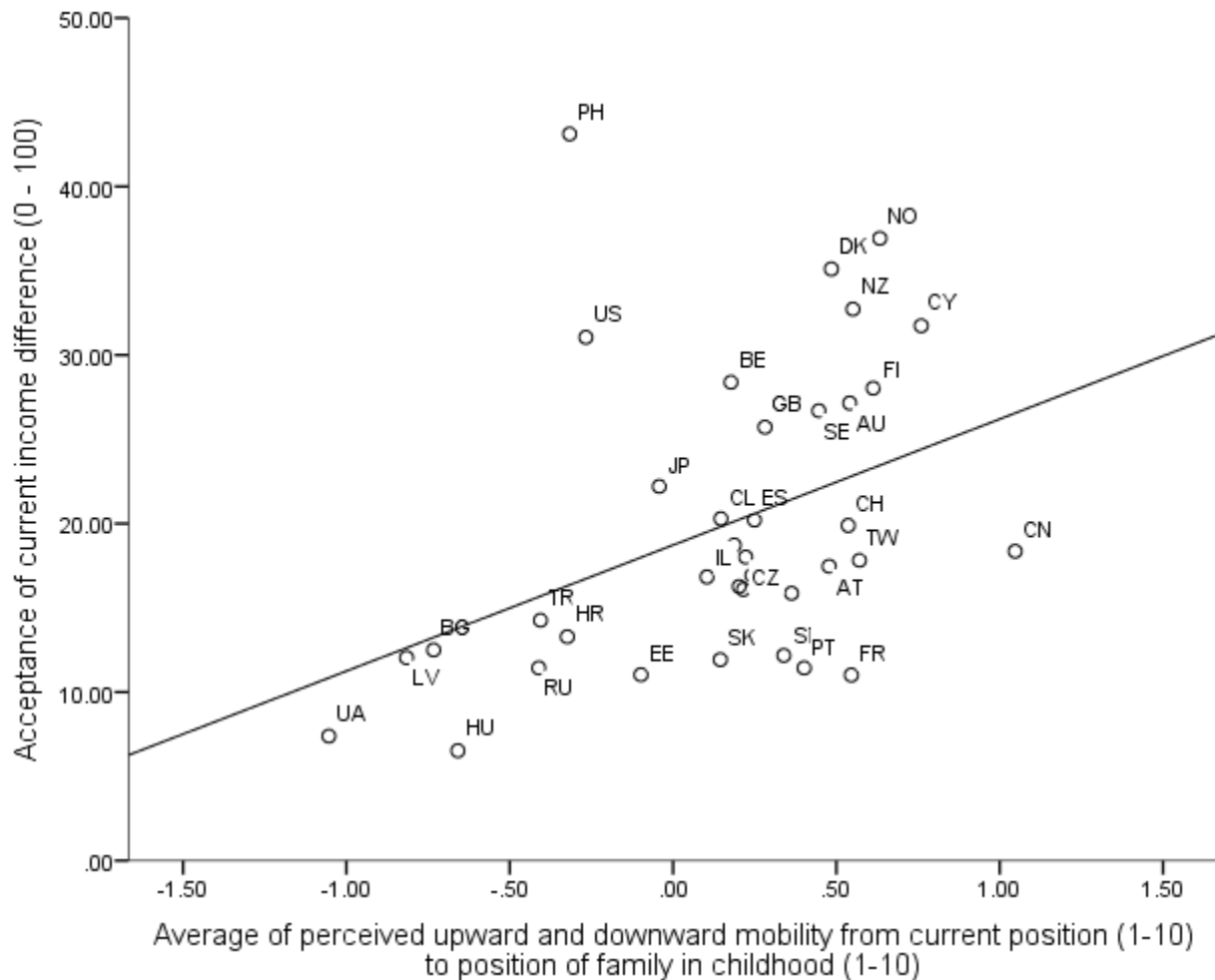
were treated as individual-level phenomena. The “tunnel-effect” variable is more complex. On the individual level, it measured whether the individual has experienced a (perceived) move upward or downward. On the aggregated level, it is used to measure a feeling of general upward or downward generational mobility overall in society. Therefore generational mobility that is entered as a level-two variable. The models were controlled for background variables such as sex, age and education (level given on a five-point scale provided by ISSP). The models also include the respondents’ (perceived) current position in society, i.e. the 1–10 scale used in the mobility measure. The thesis is that those with higher position have a higher tolerance for current income differences. In models with education included (the other big determinant of relative position), this is largely a measure of income.^{vi} Finally, levels of inequality (gini-coefficients, around 2009), income (GDP per capita in US dollars, PPP standardized, 2009), recent economic growth (average grow rates in the decade prior to the interviews, 1999–2009) and level of political rights in 2009 (provided by Freedom House on a 1–7 scale, best to worst) were added to the models. List-wise deletion of missing values was used. With this setup, the proposition of the importance of the three narratives was tested.

Descriptive statistics

Figure 2 shows the bivariate relationship between average perception of upward or downward generational mobility in the different societies and acceptance of current income differences (cor. 0.40). As already mentioned, China is at one extreme: On average, the Chinese indicate that their own position in society is one point higher than the position of the family they grew up in. Other societies with a feeling of generational upward mobility are Cyprus (0.8), Norway (0.6), Finland (0.6), Taiwan

(0.6) and New Zealand (0.6). At the other end, one finds societies where the general feeling is that of backward generational mobility. The extreme case is Ukraine, where the public indicate that their current position on average is 1.1 points lower than that of the family they grew up in. Other societies with a general sense of backward social mobility is Latvia (-0.7), Bulgaria (-0.7) and Hungary (-0.7). Among the less extreme cases, the US is the most interesting. The score of -0.3 indicates that the “old American feeling” of generational upward mobility is no longer present. On average, Americans feel they have a lower position than the position of the family they grew up in. As for more structural explanations, the feeling of generational mobility is linked to the level of GDP per capita (cor. 0.50), i.e. as one would expect long-term growth matters. Perceptions of generational mobility are, however, not significantly linked to recent growth (the last decade), level of income inequality or political rights.

Figure 2: Bivariate correlation between average perceived generational mobility and acceptance of current income differences. 2009.



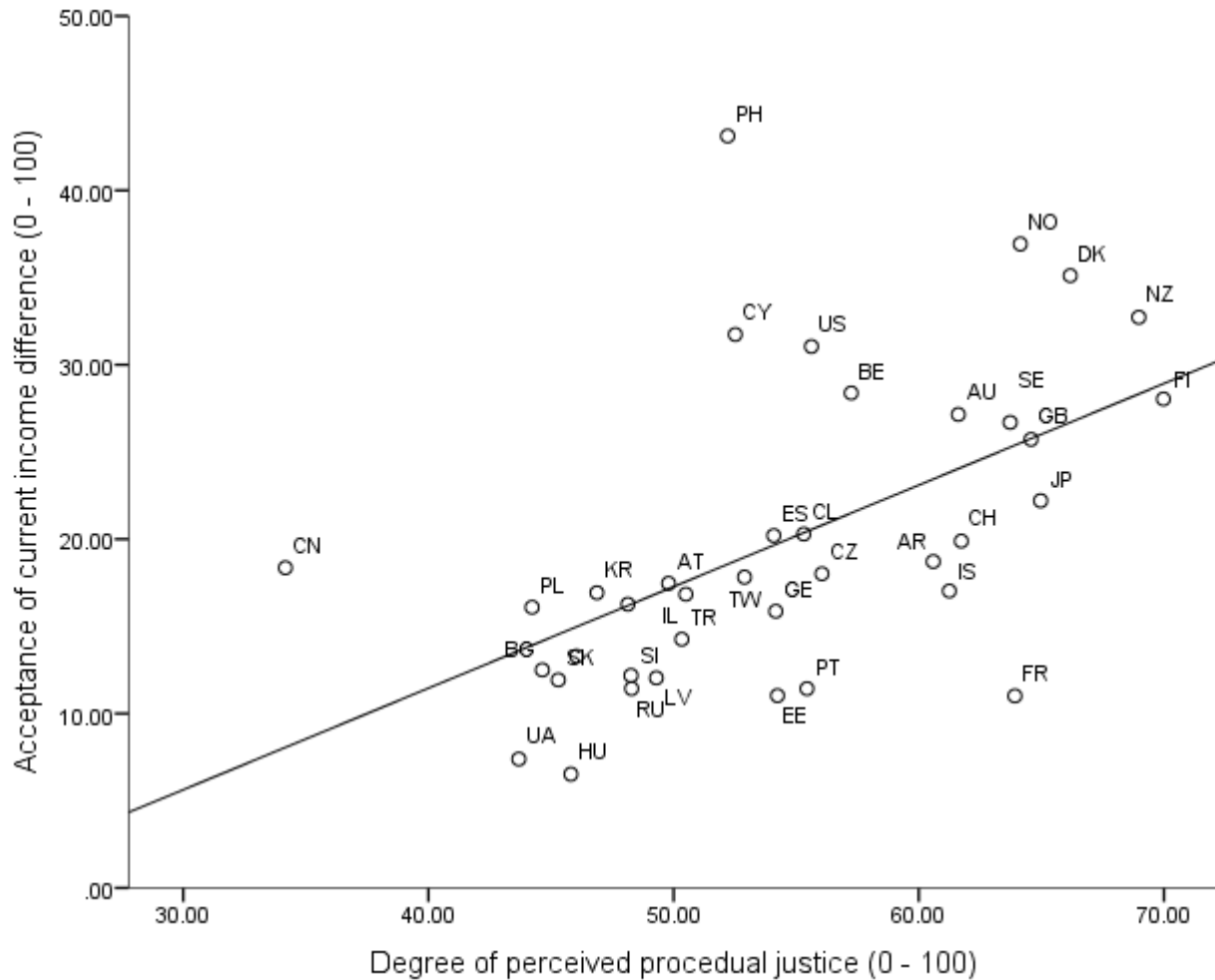
Source: ISSP 2009

Country marks: see Figure 1

Figure 3 shows the bivariate relationship between the average level of perceived procedural justice in getting ahead in society and acceptance of current income differences (corr. 0.55). At one end of the scale is Finland, where most people find “coming from a wealthy family”, “having well-educated parents”, “knowing the right people”, “having political connections” or “giving bribes” of little importance for getting ahead in society. Other countries with high level of perceived procedural justice

are New Zealand, Denmark, Japan and Great Britain. At the other end one finds China. Thus, the Chinese distinguish themselves by a combination of perceptions of high general upward generational mobility but very low levels of procedural justice in moving upward. Among other countries with low levels of perceived procedural justice are Ukraine, Poland, Bulgaria, Slovakia, Hungary and Croatia. Bivariate the measure of (perceived) procedural justice is positively linked to GDP (cor. 0.69) but negatively linked to recent economic growth (cor. 0.70). As expected, the belief in procedural justice is also significantly linked to political rights (0.49). The correlation with inequality level is negative but not strong enough to be significant (cor. -0.21).

Figure 3: Bivariate correlation between perceived procedural justice (index) and acceptance of current income differences. 2009



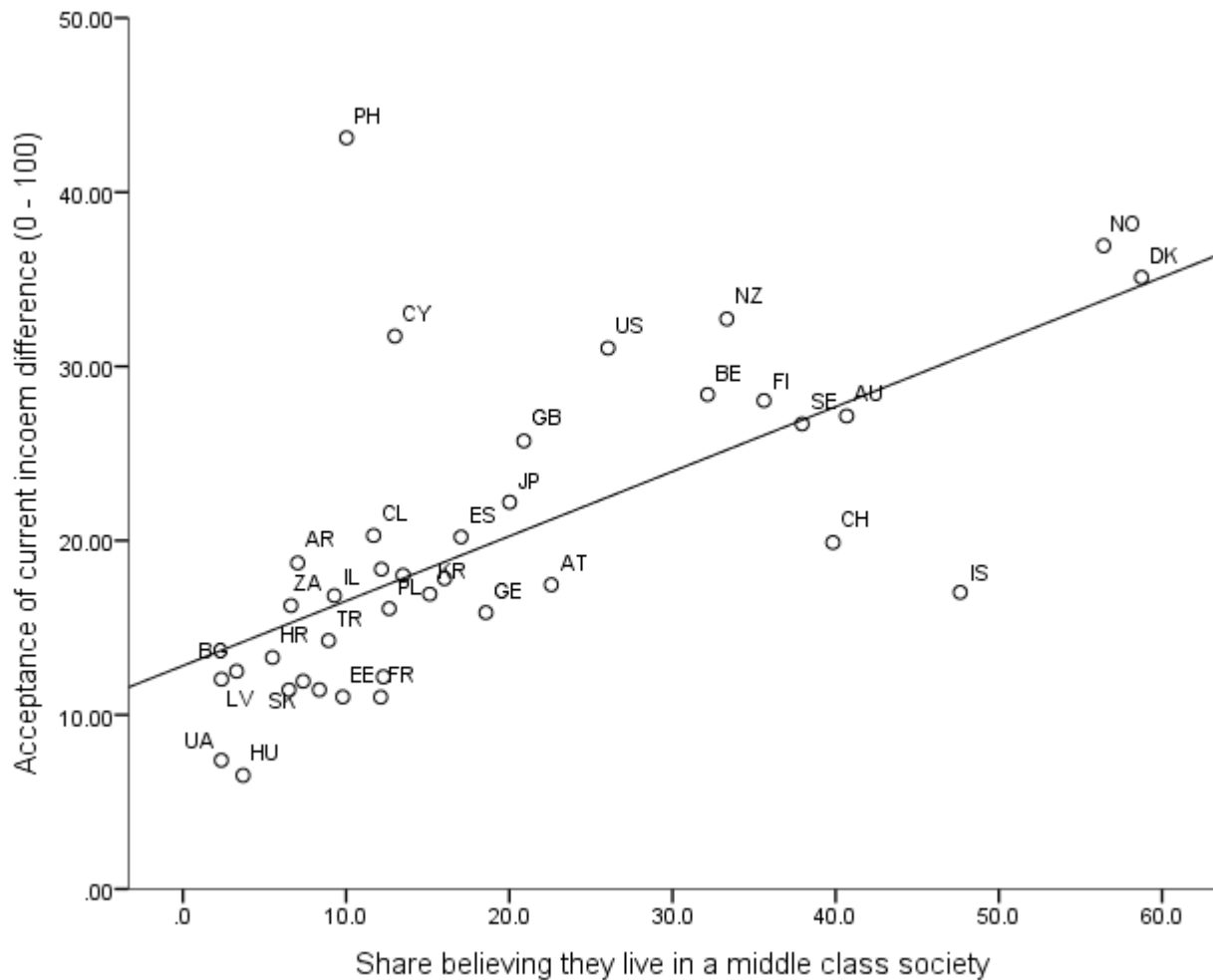
Source: ISSP 2009

Country marks: see Figure 1

Figure 4 shows the bivariate relationship between share of the public answering that their country is the preferred middle-class society and acceptance of current income differences (corr. 0.64). As already mentioned, one finds here Denmark and Norway at one end of the scale – respectively 59 and 56 percent of respondents indicate that their country is such a society. At the opposite end are Ukraine, Latvia, Bulgaria and Hungary, where below five percent think they live in such a society. Between

these extreme cases is the US, where 26 percent think they live in a middle-class society. This is a larger share than one might expect given the actual level of income inequality found in the country, which indicates that segments of Americans still believe in the American dream (especially those born before the 1970s, see Larsen 2013). Bivariate, the fulfillment of the middle-class utopia is strongly linked to GDP per capita (cor. 0.82), but again negatively linked to recent economic growth (cor. -0.43). As expected, perceptions of living in a middle-class society are negatively linked to the level of income inequality (-0.37). There was also a negative correlation with political rights but it was not strong enough to be significant (cor. -0.29).

Figure 4: Bivariate correlation between perception of living in a middle class society and acceptance of current income difference. 2009.



Source: ISSP 2009

Country marks: see Figure 1

As seen from the country rankings, the belief in these three narratives might interact. But they are not one-dimensional. At the aggregated level, perception of generational mobility is only moderately correlated with perceptions of procedural justice (cor. 0.36) and living in a middle-class society (cor. 0.52). Perception of procedural justice and living in a middle-class society is stronger correlated (0.69)

but still not a one-to-one relationship. Thus, one can indeed find societies such as China, where the feeling of generational mobility is high, while the feeling of procedural justice is low; and societies such as Japan, where the feeling of procedural justice is high, while the feeling of living in a middle-class society is relatively low. Therefore these three variables will be treated separately in the multivariate analyses (see online appendix for summary measures of all included variables).

Directions, effect sizes and significance tests

The main steps in the conducted multilevel regression models are seen in Table 1. The first model (the so-called empty model) indicates how much of the variance in acceptance of income difference one finds, respectively, between countries (14 percent) (73.4 divided by total variance, 73.4 plus 445.3) and between individuals (86 percent). The size of the former figure indicates that we are indeed in need of a multilevel model in order not to miscalculate standard errors (Hox, 2010). The next model (II) includes significant structural variables. Among the aggregated structural variables, only GDP per capita had a significant effect. An increase in GDP per capita of 1000 US dollars goes together with an increase in acceptance of current income different of 0.18 point on the scale from 0 to 100. There were no significant relationships between the measure for political rights, the level of income inequality, recent growth and acceptance of income differences (therefore not included in the models). Especially, the absence of a correlation with political rights, as provided by Freedom House, is a problem for the modernist account. Among the individual level structural variables Model II shows that females in general are less tolerant of current income differences than males (-1.35), that the elderly are in general

less tolerant than younger (-0.04), that the more highly educated (0.28) and those in higher positions (1.50) are in general more tolerant than the less educated and those in lower positions.

The variance figures indicate that by taking the significant structural factors into account, the model is able to explain 29 percent of the between country variation in acceptance of current income inequality ($(74.1 - 52.0) / 73.4$, see variance measures). Whether this is high or low is a matter of interpretation. Those who adhere to a modernist account would emphasize that a few variables actually help to explain cross-national differences. Those who adhere to a cultural account would emphasize that 71 percent of the country variation is left unexplained.

Table 1 Association between perceptions of social mobility, procedural justice, societal structure and acceptance of current income differences. Multilevel linear regression: Random Intercept Models (I–IV) and random slope model (V–VI). Regression coefficients for fixed effects (including standard errors and levels of significance) and variance estimates for random effects. $N_{\text{countries}} = 38$.

	Model I Empty model	Model II Structural variables	Model III + beliefs in three narratives	Model IV + decompos ition of mobility	Model V + Random slope (upward)	Model VI + Interact- ion
Fixed effects ^A :						
- GDP per capita (1000 US)		0.18** (0.06)	0.09 ^{ns} (0.07)	0.09 ^{ns} (0.07)	0.07 ^{ns} (0.07)	0.06 ^{ns} (0.07)
- Sex (0 /1 female)		-1.35*** (0.18)	-1.52*** (0.19)	-1.53*** (0.19)	-1.52*** (0.19)	-1.52*** (0.19)
- Age		-0.04*** (0.005)	-0.04*** (0.005)	-0.04*** (0.006)	-0.04*** (0.006)	-0.04*** (0.006)
- Education (1-5)		0.28*** (0.07)	0.21** (0.07)	0.22** (0.07)	0.22** (0.07)	0.21** (0.07)
- Current position (1-10)		1.50*** (0.06)	1.35*** (0.06)	1.39*** (0.06)	1.39*** (0.06)	1.40*** (0.06)
- Average mobility in society (-9 to 9)		-	2.85 ^{ns} (2.76)	2.94 ^{ns} (2.75)	2.29 ^{ns} (2.69)	2.95 ^{ns} (2.70)
- Perception of living in middle-class society (1/0)		-	6.24*** (0.27)	6.21*** (0.28)	6.19*** (0.27)	6.19*** (0.27)
- Procedural justice (0-100)		-	0.07*** (0.005)	0.07*** (0.005)	0.07*** (0.005)	0.07*** (0.005)
-Upward mobility (0/1)		-	-	-0.97*** (0.22)	-0.93** (0.34)	-0.96** (0.32)
- Same position		-	-	Ref	Ref	Ref
- Downward mobility (0/1)		-	-	-0.48* (0.24)	0.52* (0.27)	-0.54* (0.25)
- Interaction: Upward mobility x average social mobility in society		-	-	-	-	1.69** (0.67)
- Intercept	19.8*** (1.39)	20.2*** (1.18)	19.3*** (1.12)	19.7*** (1.12)	19.8*** (1.11)	19.8*** (1.10)

Table 1 (continued)

Random effects.						
Variance estimates:						
- Country level	73.4	52.0	46.0	45.7	44.1	44.0
- Individual level	445.3	435.6	429.7	429.6	429.1	429.1
- Upward mobility					2.3	1.8
- Covariance: upward mobility \times intercept					2.0	1.8
N _{individuals}	52,024	50,968	49,796	49,796	49,796	49,796

^{NS}) $p \geq .05$; *) $p < .05$; **) $p < .01$; ***) $p < .001$

^A All independent variables centered around the grand mean.

Model III included belief in the three suggested narratives. As expected, beliefs in these stories about modernity lower the effect from structural variables such as GDP per capita and education; the effect from the former is reduced to 0.09 and turns insignificant. Our interpretation is that these beliefs are indeed intermediate variables between structural changes caused by free market and democracy and acceptance of income differences, i.e. modernization processes do indeed need to be perceived. Furthermore, the explained part of the between country variance increases to 37 percent (73.4-46)/73.4). This leads to the overall conclusion that the three narratives indeed are important for explaining cross-national differences in acceptance of income differences.

Turning to the coefficients the model shows that belief in procedural justice is clearly correlated with acceptance of current income inequalities: for every step upwards on the scale of 0–100, tolerance of current income differences is estimated to increase by 0.07 points. So going from one extreme to the other in the perception of procedural justice will increase income tolerance by approximately 7 points. This is a well-known finding. The perception of living in a middle class society also goes together with high acceptance of income differences. If the respondent thinks he or she lives in a middle-class society, the acceptance of current income differences is estimated to increase by 6.24 points. The effect

from living in a society with a general belief in upward generational mobility is less straight-forward. In model III an average (perceived) generational mobility increase of one point (as in China) is estimated to increase acceptance of current income differences with 2.85 points. But the effect is not significant. One should, however, with only 38 cases at level two be cautious with dismissing the effect due to significance levels. If GDP per capita is left out of the equation, the “tunnel-effect” variable does have a strong (4.7) and significant effect. And in an ordered logistic model, the effect is highly significant even with GDP included (see online appendix model III). Finally, as will be demonstrated below, one should further model contingent effects in order to understand the impact from generational mobility.

The complex impact from generational mobility

Model IV to VI decompose the effect from respondents’ personal experience of upward or downward social mobility. Here one can distinguish between the effect from being in a new position in society (lower or higher) and the effect from the very experience of moving upward or downward. A person’s position in society clearly influences tolerance for current income differences. This effect is measured by respondents’ self-positioning (on a 1–10 scale). It is estimated in model IV that someone self-positioned one step higher on this scale has a 1.39-point higher tolerance for current income differences. Thus a person located at the very top (10) is estimated to score 12.5 points higher on the 0–100 scale for income-difference-tolerance than a person located at the very bottom (1) (9 steps times 1.39). However, the very experience of social mobility – if the income-difference-tolerance of respondents’ current position is controlled for – has a different effect. Model VI indicates that the

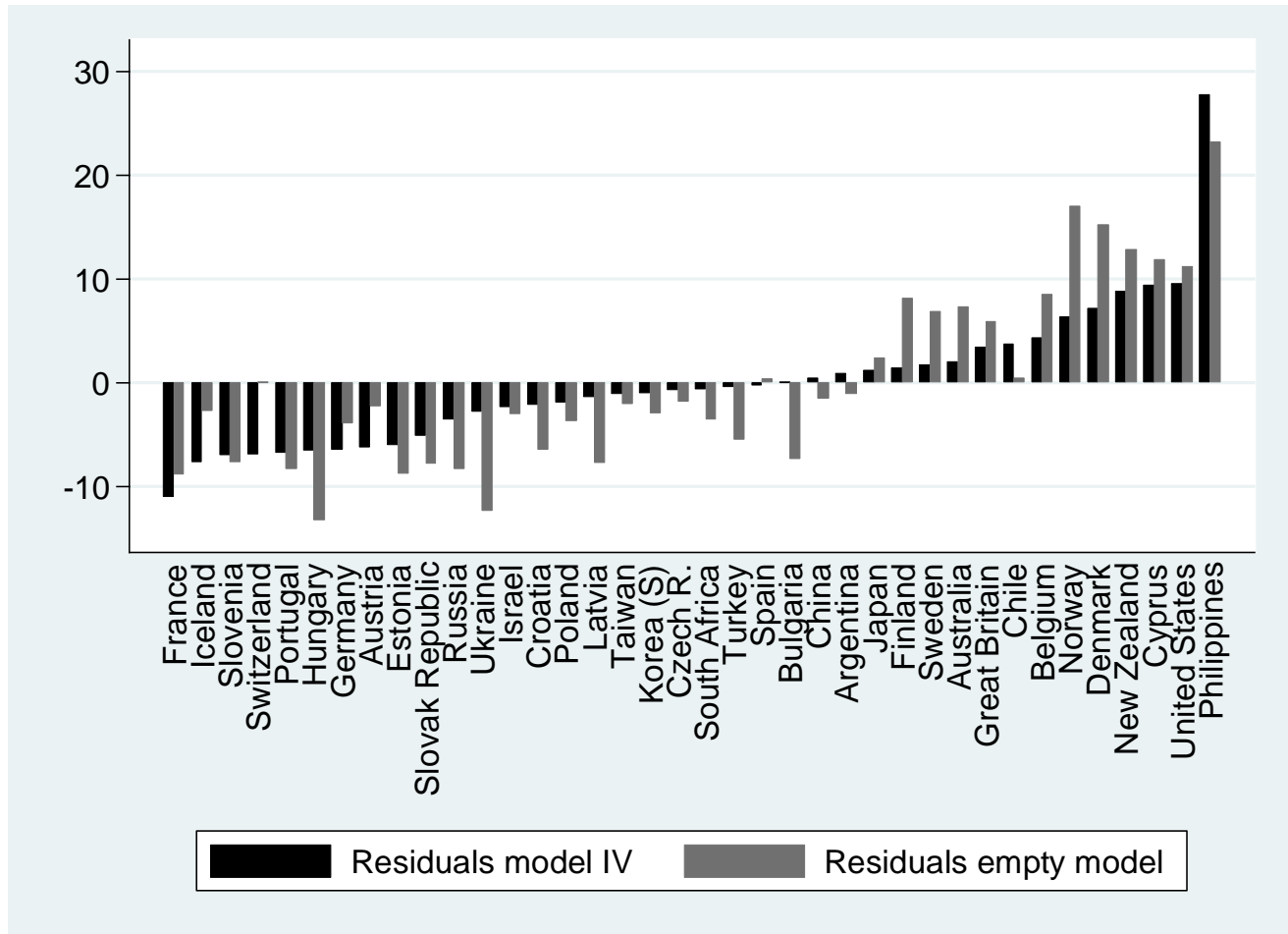
experience of upward mobility (of any range, i.e. measured by a dummy) decreases the tolerance for current income differences by 0.97 points – not a very strong effect, but clearly significant. The experience of downward mobility – again with the effect from current position controlled for – also has a negative effect, though not as strong (-0.48). But these effects should be further elaborated.

The next two models show how the effect from the experience of upward mobility is different in various countries. In model V, the effect from upward mobility is allowed to vary across countries. The variance measures indicate that the experience of upward mobility indeed has a different effect across countries (model V tested significantly better than model IV, maximum likelihood test). The next question is how to account for this different effect. Model VI demonstrates a significant interaction effect between the average (perceived) generational mobility in society and the individual experience of upward mobility. In societies with an average upward (perceived) mobility, a personal experience of upward mobility increases tolerance for current income differences. To use the analogy, the experience of driving forward, when others also are perceived to be on the move, makes me happy about the traffic situation. This is a “virtuous” circle from which China currently benefits. But in countries with an average (perceived) downward mobility, the experience of upward mobility has the opposite effect. If someone moves forward while the rest of society moves backwards, tolerance for current income differences actually tends to decrease among those who move forward. This is part of the “vicious” circle in which countries such as Ukraine and Hungary find themselves.^{vii} The result are confirmed by ordered logistic regressions (see online appendix models IV to VI).

Limits of the three narratives - deviant cases

From a modernist approach one could emphasize the fact that we have been able to explain a considerable part of the cross-national variation by means of a few variables connected to modernity; or at least perceptions of modernity. However, from a cultural approach one could point to the fact that still above 50 percent of cross-national variation is left unexplained. A fruitful way to bridge this discussion is to use general models to look for exceptional cases. In Figure 5 this is done by showing the residuals from the empty model and model IV respectively. The countries are ranked according to how far the actual tolerance of income differences is from the one predicted by model IV.

Figure 5: Residuals (level two) from empty model and model IV. Multilevel regressions (see text).
ISSP 2009



The differences between the residuals of the empty model and model VI reveal that variations in belief in generational mobility, procedural justice and the presence or absence of middle-class society, plus a number of standard background variables do a good job explaining cross-national differences. With these few variables taken into account, the low level of income tolerance in the Ukraine, Hungary, Russia, Latvia, Croatia and Bulgaria is well explained. The same is true for the high tolerance in Norway, Denmark, New Zealand and Cyprus. South Africa and even China are also fairly well predicted by the model. However, the Philippines remain a truly exceptional case. In fact, when belief

in generational mobility, procedural justice and middle class society are taken into account, the high income-difference tolerance found in the Philippines becomes even more exceptional (in technical terms, the residuals in model IV are larger than the residuals in the empty model; see Figure 5). If one accepts that a country can be truly exceptional in terms of income-difference-tolerance, it makes sense to simply leave the Philippines out of the statistical models (which in technical terms also eliminates the effect that strong outliers can have on regression models). Reruns of the models indicate that the expected patterns are indeed strengthen when the Philippines are left out. Model IV without the Philippines is able to explain 67 percent of the variance between countries.^{viii} However, even if one excludes the Philippines and only looks at the 37 other cases, there are still some countries that are more difficult to explain than others. The countries with “too high” levels of tolerance of current income differences are the US, Cyprus and New Zealand. The model does help to explain high level of tolerance (the residuals in model IV are lower than those in the empty model; see Figure 5) but the model do not tell the full story. Thus, the US is indeed somewhat exceptional. Among the countries with “too low” income-difference tolerance, France stands out as the most exceptional case. Despite belief in upward generational mobility and procedural justice, the French indicate little acceptance of current income differences. Thus, there is indeed a world of difference between the US and France, which is confirmed in qualitative interviews (Lamont and Thévenot, 2000; Lamont, 2000).

Conclusion

The article finds support for the argument that beliefs are important for explaining cross-national differences in acceptance of current income differences. The overall point is that cross-national differences in acceptance of income differences are not a matter of preferences, whether rooted in self-

interest/perceived self-interest (the point of departure for much economic research in this field) or historical embedded values (the point of departure for what above was labelled the cultural approach). Instead the article argues that it is a matter of belief in narratives of modernity that can be tracked all the way back to the American and French revolution.

The emphasis put on beliefs is not a new position in the literature (see e.g. Bénabou and Tirole, 2006). However, by means of ISSP data with more cases, new operationalizations and multilevel regression technics, the article has contributed by specifying the importance of three pivotal narratives connected to modernity. The article also demonstrated that at the individual level, the effect from generational mobility was complex. Persons positioned higher in society have in general greater acceptance of income differences. But the very experience of upward social mobility normally lowers the tolerance for current income differences. This is particularly the case in countries where the general trend is (perceived) downward generational mobility. In contrast, upward personal mobility increases the acceptance of income differences in societies which are perceived to be generally on the move forward. This is a novel interaction-effect, which has not been addressed by previous research, and points to the fact that the effects of individual levels variables differ across contexts.

These findings do not imply that national cultures are of no importance. At the country level the models did indicate the presence of “difficult” or exceptional cases. The Philippines is a truly unique case, which calls for other studies. France and the US were also somewhat exceptional cases, the former being less tolerant, and the latter being more tolerant, than expected by the model. Therefore the previous research on these two countries is clearly relevant. But these studies run the risk of exaggerating the differences across countries in general – and between Europe and the US in particular. Furthermore, even the differences between France and the US can be interpreted as variations across

more fundamental belief or disbelief in the narrative of modernity; the Americans being the optimists and the French being the pessimists.

Nor do the findings imply that the structural process of modernization is without importance. On the contrary, the three suggested narratives are directly linked to ideas about the functioning of free markets and democracy. But it is not a deterministic relationship. In the sample, no relationships were found between political rights, recent growth and acceptance of current income differences. Therefore it is not so surprising that countries with free markets and democracies can experience a backlash in tolerance of income differences; as it has been the case in Eastern Europe. Free markets and democracy do not automatically generate legitimacy.

Finally, one can speculate about the consequences of the rising inequality in income. Based on the conclusions of the article it is logically to conclude that neither this development does automatically cause public discontent. Instead the central question is whether the public starts to question the narratives about free markets and democracies being able to secure generational mobility, procedural justice and a middle-class society. One can indeed observe that these narratives of modernity are up for discussion, partly caused by social scientists delivering statistics about backward generational mobility (e.g. Murray, 2012), unequal chances for social upward mobility (e.g. Corak, 2005) and the presence of a new precariat and an extremely rich upper class (e.g. Piketty, 2014). Hirschman and Rothschild had the same fear in the 1970s: “Providential and tremendously helpful as the tunnel effect is ... (because it accommodates the inequalities almost inevitably arising in the course of development), it is also treacherous: ... rulers are not necessarily given any advance notice about its decay and exhaustion, ... on the contrary, they are lulled into complacency by the easy early stage when everybody seems to be

enjoying the very process that will later be vehemently denounced and damned as...consisting essentially in 'the rich becoming richer'" (1973:552).

End notes

ⁱ Index construction: “agreed strongly”= 0, “agree” =1, “neither agree nor disagree”= 2, “disagree” =3 and “disagree strongly” = 4. This index from 0 to 4 is multiplied by 25, creating an index from 0 to 100, in order to make the interpretation easier in figures and models. See online appendix for ordered logic regression using the ordinal scale as dependent variable.

ⁱⁱ All available countries were included. The Belgian sample includes only the Flemish-speaking region. Data is unweighted.

ⁱⁱⁱ The five items form a fairly uniform scale. Factor analysis indicates a first factor with eigenvalue at 2.422 and a second factor with eigenvalue below 1. Crombach alfa is also above 0.60 in all countries but Argentina and Cyprus. I constructed a simple additive index in order to make the interpretation easier (“not important at all”=0, “not very important” =2, “fairly important” = 3, “very important” = 4, “essential” = 5; multiple by 20, creating an index from 0 to 100, to make easier the interpretation). Those answering “don’t know” were coded into the middle category “fairly important” (2) in order not to lose too many cases.

^{iv} These were (A) “A small elite at the top, very few people in the middle and the great mass of people at the bottom”, (B) “A society like a pyramid with a small elite at the top, more people in the middle, and most at the bottom”, (C) “A pyramid, except that just a few people are at the bottom” and (E) “Many people near the top, and only a few near the bottom.” The descriptions were also followed by small charts (see ISSP documentation).

^v [http://vbn.aau.dk/da/publications/how-three-narratives-of-modernity-justify-economic-inequality\(beea5501-d199-46d6-9cfc-1944de3b31fd\).html](http://vbn.aau.dk/da/publications/how-three-narratives-of-modernity-justify-economic-inequality(beea5501-d199-46d6-9cfc-1944de3b31fd).html)

^{vi} Self-reported position was used, as it is more easily handled in cross-national datasets. Actual income is impossible to compare in the ISSP data as many respondents have not stated their income and furthermore the ISSP program has not standardized income categories.

^{vii} Interactions between average mobility and perceptions of living in middle-class society and procedural justice were also tested (not shown). There were no significant effects: Perceptions of living in a middle-class society and of procedural justice matter independently of the experience of being on the move backward or forward. However, if the Philippines are left out of the sample (see section seven), there is a positive interaction effect between perceived generational mobility and procedural justice. This suggests that the importance of procedural justice in getting ahead increases a little when societies are on the “move forward”, and is of less importance when they are “stuck”, which is what one could expect.

^{viii} At the same time the coefficient for average generational mobility increases to 3.7 with and acceptable p-value at 0.06 (GDP included in the model).

References

- Bénabou R and Tirole J (2006) Belief in a just World and Redistributive Politics. *Quarterly Journal of Economics* 121(2): 699-746.
- Boltanski L and Thévenot L (2006) *On Justification: Economies of Worth*. Princeton: Princeton University Press.
- Corak M (2005) Inequality across the generations in North America and Europe. *CESifo DICE Report, Journal for International Comparisons* 3(4): pp. 34-39.
- Esping-Andersen G (1990) *The Three Worlds of Welfare Capitalism*. Cambridge: Polity Press.
- Fiske ST, Cuddy AJC and Glick P (2007) Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences* 11(2): 77-83.
- Gijsberts M (2002) The legitimation of income inequality in state-socialist and market societies. *Acta Sociologica* 45(4): 269-285.
- Gough I and Therborn G (2010) Global futures of the welfare state. *CastlesFG, LeibfriedS, LewisJ, ObingerH, PiersonC, Eds.Oxford Handbook of Comparative Welfare States*: 703-720.
- Graubard SR (1986) *Norden: The Passion for Equality*. Oslo: Norwegian university press.
- Haggard S and Kaufman RR (2012) Inequality and regime change: Democratic transitions and the stability of democratic rule. *American Political Science Review* 1(1): 1-22.
- Hirschman AO and Rothschild M (1973) The Changing Tolerance for Income Inequality in the Course of Economic Development With A Mathematical Appendix. *The Quarterly Journal of Economics* 87(4): 544-566.
- Hochschild JL (1995) *Facing Up to the American Dream: Race, Class, and the Soul of the Nation*. Princeton: Princeton University Press.
- Hox JJ (2010) *Multilevel Analysis: Techniques and Applications*. Oxford: Taylor & Francis.
- Inglehart R and Welzel C (2005) *Modernization, Cultural Change, and Democracy: The Human Development Sequence*. : Cambridge University Press.
- Janmaat JG (2013) Subjective Inequality: a Review of International Comparative Studies on People's Views about Inequality. *European Journal of Sociology* 54(03): 357-389.
- Kelley J and Evans MDR (1993) The Legitimation of Inequality: Occupational Earnings in Nine Nations. *American Journal of Sociology* 99(1): 75-125.

Kjærsgård AP (2012) Scandinavian attitudes to pay - egalitarianism and aversion towards top excess. *CCWS Working Paper* 2012(77).

Kluegel JR and Miyano M (1995) Justice beliefs and support for the welfare state in advanced capitalism. In: Kluegel JR, Mason DS and Wegener B (eds) *Social Justice and Political Change: Public Opinion on Capitalist and Post-Communist States*. New York: Aldine de Gruyter, 81-105.

Lamont M and Thévenot L (2000) *Rethinking Comparative Cultural Sociology*. : Cambridge University Press.

Lamont M (2000) *The Dignity of Working Men: Morality and the Boudaries of Race, Class, and Immigration*. Cambridge, Mass.Harvard: Harvard University Press.

Larsen CA (2013) *The Rise and Fall of Social Cohesion. the Construction and De-Construction of Social Trust in the USA, UK, Sweden and Denmark*. Oxford: Oxford University Press.

Larsen CA (2006) *The Institutional Logic of Welfare Attitudes: How Welfare Regimes Influence Public Support* .London : Ashgate Publishing.

Lipset SM (1997) *American Exceptionalism: A Double-Edged Sword*. New York: W. W. Norton & Company.

McCall L and Kenworthy L (2009) American's Social Policy Preferences in the Era of Rising Inequality. *Perspectives on Politics* 7(3): 459-484.

Meltzer AH and Richard SF (1981) A rational theory of the size of government. *The Journal of Political Economy*: 914-927.

Milanovic B (2011) *Worlds Apart: Measuring International and Global Inequality*. : Princeton University Press.

Murray C (2012) *Coming Apart: The State of White America, 1960-2010*. New York: Crown Forum.

OECD (2011) *Divided we Stand: Why Inequality Keeps Rising?* Paris: OECD.

Osberg L and Smeeding T (2006) "Fair" Inequality? Attitudes toward Pay Differentials: The United States in Comparative Perspective. *American Sociological Review* 71(3): pp. 450-473.

Piketty T (2014) *Capital in the Twenty-First Century*. Harvard : Harvard University Press.

Rawls J (1999) *A Theory of Justice*. : Belknap Press.

Riskin C (2014) Inequality and the reform era in China. In: Fan S, Kanbur S, Wei S and Zhang X (eds) *The Oxford Companion to the Economics of China*.Oxford : Oxford University Press, 417.

Rothstein B (1998) *Just Institutions Matter: The Moral and Political Logic of the Universal Welfare State*. : Cambridge Univ Pr.

Sachweh P and Olafsdottir S (2010) The Welfare State and Equality? Stratification Realities and Aspirations in Three Welfare Regimes. *European Sociological Review*.

Sachweh P (2012) The moral economy of inequality: popular views on income differentiation, poverty and wealth. *Socio - Economic Review* 10(3): 419-419-445.

Stolle D and Rochon T (1999) The Myth of American Exceptionalism. In: Van Deth J, Maraffi M, Newton K and Whiteley P (eds) *Social Capital and European Democracy*. London: Routledge, 178-194.

Svallfors S (1997) Worlds of Welfare and Attitudes to Redistribution: A Comparison of Eight Western Nations. *European Sociological Review* 13(3): 283-304.

Whyte M (2010) *Myth of the Social Volcano: Perceptions of Inequality and Distributive Injustice in Contemporary China*. : Stanford University Press.

Wilkinson R and Pickett K (2010) *The Spirit Level: Why Equality is Better for Everyone*. London: Penguin Books.

Online appendix:

Table A1: Summary of statistics for variables used in multi-level regressions

	Min	Max	Mean	St. devia- tion	n
<i>Dependent variable:</i>					
Acceptance of income difference (rescaled 0–100, see endnote 1)	0	100	19.2	22.7	52,024
<i>Independent variables at individual level:</i>					
Generational mobility (perceived). Scaled from -9 to 9 (see method section for operationalization)	-9	9	0.17	1.86	52,102
Index for perceived procedural justice. Rescaled 0–100 (see method section and endnote 2)	0	100	53.4	19.1	52,210
Perception of living in a middle-class society (dummy 1=middle-class type society, 0=others)	0	1	0.17	0.38	52,541
<i>Independent variables at aggregated level:</i>					
Generational mobility (perceived). Scaled from -9 to 9 (see method section for operationalization)	-1.05	1.05	0.15	0.47	38
<i>Control variables and the individual level:</i>					
Sex (dummy 1=female, 0=male)	0	1	0.55	0.50	53,124
Age	15	97	46.8	17.1	53045
Education (in five ISSP standard brackets, 0 (no formal) to 5 (highest university), see ISSP documentation)	0	5	2.83	1.46	52,789
Position in society 1–10 (self-reported)	1	10	5.00	1.82	52,348
<i>Control variables at aggregated level:</i>					
Gini-coefficient (closest at 2009).	0.24	0.70	0.33	0.09	38
GDP per capita 2009 (US\$)	1,832	78,457	26,588	18,781	38
Average annual growth rate 1999-2009	0.55	10.3	3.16	1.77	38
Political rights (Freedom house)	1	7	1.82	1.65	38

Table A2 Association between perceptions of social mobility, procedural justice, societal structure and acceptance of current income differences. Multilevel ordered logistic regression (Stata meologit procedure): Random Intercept Models (I–IV) and random slope model (V–VI). Coefficients for fixed effects including standard errors and levels of significance). $N_{\text{countries}} = 38$.

	Model II Structural variables	Model III + beliefs in three narratives	Model IV + decomposit ion of mobility	Model V + Random slope (upward)	Model VI + Interact- ion
Fixed effects ^A :					
- GDP per capita (1000 US)	0.02*** (0.00)	0.03*** (0.00)	0.03*** (0.00)	-0.03*** (0.00)	0.00*** (0.00)
- Sex (0 /1 female)	-0.10*** (0.02)	-0.12*** (0.02)	-0.12*** (0.02)	-0.12*** (0.02)	-0.12*** (0.02)
- Age	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)
- Education (1-5)	0.02*** (0.01)	0.03*** (0.01)	0.03*** (0.01)	0.02** (0.01)	0.01 ^{ns} (0.01)
- Current position (1-10)	0.15*** (0.01)	0.13*** (0.01)	0.13*** (0.01)	0.14*** (0.01)	0.14*** (0.01)
- Average mobility in society (-9 to 9)	-	0.22*** (0.02)	0.23*** (0.02)	0.28*** (0.02)	0.32*** (0.03)
- Perception of living in middle-class society (1/0)	-	0.52*** (0.02)	0.52*** (0.02)	0.52*** (0.02)	0.53*** (0.02)
- Procedural justice (0-100)	-	0.007*** (0.000)	0.007*** (0.000)	0.007*** (0.000)	0.007*** (0.000)
-Upward mobility (0/1)	-	-	-0.09*** (0.02)	-0.10*** (0.03)	-0.04 ^{ns} (0.03)
- Same position	-	-	Ref	Ref	Ref
- Downward mobility (0/1)	-	-	-0.08*** (0.02)	-0.09*** (0.02)	-0.09*** (0.02)
- Interaction: Upward mobility x average social mobility in society	-	-	-	-	0.28** (0.06)
$N_{\text{individuals}}$	50,968	49,796	49,796	49,796	49,796

^{NS}) $p \geq .05$; *) $p < .05$; **) $p < .01$; ***) $p < .001$

^A All independent variables centered around the grand mean.