The Politics of Well-Being Revisited: The Role of Governance Quality and Resource Misallocation

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Abstract

To what extent do changes in the political environment shape happiness? Prevailing attempts to understand whether the size of the welfare state is sufficient for happiness yields mixed empirical results. These differences result from omitted variable biases, not different methodological choices within the literature. Drawing on insights from the new social risk and quality of governance literatures, this paper contends that the policy orientation and administrative quality of welfare state programs jointly condition the happiness effect of social policies. At high levels of administrative quality, the extent to which social policies privilege newer, post-industrial forms of social risk strongly influences the happiness effect of the welfare state. The size of the welfare state only exerts a positive effect when social policies are designed to protect individuals from modern forms of social risk. At lower levels of administrative quality, by contrast, the allocation of welfare state resources matters less for happiness. Poor administrative capacities moderate the effects of extremely well- or poorly-oriented social policy regimes. First, these results stress that increasing the size and generosity of the welfare state is no panacea for increasing individual happiness. Second, under certain circumstances, high quality administrative capacities—in the presence of poorly allocated social policies—can actually cause the welfare state to promote more harm than good. Hypotheses are tested on individuals living in select OECD countries using data from Wave 4 of the World Values Survey (2005-2008)[1] and Wave 3 of European Social Survey (2006-2007).

[1]Please send all correspondence to me at the following address: ajakubow@polisci.rutgers.edu. I would like to thank Patrick Flavin for generously making his and his co-author's (Alex Pacek and Benjamin Radcliff) replication data easily available to me for the purposes of this paper.

Introduction

To what extent do changes in the political environment shape human happiness? Political scientists often approach this question indirectly by studying political and social phenomena that are implicitly related to the concept of happiness. Such substantive foci include democracy, peace, human rights, economic growth and development, equality, and the rule of law. However, many of us study these and related concepts because we fundamentally believe that these things constitute inherent human 'Goods,' the pursuit of which will invariably improve people's lives. The study of politics, therefore, is frequently about the study of happiness. Proponents of this perspective have, in recent years, explicitly attempted to understand the extent to which political variables influence the human 'pursuit of happiness.' Instead of using democracy, human rights, economic development, or some similar variable as a proxy for happiness, recent advances in the availability of data on measures of subjective well-being[2] allow political scientists and others to directly model the relationship between political variables and happiness outcomes.

Concerns about the suitability of 'soft' concepts like 'happiness' and 'life satisfaction' for empirical, scientific research abound, but such fears are largely unwarranted. Measures of subjective well-being are valid (Costa and Mccrae 1988; Fernández-Dols and Ruiz-Belda 1995; Helliwell 2006*b*,*a*; Lepper 1998; Moum 1996), reliable (Eid and Diener 1999; Fordyce 1988; Helliwell 2006*a*; Kahneman and Krueger 2006; Sandvik, Diener and Seidlitz 1993; Veenhoven 1993, 1994, 1996, 1997, 2000), and cross-nationally comparable (Helliwell 2006*a*; Inglehart 1990; Pacek and Radcliff 2008*b*; Veenhoven 1993, 1994, 1996, 1997). Such measures are also quite robust to concerns about endogeneity and self-selection biasing causal inferences. Through rigorous analysis of panel data, scholars have found that changes in happiness *follow from* changes in employment status (Clark 2006; Clark and Georgellis 2010; Lucas 2007; Winkelmann and Winkelmann 1998) and income (Gardner and Oswald 2001), not the other way around. Although analogous studies have yet to be conducted in order to confirm the causal relationship between welfare and subjective well-being (SWB), many studies use empirical techniques—lag structures and instrumental variables—to help assuage fears about causal endogeneity (Di Tella, MacCulloch and Oswald 2003; Pacek and Radcliff 2008*a*). The other reason for optimism about making causal claims about the relationship between welfare and SWB comes from a rather dark place: suicide.[3] While less generous welfare benefits may help contribute to a person ending his or her own life (Zimmerman 1987, 2002), it is impossible to argue that an individual's suicide leads to reductions in the generosity of a country's welfare benefits.

[2]The concepts of 'subjective well-being,' 'happiness,' and 'life satisfaction' are used interchangeably throughout this article. For the purposes of this paper, they all refer to the same underlying concept This follows the convention used in much of the literature (Alvarez-Diaz, Gonzalez and Radcliff 2010; Bjornskov 2006; Bjornskov, Dreher and Fischer 2007; Bjornskov, Drehe and Fischer 2008; Bjornskov, Dreher and Fischer 2010; Dorn et al. 2006, 2008; Easterlin 2003; Flavin, Pacek and Radcliff 2009, 2011; Pacek and Radcliff 2008*a*,*b*; Radcliff 2001).

[3]Recall that suicide serves as a very suitable proxy for extreme unhappiness (Helliwell 2006*a*; Moum 1996).

SWB indicators have not gone unnoticed by policymakers, either. Former French President Nicholas Sarkozy, dissatisfied with the use of GDP per capita and other material measures of social progress, recently tasked a 25-person commission of prominent economists and other academics to search for better indicators of well-being (Commission on Growth and Development 2008). The fact that 'hard-core' behavioralist economists—Joseph Stiglitz, Amartya Sen (both Nobel Prize winners), and Jean-Paul Fitoussi—endorsed the use of self-reported data on SWB as a more suitable means of measuring well-being speaks to the confidence that researchers and policy-makers alike should have in the validity, reliability, and comparability of SWB measures (Easterlin 2010).[4]

The happiness literature debates the relative significance of the welfare state as a tool for the promotion of happiness across post-industrial, democratic societies. Welfare state proponents contend that a more generous welfare state promotes happiness by providing individuals with the means to satisfy basic needs while insulating them from the risks and vagaries of the market. Skeptics, however, retort that large welfare states promote misery by breeding inefficiencies, generating various social pathologies, and grossly misallocating scarce social resources. Given recent advances in the availability of cross-national happiness data, scholars eagerly attempt to test their arguments in new empirical domains. Instead of revealing a clear trend, however, efforts to increase our N have only served to reify the existing split within the literature. This paper takes a different approach.

Moving beyond this impasse requires new theoretical thinking about the relationship between welfare and well-being. In short, previous explanations suffer from omitted variable biases. By itself, the generosity of the welfare state is neither a necessary nor sufficient condition for the promotion or inhibition of happiness. The effect of welfare spending on happiness depends on the extent to which welfare state policies actually help people meet their basic needs and the quality of administrative institutions. Welfare state generosity exerts the greatest influence on happiness when: 1) spending policies closely match the type and magnitude of social risks present in society; and 2) the state has high-quality administrative institutions. Well-allocated welfare policies ensure that a greater proportion of individuals' basic needs are met, while high-quality institutions ensure that those programs are administered efficiently and fairly.

However, this does not imply that welfare spending produces the most misery when institutional quality is low and policies privilege outmoded forms of social risk. This is because the relationship between welfare effort and happiness varies across different combinations of these factors. At high levels of administrative quality, the extent to which social policies privilege newer, post-industrial forms of social risk strongly influences the happiness effect of the welfare state. The size of the welfare state only exerts a positive effect when social policies are designed to protect individuals from modern forms of social risk. At lower levels of administrative quality, by contrast, the allocation of welfare state resources matters less for happiness. Poor administrative capacities moderate the

[4] A copy of the report is available at: http://www.stiglitz-sen-fitoussi.fr.

effects of extremely well- or poorly-oriented social policy regimes. In fact, the size of the welfare state exerts the strongest *negative* effect on subjective well-being when institutional quality is high but the orientation of welfare policies privileges older forms of social risk. Hypotheses are tested on individuals living in select OECD countries using data from Wave 4 of the World Values Survey (2005-2008) and Wave 3 of European Social Survey (2006-2007).

The paper proceeds as follows. Section 1 reviews some of the major theoretical and empirical findings on the relationship between welfare and well-being in the happiness literatures. Section 2 uses insights from the literatures on new social risks and governance quality to promote a more accurate theory of happiness and Section 3 identifies some testable implications of such a theory. Section 4 discusses the research strategy employed in the study. Section 5 presents the results of the analysis. Section 6 presents a holistic interpretation of the results, and Section 7 concludes.

The Livability Perspective, Happiness, and the Role of Institutions

The livability perspective maintains that happiness increases as individuals are able to provide for more of their basic needs in life. Such needs range from basic biological imperatives—food, water, shelter, etc—to 'higher order' needs relating to self-concept, purpose, and social belonging (Maslow 1943). While advanced capitalist democracies rarely suffer shortages of food, running water, and electricity, the ease with which individuals can meet even these basic existential needs does vary markedly across individuals and between countries. In some countries, the maintenance of a particular standard of living requires far greater sacrifices in other life domains and of other needs than in other countries. Nonetheless, according to the livability perspective, happiness increases as people satisfy more of these basic needs.

To the extent that these needs-based theories of happiness are valid,[5] a key political question emerges To what extent do political institutions and processes affect the ease with which individuals can provide for their own needs and thus increase their happiness? An important line of inquiry focuses on the relative strength of welfare state institutions across advanced, post-industrial democracies. In mature capitalist economies, the market and the state constitute the two primary means by which individuals can provide for their basic needs (Lindblom 1977). Using measures of happiness as a proxy for needs satisfaction, scholars thus ask whether the pursuit of happiness is easier when holding the invisible hand of the market or the guiding hand of the state.

Welfare state proponents contend that the robustness of the welfare state increases happiness through several main pathways. First of all, the welfare state enables individuals to satisfy their basic needs while avoiding the risks and vagaries of the market. Markets expose individuals to a

[5]See Diener and Lucas (2000) for a good summary of competing theories of human happiness.

whole series of economic risks that significantly undermine happiness (Lane 1978, 2000; Lindblom 1977; Polanyi 1944). Moreover, the market 'commodifies' (Esping-Andersen 1990) individuals, whereby they become increasingly dependent upon market processes to meet their various needs. This reduces happiness by undermining political and social autonomy. The welfare state reduces the scope for commodification, and thus increases happiness, by insulating individuals from economic risk. Secondly, the welfare state has the potential to promote social and political equality. Epidemiological research finds strong evidence that equality promotes subjective and objective measures of health (Marmot et al. 1978, 1991; Marmot 2004; Wilkinson and Pickett 2009). Health, in turn, is a strong predictor of happiness (Frey and Stutzer 2010; Helliwell 2003). Some scholars even maintain that egalitarian social relations approach the status of a fundamental human need (Wilkinson 1996; Wilkinson and Pickett 2009). According to this perspective, the very act of living in a more egalitarian society should promote human happiness. Finally, the equal distribution of resources and opportunities helps individuals realize a common purpose they share with others and convinces them that they are part of a greater social whole (Rothstein 2010). This promotes happiness by helping individuals satisfy needs for belonging and purpose. These and similar arguments find support in several empirical studies (Di Tella, MacCulloch and Oswald 2003; Flavin, Pacek and Radcliff 2011; Haller and Hadler 2006; Radcliff 2001; Pacek and Radcliff 2008*a*,*b*).

Welfare opponents, however, also offer a convincing theoretical explanation of why a larger welfare state produces more misery, not happiness. Such arguments maintain that even the most well-intended government interventions into the market can generate many negative, unintended consequences. First of all, state intervention is inefficient, wasteful, and often comes at the expense of economic growth (Butler and Kondratas 1987; Lindbeck 1995; Olson 1982).[6] Suboptimal growth negatively affects levels of prosperity, employment, and funding for key social programs. Secondly, conventional wisdom maintains that large welfare states produce various social pathologies. Welfare produces negative family consequences—such as higher martial instability (Buckingham 2000; Gilder 1993) and an increase in low-income, single parent families (Murray 1984)—lowers the psychological and physical health of benefit recipients (Chung and Bemak 1996; Kalil and Danziger 2000), creates cultures of dependency (Fraser 1997; Saunders 2000), and causes benefit-induced migration (Allard and Danziger 2000). A large welfare state also reduces societal well-being by cultivating a sense of *ennui* amongst a population that feels increasingly atomized and disconnected from an increasingly impersonal, dysfunctional leviathan (Bjornskov, Dreher and Fischer 2007). Moreover, the sprawling tentacles of the welfare state strangle off traditional social institutions like the church and family to which generations of individuals have long turned for support (Popenoe 1988, 1993; Veenhoven 2000). Finally, the collectivization of social life that proceeds in lockstep with the advance of the state into society further reduces happiness by undermining individual autonomy and free choice (DeSwaan 1988; Veenhoven 2000). Two important empirical

[6] See Kenworthy (1999) and Kenworthy and Pontusson (2005) for discussion of this debate.

studies find a negative relationship between welfare generosity and happiness (Bjornskov, Dreher and Fischer 2007; Ouweneel 2002), one finds no relationship (Veenhoven 2000), and another finds a more complicated, inverse U-shape relationship between welfare and happiness (Hessami 2010).[7]

Beyond the Impasse: Size Isn't Everything

The literature clearly lacks consensus on the relationship between the generosity of the welfare state and levels of individual happiness. The origins of these widely divergent findings, however, stem from theoretical oversights, not methodological choices. The literature's preeminent focus on the overall *size* of the welfare state overlooks how other factors—notably the *quality* of administrative institutions and the *policy orientation* of social programs—can moderate the happiness effect of welfare state generosity.

First of all, the provision of social goods and services hinges on the administrative capabilities of public bureaucracies. A strong linkage between policy outputs and social outcomes presumes an impartial, non-partisan, and efficient system of public administration. However, policy opponents can more easily weaken this linkage when corruption and mismanagement plagues public administration. Policy opponents can use a pliable civil service system to undermine the influence of regulators, raise legal challenges, weaken monitoring and enforcement mechanisms, and dilute sanctions for noncompliance in order to circumvent policies they find inconvenient or disagreeable. Under such circumstances, increasing the size of the welfare state may actually reduce happiness, because individuals may not appreciate funneling more taxes into a 'broken' welfare system.

Several studies examining the relationship between institutional quality and happiness confirm these intuitions. Quality of governance research illustrates that individuals are happier in societies where governments and public bureaucracies are widely believed to be effective and efficient in the deliverance of public goods and services (Helliwell 2006*b*; Helliwell and Huang 2008; Holmberg, Rothstein and Nasiritousi 2009; Layard 2006; Ott 2010, 2011; Samanni and Holmberg 2010; Whiteley et al. 2010). Good governance directly contributes to happiness by ensuring that citizens are treated with care and respect (Ott 2010). This increases the 'procedural utility' of consuming public goods and services (Frey and Stutzer 2010, 2000, 2005; Whiteley et al. 2010). Secondly, high quality institutions ensure all citizens are treated impartially, and this increases happiness by fostering interpersonal and political trust (Kumlin 2004; Kumlin and Rothstein 2005; Rothstein 2010).

Although these results are promising, far less research explicitly explores the relationship between

[7]Hessami reports an inverse U-shape relationship between levels of expenditure and SWB, suggesting that welfare has decreasing marginal utility on individual SWB beyond a certain threshold.

welfare state size, administrative quality, and happiness. One study (Bjornskov, Dreher and Fischer 2007) finds that the size of the welfare state (proxied by government consumption) only exerts a positive effect on happiness at high levels of institutional quality. However, the authors also find that the results are highly sensitive to changes in the group of countries included in (or excluded from) the sample. There are also theoretical grounds for skepticism. Good administration, in and of itself, is morally ambiguous. If a state's primary policy objective is the mass extinction of individuals belonging to a particular ethnic or religious group, for example, an efficient, loyal administrative apparatus can actually hasten the realization of a terrible policy outcome. Although not nearly as extreme, a similar logic applies when thinking about the relationship between welfare and well-being. It may be the case that the efficient administration of poor policies can actually lead to lower happiness than if the same policies were administered poorly. For this reason, it is vital that any attempt to understand the relationship between must also consider the nature of the goods and services provided by the welfare state.

In keeping with the basic tenets of the livability perspective, I assume that individuals are happier to the extent that they satisfy more of their basic needs in life. While a thorough conceptual explanation of what constitutes a 'basic need' and where such needs come from is better left to social psychologists, political scientists have long recognized that drastic structural changes across many of the world's advanced, capitalist democracies has generated a series of new social risks (Bonoli 2005, 2007; Bonoli and Reber 2010; Bonoli and Hausermann 2010; Bonoli 2010; Esping-Andersen 2002). Such risks include unstable employment patterns, long-term unemployment, working poverty, single parenthood, demographic ageing, the role of women in the workforce, and the related issues stemming from reconciling the demands of work and family living. These new social risks, in turn, represent the unmet *needs* of new welfare state constituencies.

However, protecting individuals from new social risks requires an array of policy instruments distinct from those used to address the traditional risks defining many societies in the immediate post-war era. A traditional concern with income replacement policies—in the form of pensions, disability payments, or unemployment benefits—competes with additional concerns about the promotion of human capital and the empowerment of various family types to balance the exigencies of employment with childbearing. Unfortunately, current approaches fail to model these heterogeneities of risk—both theoretically and empirically. Overall measures of government size, welfare effort, or similar indicies of benefit generosity fail to differentiate between intended policy beneficiaries. States with seemingly robust welfare capacities may be grossly misallocating those resources, and this will influence happiness outcomes. The extent to which welfare resources are *allocated* between old and new social risks determines the extent to which the needs of particular welfare state constituencies are met. Greater resource misallocation suggests that the needs of more individuals go unmet. This, in turn, should correspond to lower levels of happiness. Failing to consider

the degree of misallocation in welfare state policy constitutes another potential source of omitted variable bias. The joint consideration of resource misallocation and administrative quality may help explain the lack of empirical consensus on the relationship between welfare and happiness in the literature.

Hypotheses

In sum, the concepts of resource misallocation and institutional quality suggest a way of reconciling the divergent findings in the literature on the relationship between welfare generosity and happiness. A sizeable welfare state is simply insufficient for promoting happiness. The effect of welfare is contingent on both the implementation and orientation of social policies. At high levels of institutional quality, the allocation of welfare resources will influence the effect of welfare state size on happiness. When welfare states cater towards insuring individuals from newer, post-industrial forms of social risk, the happiness effect of welfare size is positive. People benefit from the efficient administration of appropriately-targeted social goods and services. However, when welfare states efficiently administer anachronistic social policies, the happiness effect of welfare will be negative. Not only are individuals hurt by being effectively insulated from outmoded forms of social risks, this disconnect between high administrative capacity and poor policy output may likely generate frustration and disillusionment with the welfare state. This leads to the following hypothesis:

H1: At high levels of institutional quality, there will be a significant difference between the happiness effect of welfare size across different levels of resource misallocation.

By contrast, the effect of allocation will be far less significant at lower levels of institutional quality. When public institutions are less efficient and more prone to corruption, patterns of resource allocation will be less relevant for happiness because, in either case, both types of social programs will suffer from poor administration. Poor administration undermines the positive effects of having an appropriately calibrated program of social goods and services, but it also buffers individuals against feeling the worst effects of grossly misallocated social programs. Thus, the happiness effect of welfare should be relatively similar at low levels of administrative quality:

H2: At low levels of institutional quality, there will be no significant difference between the happiness effect of welfare size across different levels of resource misallocation.

The moderating effect of administrative quality also influences expectations about when welfare size will have, in absolute terms, the greatest influence on happiness. The size of the welfare state should have the strongest positive effect on happiness when social programs are oriented towards new social risks *and* when institutional quality is high. In this best-case scenario, individuals benefit from the efficient administration and implementation of well-designed social policies. This leads to

the following hypothesis:

H3: The size of the welfare state will have the strongest positive effect on happiness when institutional quality is high and resources are allocated toward insuring individuals from newer forms of social risk.

If high quality institutions calibrated towards the alleviation of new social risks maximizes the happiness effect of welfare state generosity, the exact opposite scenario—characterized by low quality institutions and a bias towards old social risks—seems like the obvious choice for a situation in which welfare state size would produce the least happiness benefit. As argued above, both factors are considered inimical to the promotion of happiness. However, the situation changes when the effects of both factors are considered jointly. Poor quality institutions actually buffer individuals against feeling the worst effects of anachronistic social policies. Instead, welfare generosity produces the greatest unhappiness when institutional quality is *high* and spending policies privilege older social risks. High quality institutions ensure the exposure of welfare state constituents to the worst effects of a poorly calibrated welfare state. This leads to the fourth and final hypothesis:

H4: The size of the welfare state will have the strongest negative effect on happiness when institutional quality is high and resources are allocated toward insuring individuals from older forms of social risk.

To promote greater clarity, all anticipated relationships are presented visually in Table 1 below.

TABLE 1 ABOUT HERE

Research Design

The main hypotheses of this paper assess the relationship between resource allocation, institutional quality, and happiness. Allocation is proxied by the New Social Risk Share (NSRS) measure (Tepe and Vanhuysse 2010), a spending variable designed to measure the extent to which public welfare expenditures cater towards the alleviation of new, post-industrial risks.[8] Measures of institutional quality are derived from the World Bank Governance Indicators Dataset. Subjective well-being data are taken from individual responses to questions about life satisfaction on the fifth wave of the World Values Survey (WVS) (2005-2008). Using this data set allows easy replication and extension of findings from a recent study on the relationship between the size of the welfare state and life satisfaction by Flavin et al (2011). The authors of this study report a positive, significant relationship between social expenditures (as a % of GDP) and individual levels of life satisfaction

[8] All variables used in this study, including detailed calculation information, are summarized in the Appendix.

across 15 OECD countries.[9] Replicating and extending these results permit a controlled analysis of how allocation and institutional quality moderate the relationship between welfare state size and life satisfaction. Finally, as a robustness check, hypotheses are also tested against data on life satisfaction taken from the third round of the European Social Survey (ESS) (2006-2007).[10]

Before predicting levels of individual happiness, however, we must confront the fact that measures of resource allocation will be partly endogenous to structural characteristics of domestic labor markets. Higher NSRS values, for example, do not constitute *a priori* evidence of a properly calibrated welfare state. Higher NSRS values may simply reflect high levels of female labor force participation and/or high fertility rates. A variable measuring the year in which each country experienced the onset of post-industrial risks (Bonoli 2007; Tepe and Vanhuysse 2010) is included to control for the prevalence of new social risks within domestic labor markets. Earlier post-industrial transitions imply greater functional pressures for reallocating welfare resources towards new social risks.

The analysis employs a two-level, hierarchical model. This allows factors at the levels of country (Level 2) and individual (Level 1) to explain variation in individual happiness. Failure to account for the hierarchical nature of the data violates the assumption of independent errors, which can lead to biased standard errors and invalid inferences about the effects of key societal-level variables (Skrondal 2004; Steenbergen 2002). This modelling approach is also based on encouraging findings from the unconditional, or null, model (Appendix). The variance component for Level 2 is statistically significant in both datasets. This indicates that macro-level factors systematically shape the extent to which individuals feel satisfied or happy about the lives that they lead. Further analysis reveals that these macro-level factors account for roughly 6% of the total observable variance in the dependent variable using the WVS dataset, and 12% of the total observable variance in the ESS dataset.[11] Given that the dependent variable is measured at the individual level, it is not surprising that Level 1 factors account for the vast majority of the variance in life satisfaction (Steenbergen 2002). However, failure to investigate Level 2 sources of variance precludes us from identifying important relationships that potentially shape feelings of life satisfaction. This may ultimately result in incorrect substantive conclusions about the policy conditions under which the size of the welfare state could help individuals succeed in the pursuit of happiness.[12]

[9] Countries analyzed from the World Values Survey dataset include: Australia, Canada, Finland, France, Germany, Great Britain, Italy, Japan, the Netherlands, Norway, South Korea, Spain, Sweden, Switzerland, and the United States.

[10] Countries analyzed from the European Social Survey include: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, the Netherlands, Portugal, Spain, Sweden, and Switzerland.

[11] See Rabe-Hesketh and Skrondal (2008) for the formula used to find the statistics discussed here.

[12] Flavin et al report country-clustered, Huber-White robust standard errors to account for between-country heteroskedasticity and within-country correlation. However, they also use a hierarchical modeling strategy to account for the nested nature of the data and find substantively similar results. I also use both estimation techniques and find no substantive differences between them, either. Hierarchical results are reported merely as a function of personal

Given the nested nature of the data and these encouraging findings from the null model, model estimation proceeds by means of a multi-level, mixed-effects linear regression. Although respondents answered questions about their perceived life satisfaction and happiness using a multi-step ordinal scale, the dependent variable is treated as a continuous variable in the analysis. Ferrer-i-Carbonell and Frijters (2004) find that assuming ordinality or cardinality makes no difference in the analysis of happiness data, and treating the dependent variable as continuous follows a convention used by many in the literature, including Flavin et al (2011). The life satisfaction of individual i in country j is thus modeled as follows:

$$LifeSatisfaction_{ij} = \beta_0 + \beta_1 X_{1ij} + \cdots + \beta_n X_{nij} + \alpha_1 W_{1j} + \ldots + \alpha_m W_{mj} + \zeta_j + \epsilon_{ij},$$

where the happiness of individual i in country j is explained by the global average (β_0), individual characteristics (X with estimator β), and country-level characteristics (W with estimator α). The error term for each country is ζ_j, and the error term for each individual is ϵ_{ij}. The variance components for all models are listed in the Appendix. The analysis was conducted using Stata 12.1.

Results

Table 2 presents results on the relationship between allocation, administrative quality, and life satisfaction using Wave 5 of the World Values Survey. Model 1 reproduces the results from Flavin et al (2011) on the relationship between social spending and life satisfaction. A larger welfare state exerts a significant and positive effect on the dependent variable. However, the effect of social expenditures is no longer significant after we introduce controls for the share of resources allocated towards new social risks and administrative quality in Model 2. This provides suggestive evidence that the relationship between welfare generosity and life satisfaction may vary over different combinations of these control variables. Administrative quality exerts a strong, significant, and positive effect on life satisfaction. This resonates with the findings of other studies on the relationship between government quality and subjective well-being. The effect of the NSRS variable is insignificant.

TABLE 2 ABOUT HERE

Model 3 examines the interactive effect of NSRS and social expenditures. The significant interaction term indicates that the happiness effect of social expenditures varies across different levels of the NSRS variable. To facilitate interpretation of this effect, Figure 1 graphs the interaction between NSRS and social expenditures. Controlling for the level of administrative quality, greater NSRS values cause an increase social expenditures to exert an increasingly *negative* effect on life satisfac-

preference.

tion. When NSRS values are low, the marginal effect of an increase in social expenditure is positive until NSRS values of approximately 0.3. The effect becomes significantly negative, however, after NSRS values of 0.45. Although the relationship here would seem to contradict the logic outlined above—whereby greater allocations towards to alleviation of newer social risks should increase the happiness effect of social expenditures—it does suggest that the moderating effect of the NSRS variable may also be conditional on different levels of administrative quality.

FIGURE 1 ABOUT HERE

Before modeling this heterogeneity, we examine the interactive effect of administrative quality and social expenditures on life satisfaction in Model 4. Again, we find that the interaction term is significant, and Figure 2 plots this relationship. Controlling for the level of NSRS, this graph illustrates that an increase in social expenditures also exerts—just barely—an increasingly *negative* effect on life satisfaction as administrative quality increases. In other words, the data suggest that the happiness effect of welfare is strongest when administrative institutions are least efficient and most prone to corruption. Welfare expenditures could be a compensatory mechanism for inefficient governance, but any judgments should be reserved until we explore the joint influence of different levels of NSRS and administrative quality on the happiness effect of social expenditures.

FIGURE 2 ABOUT HERE

To remedy this problem, Model 5 introduces a three-way interaction term between the NSRS variable, administrative quality, and social expenditures. The interaction term is positive, although a three-way interaction between three continuous variables does not lend itself to easy interpretation. To facilitate this, Figure 3 presents this interaction visually. Figure 3 graphs predicted life satisfaction scores across four different combinations of the moderating variables—NSRS and administrative quality. The y-axis represents predicted life satisfaction scores, while the x-axis plots social expenditures as a percentage of GDP. The high and low values of each of the moderating variables respectively correspond to a one standard deviation change above and below each variable's global mean.

Figure 3 illustrates three important relationships. First, the slope contrast between the lines at high levels of administrative quality (lines green and orange) appears much starker than the corresponding contrast between the lines at low levels of administrative quality (lines blue and red). This suggests that the allocation of welfare state resources exerts a stronger influence on the happiness effect of welfare size at higher levels of administrative quality. When administrative quality is low, the poor provision of social goods and services tempers the effect of particularly well- or poorly-allocated social resources. This visual evidence supports H1 and H2. Second, we observe that the line denoting high levels of NSRS and administrative quality (line orange) has the steepest positive slope. This suggests that the size of the welfare state exerts the strongest positive effect

on subjective well-being when welfare resources are designed to insulate individuals from post-industrial forms of social risk and welfare programs are administered fairly and efficiently. This supports H3. Conversely, the size of the welfare appears to exert the strongest *negative* effect on subjective well-being when administrative quality is high but NSRS is low. This supports H4. The worst effects of poor resource allocation are enhanced when public welfare bureaucracies effectively administer anachronistic social policies and programs.

FIGURE 3 ABOUT HERE

Although Figure 3 presents promising visual evidence supportive of our main hypotheses, the differences in slopes need to be examined more rigorously. Table 3 presents the differences in slopes across all the four different combinations of the moderating variables depicted in Figure 3. These are listed in the first column on the left. The second column presents the marginal effect of a unit increase in social expenditures on life satisfaction at different levels of each of the moderating variables. The effect is positive, but not significantly different from zero, when institutional quality and NSRS are both high and when both are low (Rows 1 and 4, respectively). The effect is negative and significant when one of the moderating variables is high and the other is low (Rows 2 and 3).

The third column, $(S_1 - S_x)$ reports the difference between the slope of Row 1 (S_1) and the slopes of all other Rows. This allows us to test H3. If the happiness effect of welfare is strongest when resources are highly sensitive to new social risks and administrative quality is high, the difference between S1 and all other slopes should be positive and significant. While the effect of S1 is larger than the effects of all other combinations, the difference is only significant when compared to a welfare state characterized by high administrative quality and a low sensitivity to new social risks (S_2). On this basis, we reject H3. However, because the difference between S_1 and S_2 is significant, we have strong evidence that the effect of resource allocation is significant at high levels of administrative quality (H1).

The fourth column, $(S_2 - S_x)$ reports the difference between the slope of Row 2 (S_2) and the slopes of Rows 3 and 4. This allows us to evaluate whether the happiness effect of welfare is most injurious to life satisfaction when institutional quality is high but NSRS is low (H4). When we consider these results along with the results from the top cell of the previous column, we find that the happiness effect of welfare is significantly lowest when administrative quality is high but NSRS is low. This confirms H4.

Finally, the fifth column, $(S_3 - S_x)$ examines the influence of resource allocation on the happiness effect of welfare when administrative quality is low. The sole entry in this column reports the difference between the slope of Row 3(S_3) and the slope of Row 4 (S_4). It is hypothesized that the allocation of resources will not make a difference in the happiness effect of welfare at low levels of administrative quality. However, the results here show that the happiness effect of welfare is

significantly higher when both institutional quality and NSRS are low. This leads us to reject H2.

TABLE 3 ABOUT HERE

To ensure that the observed relationships are not merely an artifact of the data, the analysis is rerun against data from the third round of the European Social Survey (2006-2007). This allows us to examine whether the same relationships apply to a different set of cases observed at a similar point in time. To ensure continuity between the analyses, similar controls are introduced at both the individual- and national-levels. Table 4 presents the results of this analysis. Model 6 presents the basic effect of social expenditures on life satisfaction; measures of administrative quality and resource allocation are omitted. Unlike in the previous analysis, the size of the welfare state fails to exert a significant effect on individual levels of life satisfaction. The welfare effect remains insignificant after introducing controls for administrative quality and NSRS in Model 7. Models 8 and 9 respectively introduce interaction terms between social spending and NSRS (Model 8) and between social spending and administrative quality (Model 9). Compared to Models 3 and in Table 2, the effects of both interaction terms are now *positive* and significant. Plots of the interaction terms from both models (not shown) reveal that the happiness effect of welfare size increases as institutional quality improves and welfare policies cater to post-industrial forms of social and economic risk. This provides us with even more evidence that we need to model the joint effect of administrative quality and resource allocation before making any claims about the role of welfare state size in shaping happiness outcomes.

TABLE 4 ABOUT HERE

As before, Figure 4 and Table 5 help us explore the significant interaction term between social expenditures, administrative quality, and NSRS in Model 10. From the graph and the second column of Table 5, we observe that welfare size only exerts a positive and significant effect on life satisfaction when both administrative quality and NSRS are high. Under all other combinations with respect to these two moderating variables, the size of the welfare state exerts a significantly *negative* effect on life satisfaction. A comparison of slopes against $S1$ in column three reveals that the size of the welfare states increases life satisfaction the most when both administrative quality and NSRS are high. This not only confirms H3, but also suggests that that the happiness effect of welfare size is very sensitive to the allocation of welfare resources at high levels of administrative quality. The difference in the marginal effects of $S1$ and $S2$ is positive and significant in favor of $S1$. This confirms H1. The slope comparisons against $S2$ in column four also confirms H4. The size of the welfare state is most harmful to subjective well-being when administrative quality is high but welfare state spending privileges traditional forms of social risk. The comparison between resource allocations at low levels of administrative quality in the last column suggests that allocation also matters at low levels of administrative quality. Because the difference is significant, we reject H2.

FIGURE 4 ABOUT HERE

TABLE 5 ABOUT HERE

Interpretation

Table 6 summarizes how each of the hypotheses examined here fare against the data. First of all, the relationship between H1 and H2 must be reconsidered. It was originally hypothesized that the happiness effect of welfare size will only be influenced by the allocation of welfare resources when administrative quality is high. Poor quality institutions prevent individuals from realizing the benefits of extremely well-calibrated welfare states as well as the costs of extremely poorly-calibrated ones, so the allocation of welfare state resources is less consequential for happiness outcomes. When administrative quality is high, however, the crisp and efficient implementation and administrative of welfare policies will ensure that—for better or for worse—individuals are more readily exposed to the consequences of substantive choices made in welfare policy programs. The significant difference between different allocation types at high levels of administrative quality follows expectations, but it was not anticipated that the effect of allocation would also be significant when administrative quality is poor. Allocation evidently matters at all levels of administrative quality. However, the basic intuition of the argument holds if we compare the differences in magnitude between different levels of NSRS at different levels of administrative quality. In both datasets, the difference in slopes between well- and poorly-calibrated welfare states is far greater when administrative quality is high. If we compare the values between the uppermost entries in columns three and five in both slope tables (Tables 2 and 4), we observe that the absolute difference in slopes is far greater at high levels of administrative quality. This still provides evidence that the extent of (mis)allocation in welfare programs matters more for the happiness effect of welfare size at higher levels of administrative quality.

Secondly, the data suggest that mismatches between the administrative capacities and policy orientation of welfare states cause the size of the welfare state to exert increasingly negative effects on individual subjective well-being. It was anticipated, and confirmed, that a combination of high institutional quality and low NSRS would cause the size of the welfare state to undermine life satisfaction more than any of the other 3 combinations. It was not expected, however, that a mismatch between capabilities and policy outputs would exert a strong negative effect at low levels of institutional quality, as well. In both data sets, the size of the welfare state exerts the second largest *negative* effect on life satisfaction when the welfare state has high NSRS values but poor administrative institutions. In both cases, disillusionment with the welfare state could explain the strong negative reaction by individuals as the size of the welfare state increases. When institutional

quality is high, individuals may expect the state to quickly and efficiently recalibrate itself towards the alleviation of post-industrial needs and risks. The disconnect between capabilities and outputs may not bother individuals when the size of the welfare state is small, but frustration may grow as the welfare state increases in size. Constituents will not enjoy making greater social contributions through taxes to see an efficient government fail to make changes in the orientation of important social policies. In the other case—when the welfare state is oriented towards new social risks but plagued by inefficiencies—individuals may grow upset as administrative weaknesses prevent them from realizing the benefits for which they are all supposedly paying. In this case, a welfare state with good intentions but poor execution also promotes misery by creating expectations that go unfilled.

TABLE 6 ABOUT HERE

Conclusion

This paper helps explain the cacophony of conclusions circulating in the literature about the relationship between welfare state size and happiness. In a sense, everyone is right; the size of the welfare state is simultaneously a force for happiness and misery. However, instead of writing off these divergent results as a function of different methodological choices, this paper identifies in administrative quality and resource allocation two important factors that significantly moderate the effect of social expenditures on happiness. Increasing the size of the welfare state can actually undermine subjective well-being when gross mismatches exist between the administrative capabilities and policy orientation of the welfare, particularly when administrative capacities are high but the welfare state continues to privilege outmoded forms of social and economic risk. The evidence here tentatively suggests that increasing the size of the welfare state increases utility the most at very high levels of administrative quality and resource allocation towards new social risks.

These findings have some important normative implications for policymakers. First, because this study promotes a more nuanced picture of the relationship between welfare spending and happiness, policymakers should rethink increasing the size and scope of the welfare state as panacea for misery. In polities plagued by inefficiencies in the administration of public goods and services or anachronistic social protection regimes, funneling more resources into the welfare state can actually make matters worse. At the same time, reform efforts need to be comprehensive. Increasing administrative efficiency without a concomitant, substantive reorientation of welfare policies may do more harm than maintaining the status quo. A similar logic applies if the pace of reform to welfare policies outstrips the capacity of the state to administer these policies.

Future studies would do well to extend the arguments here to new empirical domains. Experi-

menting with different case selections and time periods will help extend the robustness of these findings or identify important scope conditions to the main arguments of this paper. Longitudinal data would allow us to predict how *changes* in levels of administrative quality and the allocation of welfare resources map onto the changes in happiness individuals experience over time. Additionally, future research should also strive to verify the links in the causal chain connecting different mixes of social expenditure, administrative quality, and to subjective quality of life outcomes. If, for instance, disillusionment with a welfare state characterized by an orientation-capability mismatch drives unhappiness when spending increases, social scientists could explore public perceptions of and attitudes towards the welfare state to confirm this mechanism.

This is an important and growing area of research in political science. The welfare state is an important tool societies use to ensure that the basic needs of its citizens are met. With fiscal austerity constraining the ability of leaders to expand social entitlements across many advanced, post-industrial democracies, government's social obligation to its citizens is under threat. Against such fiscal constraints, finding novel ways to ensure that the welfare state can produce the greatest number of 'smiles' per dollar spent is in the interest of all.

Tables and Figures

Table 1: Anticipated Relationships: Happiness Effect of Welfare Generosity

	High Quality	Low Quality
New Social Risks	++ [Q1]	+/- [Q3]
Old Social Risks	- - [Q2]	+/- [Q4]

H1: difference between Q1 and Q2 is significant
H2: difference between Q3 and Q4 is not significant
H3: difference between Q1 and Q2-Q4 is positive, significant
H4: difference between Q4 and Q1-Q3 is negative, significant

Table 2: Random-Intercept Models of Life Satisfaction, (WVS Wave 5: 2005-2008)

	(1)		(2)		(3)		(4)		(5)	
NSRS*Admin*Spending									2.666***	(0.770)
NSRS*Admin									-55.712***	(15.399)
NSRS*Spending					-0.443***	(0.105)			-3.152***	(0.882)
Admin*Spending							-0.124***	(0.024)	-1.042***	(0.259)
Admin. Quality			0.388***	(0.113)	0.511***	(0.097)	3.262***	(0.564)	22.688***	(5.273)
NSRS			-0.542	(0.644)	8.314***	(2.167)	-0.606	(0.611)	64.774***	(17.323)
Social expenditures	0.031*	(0.018)	0.015	(0.019)	0.164***	(0.034)	0.131***	(0.027)	1.167***	(0.279)
GDP per capita	-0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	-0.000*	(0.000)	0.000	(0.000)
Unemployment rate	-0.059	(0.048)	-0.040	(0.048)	-0.043	(0.051)	0.053	(0.040)	0.111***	(0.029)
NSR onset	-0.001	(0.015)	-0.001	(0.014)	-0.003	(0.010)	-0.035***	(0.009)	-0.025**	(0.011)
Individualism	0.083	(0.058)	0.066	(0.047)	0.023	(0.032)	0.019	(0.033)	-0.021	(0.027)
Income	0.078***	(0.016)	0.078***	(0.016)	0.078***	(0.016)	0.077***	(0.016)	0.076***	(0.015)
Education	-0.011	(0.015)	-0.010	(0.015)	-0.011	(0.015)	-0.010	(0.015)	-0.010	(0.015)
Health	0.708***	(0.032)	0.708***	(0.032)	0.708***	(0.032)	0.707***	(0.032)	0.705***	(0.032)
Female	0.092**	(0.043)	0.091**	(0.043)	0.091**	(0.043)	0.091**	(0.043)	0.090**	(0.043)
Age	-0.035***	(0.006)	-0.035***	(0.006)	-0.035***	(0.006)	-0.035***	(0.006)	-0.035***	(0.006)
Age sq.	0.000***	(0.000)	0.000***	(0.000)	0.000***	(0.000)	0.000***	(0.000)	0.000***	(0.000)
Married	0.363***	(0.050)	0.364***	(0.050)	0.363***	(0.050)	0.365***	(0.050)	0.368***	(0.050)
Unemployed	-0.336***	(0.114)	-0.337***	(0.114)	-0.334***	(0.115)	-0.337***	(0.114)	-0.335***	(0.115)
Church attendance	0.049***	(0.014)	0.049***	(0.014)	0.050***	(0.014)	0.049***	(0.013)	0.050***	(0.014)
Trust	0.213***	(0.050)	0.211***	(0.050)	0.208***	(0.050)	0.213***	(0.050)	0.210***	(0.050)
Protestant	-0.009	(0.067)	-0.005	(0.066)	-0.006	(0.065)	-0.006	(0.064)	-0.041	(0.063)
Muslim	-0.326**	(0.160)	-0.319**	(0.160)	-0.308*	(0.162)	-0.329**	(0.165)	-0.343**	(0.162)
Orthodox	-0.091	(0.166)	-0.082	(0.165)	-0.074	(0.168)	-0.069	(0.168)	-0.060	(0.174)
Hindu	-0.635	(0.404)	-0.624	(0.405)	-0.623	(0.405)	-0.636	(0.405)	-0.651	(0.399)
Buddhist	-0.062	(0.083)	-0.044	(0.078)	-0.046	(0.075)	-0.064	(0.080)	-0.013	(0.067)
Jewish	-0.447	(0.272)	-0.437	(0.271)	-0.431	(0.271)	-0.438	(0.272)	-0.456*	(0.271)
Catholic	-0.114**	(0.055)	-0.101**	(0.052)	-0.097*	(0.051)	-0.107**	(0.052)	-0.132**	(0.054)
Constant	5.688	(31.010)	5.960	(27.322)	5.953	(20.779)	71.520***	(18.403)	27.895	(25.962)
N	10405		10405		10405		10405		10405	
Log-likelihood	-18992.194		-18989.111		-18985.048		-18984.627		-18979.294	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 1: NSRS X Social Expenditures (Model 3)

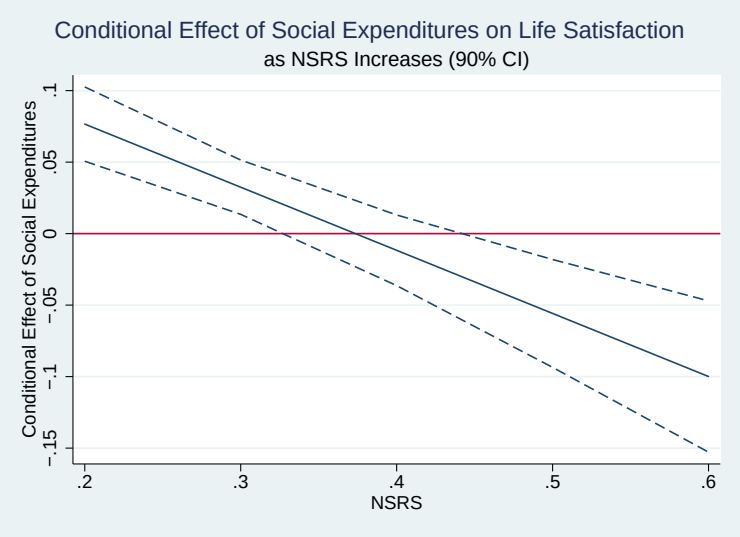

Figure 2: Admin. Quality X Social Expenditures (Model 4)

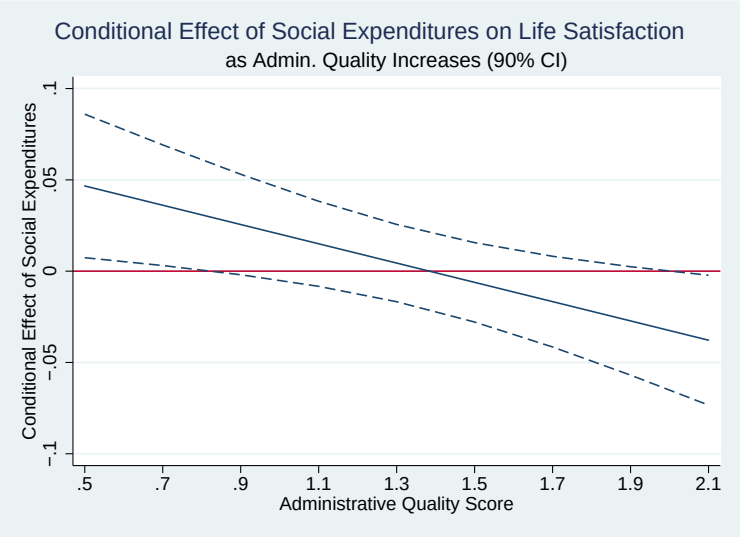

Figure 3: NSRS X Admin. Quality X Social Expenditures (Model 5)

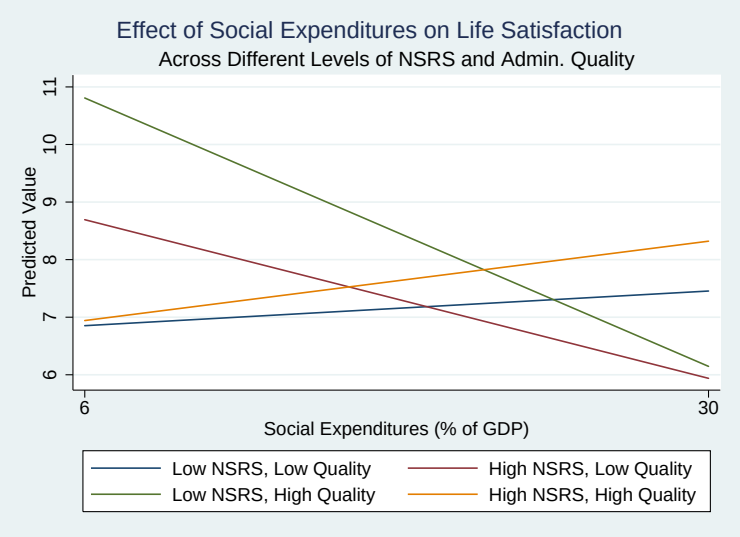

Table 3: Marginal Effects Slope Comparison: Model 5, WVS

Type	Slope	$(S_1 - S_x)$	$(S_2 - S_x)$	$S_3 - S_x$
1. High Quality, High NSRS	0.014			
	(0.040)			
2. High Quality, Low NSRS	-0.260***	0.273***		
	(0.051)	(0.086)		
3. Low Quality, High NSRS	-0.096***	0.110	-0.164***	
	(0.035)	(0.074)	(0.038)	
4. Low Quality, Low NSRS	0.013	0.001	-0.273***	-0.101***
	(0.008)	(0.046)	(0.046)	(0.030)

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Bonferroni correction used for post-hoc tests

Table 4: Random-Intercept Models of Life Satisfaction, (ESS Round 3: 2006-2007)

	(6)		(7)		(8)		(9)		(10)	
NSRS*Admin*Spending									11.847***	(0.854)
NSRS*Admin									-274.886***	(19.074)
NSRS*Spending					1.182*	(0.611)			-15.373***	(1.231)
Admin*Spending							0.240*	(0.129)	-3.683***	(0.295)
Admin. Quality			1.669***	(0.324)	2.949***	(0.773)	-4.735	(3.413)	87.314***	(6.525)
NSRS			-4.311***	(1.280)	-30.915**	(14.041)	-1.887	(1.662)	366.933***	(28.382)
Social expenditures	-0.037	(0.035)	0.013	(0.018)	-0.449*	(0.243)	-0.414*	(0.234)	4.301***	(0.409)
GDP per capita	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	0.000***	(0.000)
Unemployment rate	0.043	(0.063)	0.003	(0.059)	0.046	(0.050)	0.032	(0.062)	0.400***	(0.029)
NSR onset	-0.018	(0.015)	0.012	(0.010)	0.047*	(0.025)	0.016	(0.012)	0.162***	(0.008)
Wealthy	0.573***	(0.092)	0.575***	(0.091)	0.577***	(0.091)	0.575***	(0.092)	0.572***	(0.092)
Poor	-0.964***	(0.184)	-0.965***	(0.184)	-0.964***	(0.184)	-0.964***	(0.184)	-0.963***	(0.184)
Education	0.028	(0.064)	0.027	(0.064)	0.027	(0.064)	0.028	(0.064)	0.026	(0.063)
Health	0.523***	(0.042)	0.524***	(0.042)	0.524***	(0.042)	0.524***	(0.042)	0.523***	(0.042)
Female	0.070	(0.048)	0.069	(0.048)	0.070	(0.048)	0.070	(0.048)	0.070	(0.048)
Age	-0.049***	(0.013)	-0.049***	(0.013)	-0.049***	(0.013)	-0.049***	(0.013)	-0.049***	(0.013)
Age sq.	0.001***	(0.000)	0.001***	(0.000)	0.001***	(0.000)	0.001***	(0.000)	0.001***	(0.000)
Married	0.396***	(0.086)	0.396***	(0.086)	0.396***	(0.086)	0.397***	(0.086)	0.397***	(0.086)
Unemployed	-0.548***	(0.089)	-0.548***	(0.089)	-0.548***	(0.089)	-0.547***	(0.089)	-0.547***	(0.088)
Church attendance	0.049***	(0.011)	0.049***	(0.011)	0.050***	(0.011)	0.049***	(0.011)	0.049***	(0.011)
Trust	0.112***	(0.013)	0.112***	(0.013)	0.112***	(0.013)	0.112***	(0.013)	0.112***	(0.013)
Protestant	-0.403***	(0.087)	-0.411***	(0.088)	-0.414***	(0.088)	-0.410***	(0.089)	-0.410***	(0.089)
Muslim	-0.653***	(0.163)	-0.653***	(0.162)	-0.654***	(0.162)	-0.648***	(0.163)	-0.658***	(0.163)
Orthodox	-0.661***	(0.161)	-0.663***	(0.162)	-0.666***	(0.162)	-0.659***	(0.162)	-0.665***	(0.162)
Eastern	0.138	(0.567)	0.134	(0.568)	0.134	(0.568)	0.134	(0.568)	0.134	(0.567)
Jewish	-1.052***	(0.306)	-1.053***	(0.305)	-1.056***	(0.305)	-1.047***	(0.308)	-1.054***	(0.307)
Catholic	-0.365***	(0.085)	-0.368***	(0.085)	-0.369***	(0.085)	-0.363***	(0.087)	-0.373***	(0.086)
Individualism	0.182**	(0.078)	-0.093	(0.057)	-0.322**	(0.134)	0.064	(0.122)	-0.340***	(0.029)
Constant	41.837	(30.243)	-18.021	(20.184)	-78.315*	(46.443)	-19.143	(24.330)	-426.445***	(23.536)
N	14711		14711		14711		14711		14711	
Log-likelihood	-25623.045		-25619.222		-25617.302		-25617.136		-25597.032	

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 4: NSRS X Admin. Quality X Social Expenditures (Model 10)

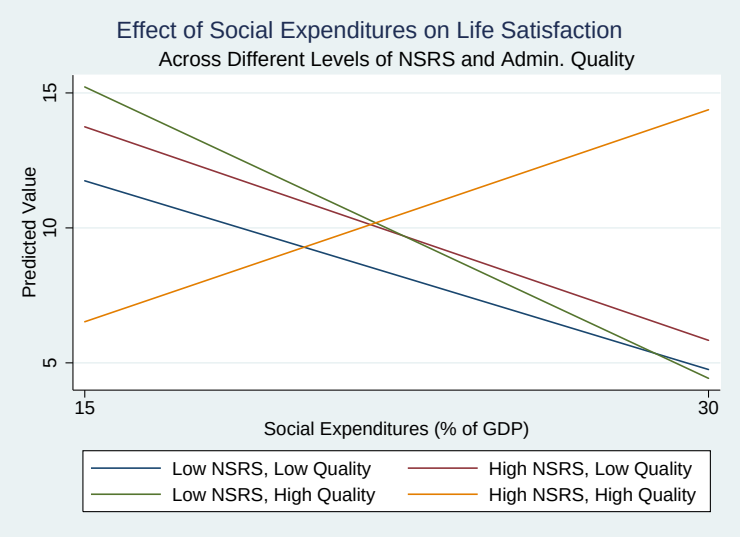

Table 5: Marginal Effects Slope Comparison: Model 10, ESS

Type	Slope	$(S_1 - S_x)$	$(S_2 - S_x)$	$(S_3 - S_x)$
1. High Quality, High NSRS	0.523***			
	(0.028)			
2. High Quality, Low NSRS	-0.720***	1.243***		
	(0.049)	(0.073)		
3. Low Quality, High NSRS	-0.527***	1.051***	-0.192***	
	(0.037)	(0.064)	(0.041)	
4. Low Quality, Low NSRS	-0.466***	0.990***	-0.254***	-0.061***
	(0.021)	(0.044)	(0.050)	(0.024)

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Bonferroni correction used for post-hoc tests

Table 6: Summary of Findings Across 2 Datasets

Hypothesis	WVS	ESS
H1	confirm	confirm
H2	reject	reject
H3	reject	confirm
H4	confirm	confirm

Appendix

Measurement of Variables

Level 1 (Individual-Level) Variables

All Level 1 variables are either taken directly or derived from Wave 5 of the World Values Survey (2005-2008) and Round 3 of the European Social Survey (2006-2007).

Life Satisfaction: In both datasets, life satisfaction scores represent an individual's response to the following question: 'All things considered, how satisfied are you with your life as a whole these days?' In the WVS, responses are coded along a 1-10 scale, whereby higher numbers correspond to higher levels of perceived life satisfaction. In the ESS data, responses are recoded according to a 1-11 scale, with higher values also corresponding with higher levels of perceived life satisfaction.

Age: Over the life course, an individual's level of happiness typically follows a U-shaped function. Individuals are significantly happier at the beginnings and ends of their lives than they are at the middle. As such, the study controls for the respondent's age and age-squared.

Income: Wealthier individuals tend to report higher levels of happiness than their less fortunate counterparts. In the WVS data, the income variable corresponds to the decile of the income distribution occupied by a respondent, whereby 1 corresponds to the 'lowest income decile' and 10 corresponds to the 'highest income decile.' Decile placement is based upon the respondent's self-reported income and the income distribution corresponding to the respondent's country of residence. The ESS does not, unfortunately, ask individuals to report their income in terms of deciles. However, one survey question asks respondents to express their feelings regarding current levels of household income. Respondents who responded that they were 'living comfortably on present income' were considered as part of the wealthy group. Those who responded that it was 'difficult' or 'very difficult' on their present income were considered as part of the poor group. The baseline category is the middling income group—those respondents who were 'coping' on present

income.

Employment Status: Unemployed individuals are significantly less happy than their gainfully-employed counterparts. Simple dummies are used to indicate whether the respondent is unemployed.

Education: Happiness tends to rise with education. In the WVS, education is measured using a nine-category scale ranging from no formal education to a completed university degree. In the ESS, education is measured using a four-category response item ranging from less than lower secondary education through completion of post-secondary education.

Health: In both surveys respondents are asked to provide an overall, subjective assessment of their health. In both datasets, a 5-category response item was recoded so that higher values correspond to higher levels of self-perceived health.

Gender: A dummy variable indicates whether or not the respondent is female.

Marital Status: Married individuals tend to report a higher level of happiness than those of an alternative marital status. A simple dummy variables captures whether or not the respondent is married.

Church Attendance: Religiosity tends to correlate positively with SWB. In both datasets, a seven-category response item captures how frequently individuals attend religious services. Higher values correspond to more frequent attendance.

Religious Denomination: Simple dummies correspond to a respondent's religious denomination. Where possible, the same range of dummy variables are used in the analysis of both datasets. Separate options for 'Hindu' and 'Buddhist' are not available in ESS survey. Instead, these options are both contained within the 'Eastern religions' response option.

Weighting survey responses: In the WVS, weights were assigned according to the weighting varible included in the original dataset. In the ESS data, weights were assigned to individual responses by the multiplicative interaction of the design and population weights included within the original dataset.

Level 2 (Country) Variables

New Social Risks Share (NSRS): This measure is defined as the ratio of spending on family benefits and active labor market policies (numerator) to the sum total of spending on family benefits, active labor market policies, unemployment benefits, survivors benefits, and incapacity

benefits (denominator). Sources: Tepe and Vanhuysse (2010); Organization for Economic Co-operation and Development (2010); Svensson (2012) and author's calculations.

Administrative Quality: This measure constitutes the average score across four performance categories taken from the World Bank Governance Indicators for each country-year: government effectiveness, regulatory quality, rule of law, and control of corruption. Higher scores correspond with higher administrative quality. This operationalization follows the method used by Helliwell and Huang in their recent study of the relationship between good government and well-being (2008). Sources: Helliwell and Huang (2008); Howell (2009); Svensson (2012).

Social Expenditure: This measure captures total public expenditures on social policy as a percentage of GDP. Covered areas include: old age, survivors, incapacity, health, family, active labor market programs, unemployment, housing, and a residual category of other social expenditures and subsidies. Sources: Flavin, Pacek and Radcliff (2011); Organization for Economic Co-operation and Development (2010); Svensson (2012)

GDP per capita: This measure is a control common to most studies within the literature. This measures GDP per capita converted to constant 2005 prices using rates of purchasing power parity. Sources: (2011; 2009; 2012).

Unemployment Rate: This measure is employed in nearly every study of SWB in the literature. National unemployment rates proxy economic outlook, as well as the chances of one becoming or remaining unemployed. Sources: (2011; 2012) and World Bank World Development Indicators.

New Risk Onset: This measure represents the average year in which each country in the dataset experienced the onset of three post-industrial, structural developments associated with the rise of new social risks: service employment as a percentage of total civilian employment, female employment rate, and the divorce rate. Sweden in 1970 constitutes the benchmark year (service employment = 54%; female employment rate = 58%; divorce rate = 30%). The new risk onset variable represents the average of the three years in which each country approached the Swedish 1970s levels of these indicators. Sources: Bonoli (2007); Tepe and Vanhuysse (2010).

Descriptive Statistics and Variance Components

Descriptive Statistics

Table 7: Descriptive Statstics: WVS Variables

Variable	Mean	Std. Dev.	Min.	Max.	N
Income	4.941	2.467	1	10	10405
Education	4.967	2.227	1	8	10405
Health	3.984	0.803	2	5	10405
Female	0.54	0.498	0	1	10405
Age	49.214	17.075	15	98	10405
Age sq.	2713.504	1736.334	225	9604	10405
Married	0.656	0.475	0	1	10405
Unemployed	0.08	0.271	0	1	10405
Church attendance	3.64	1.959	1	7	10405
Trust	0.43	0.495	0	1	10405
Protestant	0.301	0.459	0	1	10405
Muslim	0.014	0.119	0	1	10405
Orthodox	0.011	0.104	0	1	10405
Hindu	0.002	0.045	0	1	10405
Buddhist	0.06	0.238	0	1	10405
Jewish	0.005	0.068	0	1	10405
Catholic	0.409	0.492	0	1	10405
Admin. Quality	1.375	0.446	0.574	2.067	10405
NSRS	0.356	0.08	0.253	0.565	10405
Social expenditures	20.548	5.896	6.9	29.4	10405
GDP per capita	26802.069	4627.063	18423.73	36098.148	10405
Unemployment rate	6.646	2.208	3.7	11.1	10405
NSR onset	1983.839	8.302	1970	1999	10405
Individualism	7.606	1.917	3	10	10405

Table 8: Descriptive Statistics: ESS Variables

Variable	Mean	Std. Dev.	Min.	Max.	N
Wealthy	0.363	0.481	0	1	14711
Poor	0.167	0.373	0	1	14711
Education	2.683	1.073	1	4	14711
Health	3.803	0.901	1	5	14711
Female	0.564	0.496	0	1	14711
Age	50.553	18.484	15	101	14711
Age sq.	2897.284	1909.211	225	10201	14711
Married	0.582	0.493	0	1	14711
Unemployed	0.036	0.185	0	1	14711
Church attendance	3.074	1.504	1	7	14711
Trust	6.390	2.37	1	11	14711
Protestant	0.352	0.478	0	1	14711
Muslim	0.026	0.158	0	1	14711
Orthodox	0.007	0.082	0	1	14711
Eastern	0.007	0.081	0	1	14711
Jewish	0.002	0.044	0	1	14711
Catholic	0.584	0.493	0	1	14711
Admin. Quality	1.639	0.377	0.965	2.121	14711
NSRS	0.356	0.073	0.226	0.479	14711
Social expenditures	23.651	3.733	15.751	28.589	14711
GDP per capita	33895.855	6825.091	20353.811	49755.23	14711
Unemployment rate	6.51	2.294	3.4	10.3	14711
NSR onset	1986.527	7.47	1970	1996	14711
Individualism	7.183	1.337	5	9	14711

Variance Components

Table 9: Variance Components for life Satisfaction Models

	Component	Std. Error	*df*
Random Effects			
Null Model			
Level 2 intercept	.014**	.005	32
Level 3 intercept	.480**	.182	15
Model 1			
Level 2 intercept	.007*	.004	32
Level 3 intercept	.480**	.182	15
Model 2			
Level 2 intercept	.010	.007	32
Level 3 intercept	.102**	.047	15
Model 3			
Level 2 intercept	.012	.009	32
Level 3 intercept	.097*	.047	15
Unemployed	.247***	.081	31
Model 4			
Level 2 intercept	.012	.009	32
Level 3 intercept	.097*	.048	15
Unemployed	.252***	.082	31
Model 5			
Level 2 intercept	.012	.010	32
Level 3 intercept	.125*	.069	15
Unemployed	.254***	.087	31
Model 6			
Level 2 intercept	.012	.009	32
Level 3 intercept	.097*	.048	15
Unemployed	.211***	.068	31
Model 7			
Level 2 intercept	.012	.009	32
Level 3 intercept	.097*	.048	15
Unemployed	.231***	.082	31
Model 8			
Level 2 intercept	.012	.009	32
Level 3 intercept	.097*	.047	15
Unemployed	.241***	.081	31
Model 9	.082***	.023	12
Model 10	.020	.019	12

me

Intercepts and robust standard errors reported.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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