Empowering Women: The Role of Emancipative Beliefs

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In cross-national research, few studies analyse the influence of subjective beliefs on women's empowerment, and when they do, they treat subjective beliefs as an alternative explanation that rivals the influence of objective opportunities, such as the rise of knowledge societies. Under the theory of 'belief-mediated social change', we disagree with this approach and hypothesize that subjective beliefs do not rival but 'mediate' the influence of objective opportunities on women's empowerment. Analysing the empowerment of women over various domains, we find that the objective opportunities linked to the rise of knowledge societies advance women's empowerment, but only insofar as these opportunities engender a subjective belief in women's empowerment and other emancipative goals. This finding establishes a better understanding of the interplay between objective opportunities and subjective beliefs in advancing women's empowerment.

Introduction

The subordination of women to men is the most persistent form of group discrimination in human history (Nolan and Lenski, 1999, p. 102). Even today, women are less powerful than men in every existing society (Hurst, 2004, p. 73). Nevertheless, the degree to which women lack power relative to men varies between societies and, since recently, progress in women's empowerment has become one of the most forceful global trends (Hakim, 2000; Inglehart and Welzel, 2005; Paxton, Hughes and Green, 2008, p. 898). This *Rising Tide* (Inglehart and Norris, 2003) is of critical importance. The empowerment of women not only undermines the oldest form of discrimination, recent research evidences that this change is the key to development of peace, prosperity, and democracy (Sen, 1999, pp. 189–203; Fish, 2002; Coleman, 2004).

Scholars who reflect on the empowerment of women from a theoretical perspective see it as a broad phenomenon that advances across various domains (Mason, 1986; Malhotra, Schuler and Boender, 2002; Inglehart and Norris, 2003). Despite the breadth of the process in theory, empirical work on women's empowerment is largely domain-specific. Most studies limit themselves to just one domain of women's empowerment, such as women's labour market position (Winter, 1994; Ross, 2008), the percentage of women in parliament (Kenworthy and Malawi, 1999; Paxton 1997; Paxton and Kunovich, 2003), women's role in household decision-making (Mason, 1998), or women's education level (Desai and Alva, 1998). Because these studies use different empirical designs, their findings do not add up to a coherent picture of what advances women's empowerment simultaneously across various domains.

To overcome this shortcoming, we examine an encompassing index that measures women's *overall* empowerment across three domains: (i) resource acquisition, (ii) public activism, and (iii) positional achievement. We chose these three domains because the literature considers them as key to an overall

assessment of women's empowerment. For instance, in an extensive review, Malhotra *et al.* (2002) agree with Kabeer (2002, p. 435) who defines empowerment as 'the expansion of people's ability to make strategic life choices' and identifies 'resources', 'agency', and 'achievement' as the three key domains of empowerment. This notion resonates with Sen's (1999) 'human capability' approach as well as with the 'human empowerment' framework by Welzel and Inglehart (2008). According to these approaches, empowerment is equivalent to people's chances to shape their own as well as societal life. Resource acquisition, public activity, and positional achievement are three distinct domains of empowerment, corresponding with Kabeer's 3-fold emphasis on resources, agency, and achievement. The acquisition of resources empowers people because resources open opportunities to otherwise unavailable lifestyle choices. Activity in public life empowers people by creating opportunities to shape a society's agenda. Positional achievement empowers people by creating opportunities to guide the course of organizations. When women succeed in these domains, their opportunities to shape their own as well as societal life grow. By definition, this is women's empowerment.

The evidence of women's progressing empowerment is overwhelming in each of these domains. From 1990 to 2005, the Gender Development Index, a measure of women's acquisition of life resources, has improved substantially in 127 out of 129 countries (UNDP, 2008). The global average in the Gender Development Index climbed from 0.59 to 0.72 on a 0–1.0 scale and only two countries, Russia and Zimbabwe, show no improvement. Also by 2005, the UNDP's Gender Empowerment Measure, a composite indicator of women's positional achievement, improved in *all* of 93 countries since the first publication of this index in 1992 (UNDP 1995). The global average in the Gender Empowerment Measure climbed from 0.37 to 0.58 on a 0–1.0 scale over the period 1992 to 2005. In addition, estimates from the European and World Values Surveys (henceforth: Values Surveys) suggest that women's public activity increased in 37 out of 43 countries, lifting the average female activism rate from 15 per cent in 1981 to 23 per cent in 2005.

Previous work assumes that a number of societal conditions foster women's empowerment. Most of these conditions, like the availability of social service professions, address women's opportunities in an *objective* sense. By contrast, *subjective* beliefs in women's empowerment are rarely examined (Malhotra *et al.*, 2002). Most noteworthy among the few exceptions is the work of Hakim (2000), Inglehart

and Norris (2003) and Paxton and Kunovich (2003). Valuable as these contributions are, Inglehart and Norris (2003) analyse gender-related beliefs as a dependent variable, leaving aside how these beliefs affect women's empowerment. Paxton and Kunovich, for their part, do analyse the effect of gender-related beliefs but consider only one narrow aspect of women's empowerment, the percentage of women in parliaments. Hakim (2000, pp. 17, 72–82, 275, 288) also emphasizes the influence of subjective beliefs on women's empowerment but they are presented as one cause alongside objective conditions, such as the expansion of white-collar professions. This approach treats subjective beliefs as an alternative explanation that rivals the role of objective opportunities, which we consider misconceived. As we will outline, there are reasons to assume that subjective beliefs do not rival but 'mediate' the effects of objective opportunities on women's empowerment.

The idea of 'belief mediation' is rooted in classical and modern sociology, especially in the works of Weber (1964 [1922]), Elias (1978; 1987a, b; 2004 [1984]), and Hakim (2003). The basic assumption is that social practices, including the practices that subordinate women to men, persist because they are inspired by subjective beliefs in their legitimacy and desirability.[1] Consequently, purely objective opportunities affect social practices only indirectly, via their effect on actors' subjective beliefs of what is legitimate and desirable. Applied to women's empowerment, the idea of belief-mediation suggests that the effect of any objective opportunity on women's empowerment is mediated by this opportunity's tendency to engender subjective beliefs in the legitimacy and desirability of women's empowerment.

Drawing on theories of the 'knowledge society' (Bell, 1999 [1973], p. xxi; Stehr, 1994, p. 258), we argue that the transition to knowledge-driven service economies widens the opportunities of women to match the power of men for a host of objective reasons. However, we hypothesize that these objectively widened opportunities operate to the favour of women only in as far as they nurture a belief in the legitimacy and desirability of women's empowerment.

The idea that women's empowerment is a belief-related process looms prominently in the work of Hakim (2000, 2003). But to the best of our knowledge, this article is the first to test empirically the idea that subjective beliefs in women's empowerment do not rival but mediate the empowering effects of objective opportunities. The following section theorizes the idea of belief-mediated social change and applies it to women's empowerment. Then, we

present our measures and variables to test our hypotheses. Thereafter we present our findings and conclude with their implications.

Theory and Hypotheses

The Belief-Mediation of Women's Empowerment

The idea of belief mediation is inherent in classical sociology, most of which recognizes the necessity of subjective beliefs as a means to legitimize objective inequalities in opportunities. In Marx's (1967 [1860]) notion, objective socio-economic inequalities persist as long as they are supported by subjective beliefs in their legitimacy. Despite many differences to Marx, Weber (1964 [1922]) too saw a link between objectively existing power relations and people's subjective beliefs in legitimate types of power. Durkheim (1933 [1893]) as well thought that the way in which the social division of labour is objectively structured persists in connection with a subjective belief in the legitimacy of these structures. The idea of an 'objectivity–subjectivity' nexus continues through such diverse sociologies as those of Parsons (1964) and Bourdieu (1990). Subjective beliefs loom prominently in Parsons' idea of 'pattern maintenance', as well as in Bourdieu's concept of the 'habitus'.

According to these views, widening a group's objective opportunities will only advance this group to power if subjective beliefs in the legitimacy and desirability of this group's empowerment emerge. Thus, the effect of a group's objective opportunities on its empowerment should be 'belief-mediated.' If this is true for social groups in general, it should also be true for women in particular.

Implicitly, this is what many theories of women's empowerment assume. Chafetz (1988, pp. 10–22), a leading social theorist of gender inequality, argues that 'gendered' patterns of work organization diminish women's opportunities to advance to higher status in an objective sense, yet subjective beliefs in the legitimacy of women's lower status are necessary to appease women and make them accept their diminished opportunities. By logical implication, changes in the structure of work organization can open new opportunities for women to advance to higher status but these opportunities will only be effective if the beliefs arise that a higher status for women is legitimate and desirable. A similar logic is inherent in the works of Sanday (1981, pp. 163–172) and implied in Hakim's (2000, p. 288) concluding remarks on the 'social'

nature of the contraceptive revolution and the equal opportunities revolution:

Both are social revolutions, reflecting a new consensus that women can and should determine their own lifestyles, with one revolution removing barriers and the other revolution creating new opportunities.

The progressing empowerment of women over recent decades constitutes a true 'civilization process' in the understanding of Elias (1984 [1939]). Elias defines civilizing processes as changes in 'social configurations' that pacify inter-human relations and equalize power distances (1987a, 2004 [1984]), including the power distances between the sexes (1987b). In Elias's (1978) thinking, social configurations constitute objective states of affairs ('sociogenesis') backed up by subjective states of minds ('psychogenesis'). Hence, changing a social configuration, like male domination over women, requires a change of minds that supports a corresponding change of affairs. The implication of these propositions is that a change in an objective state of affairs to the advantage of women requires a corresponding change in subjective states of minds. Today, a similar position is taken by Hakim (2000, p. 63, 288; 2003, p. 140).

The logic suggested so far implies that an expansion in women's objective opportunities of empowerment changes real empowerment practices to the advantage of women by engendering a subjective belief in the empowerment of women. What is less clear is exactly why one should expect these changes in objective opportunities to trigger corresponding changes in subjective beliefs.

It is helpful in this context to consult psychological theories. Most fundamental for our purposes is Rokeach's (1968) 'opportunity response' model of the human mind. This model suggests that when existential stress narrows the opportunities of life, the human mind adopts a 'closed' orientation under which discipline, order, and authority are emphasized. By contrast, when existential security widens the opportunities of life, the human mind adopts an 'open' orientation under which liberty, tolerance, and equality become appealing. Quite logically, a patriarchal conception of gender roles is consistent with a 'closed' state of mind, as much as an emancipative notion of gender roles is consistent with an 'open' state of mind.

Three types of research confirm the 'opportunity response model.' Analyses of cross-national survey data on human values by Schwartz (1992, 2004) and by Inglehart (1997; Inglehart and Welzel, 2005) show that

belief systems with an emphasis on authority, conformity, and patriarchy prevail in existentially 'stressed' societies with widespread violence and poverty. By contrast, belief systems with an emphasis on liberty, tolerance, and emancipation are typical of existentially 'secure' societies in which peace and prosperity prevail. The same logic applies to value differences between groups with different socio-economic status within societies. Authoritarian-conformist-patriarchal values are more prevalent among existentially 'stressed' groups with low incomes, little education, and high unemployment. Libertarian-tolerant-emancipative values are more prevalent among existentially 'secure' groups with the opposite characteristics (Flanagan and Lee, 2003).

Experimental research shows that when one confronts people with threats to lose, they adopt a 'prevention focus' in which safe and routinized solutions to given problems are favoured. By contrast, when people are offered opportunities to gain, they adopt a 'promotion focus' in which experimentation with creative solutions is favoured (Foerster, Higgins and Idson, 1998). The same research finds that the prevention focus associates with a rigid mode of thinking in which authority, conformity, and patriarchy have appeal. Vice versa, the promotion focus associates with a flexible mode of thinking that increases the appeal of liberty, tolerance, and emancipation (ibid.). These findings imply that when a society is under permanent stress, the prevention focus becomes a chronic mode of orientation. Likewise, when life offers more opportunities for most people in a society, the promotion focus becomes a chronic mode of orientation.

The psychological explanation of belief change seems to conflict with the sociological notion that elite discourses are the constructive force of what people believe. There is no question of whether discourses that take place among intellectual elites frame ideas. What is critical to our argument is that these discourses make up a market of ideas placed within mass publics. Which ideas are more or less supported by the public depends on this public's prevailing psychological predisposition. In a public with a predominantly 'preventionist' predisposition, opinion leadership is more easily won with ideas that emphasize authority, conformity, and patriarchy. Vice versa, in a public with a predominantly 'promotionist' predisposition, opinion leadership is more easily won with ideas that emphasize liberty, tolerance, and emancipation.

Based on these rationales, we present a three-staged model of women's empowerment: (i) objective opportunities that empower women associate with (ii) subjective beliefs in the empowerment of women, which in turn associate (iii) with women's actual advancement to power.

Hypotheses to Test the Belief-Mediation of Women's Empowerment

The mediation logic of our model assumes that emancipative beliefs in the empowerment of women are a cause of women's actual advancement to power. In the absence of truly experimental data, it is ultimately impossible to establish causation. Still, even with predominantly cross-sectional data and with only a few measures of change over time, a number of necessary causality conditions can be tested. Bollen (1984) formulates three of these causality conditions. The first one, *association*, means that there must be a significant association between the alleged cause and effect. The second condition, *sequence*, stipulates that the association holds when the alleged cause is measured before its effect. The third condition, *isolation*, says that the association between alleged cause and effect has to withstand controls against other potential causes.

The isolation condition can be divided into five more specific conditions (Holland, 1984; Pearl, 2000). The first additional condition is *routing*: depending on where on a path from remote to proximate causes one places one's hypothesized cause, this cause must mediate the impact of the more remote causes. Otherwise, one has mis-specified the location of the alleged cause on the route of causation. The second additional condition is *co-dynamic*: change in the hypothesized cause must be significantly associated with change in the hypothesized effect. Otherwise, there is no dynamic relation, which forecloses a causal process. The third additional condition is *direction*: the association of cause and effect must be stronger in the hypothesized direction than in the opposite direction. Otherwise, reverse causality is responsible for the association. The fourth additional condition is *non-conditionality*: the hypothesized cause impacts on the effect in an unconditional way, which becomes obvious under control of potentially conditioning factors. Otherwise, the cause has to be re-specified as a conditional cause. The sixth condition is *micro-foundation*: the effect of a macro-cause on a macro-outcome must show up in the same direction between disaggregated versions of the cause and outcome variables. Otherwise, the macro-relation lacks a micro mechanism, in which case it is an ecological artefact (Coleman, 1990, p. 9).

We assume that subjective beliefs in the empowerment of women and related emancipative goals mediate the effects of objective opportunity structures on women's actual advancement to power. This claim can be broken down into several hypotheses, each of which specifies the mediation assumption with respect to another of the afore-mentioned conditions of causality. The first two hypotheses are obvious. *Association*: There is a statistically significant association between emancipative beliefs and women's empowerment. *Sequence*: This association exists in a sequential order with emancipative values measured before women's empowerment. The next five hypotheses are specifications of the isolation condition and are at the center of our analyses.

Hypothesis 1 (*routing*): Any objective opportunity's effect on women's empowerment diminishes considerably once we specify emancipative beliefs as a mediating variable in a path model from objective opportunity structures to emancipative beliefs to women's actual advancement to power.

Hypothesis 2 (*co-dynamic*): Emancipative beliefs have been increasing over recent decades and the amount of increase in these beliefs corresponds to the amount of advancement in women's empowerment to a significant extent.

Hypothesis 3 (*direction*): Prior measures of emancipative beliefs have a stronger effect on subsequent measures of women's empowerment than have prior measures of women's empowerment on subsequent measures of emancipative beliefs.

Hypothesis 4 (*non-conditionality*): Emancipative beliefs retain a significant effect on women's empowerment even under control of the conditioning role of institutions, such as district magnitudes and the dominance of leftist government.

Hypothesis 5 (*micro-foundation*): The aggregate-level effect of emancipative values on women's empowerment has a micro-foundation in that individual women's emancipative beliefs spur these women to expressive public action.

Variables and Measurement

To test our hypotheses we specify subjective beliefs in the empowerment of women and related emancipative

goals as a force that mediates the effects of a number of objective opportunity structures on women's actual advancement to power. In this model, objective opportunity structures constitute the *start* variables, subjective beliefs in the empowerment of women and related emancipative goals constitute the *mediating* variable, and women's actual advancement to power constitutes the *outcome* variable. Accordingly, we measure the start variables before the mediating variable and the mediating variable before the outcome variable. More precisely, we measure objective opportunity structures over the period 1990–1995, subjective beliefs in the empowerment of women and related emancipative goals over the period 1995–2000, and women's actual advancement to power over the period 2000–2005.

The Outcome Variable: Women's Overall Empowerment

Our analyses focus on women's empowerment in the three domains suggested by Kabeer (2002): resources, agency, and achievement. We operationalize the resource domain in terms of resource acquisition, the agency domain in terms of public activism, and the achievement domain in terms of positional achievement.[2]

To measure women's empowerment in the domain of resource acquisition we use the *Gender Development Index* (GDI). The index summarizes women's (i) educational attainment, (ii) standard of living, and (iii) life expectancy relative to men (UNDP, various years). The index has a theoretical range from 0 to 1.0. A description of index construction can be found in Charmes and Wieringa (2003). For the year 2005, the GDI is available for 74 of the 83 societies included in the Values Surveys. For another three societies (Egypt, East Germany, Singapore) we replace missing 2005 GDI values with expected values calculated from existing values in 1997, using ordinary least squares (OLS) regression.[3] This procedure is called 'deterministic imputation' (Gelman and Hill 2007, p. 535) and is appropriate for temporally highly auto-correlated variables.[4] With a correlation between its 1997 and 2005 measures of $r = 0.958$, the GDI is indeed very highly correlated over time. The lowest GDI is found in Nigeria (0.46) and the highest in Iceland (0.96). The mean GDI is 0.82 (standard deviation: 0.18), which is about the level of Indonesia.

The second domain of empowerment is public activity. Activity in public life, especially actions that express group demands, empowers women by creating opportunities to shape the agendas of their societies.

To measure women's empowerment in this domain we calculate from the Values Surveys the *percentage of women per society who participate in expressive public actions* (*ACT*), including boycotts, petitions and demonstrations.[5] We divide this measure by 100 to bring it into a similar scale range as the *GDI*. For the year 2005, the activism measure is available for 52 societies. For another 39 societies[6] the activism measure is available in 2000. The *ACT* variable shows a very high temporal correlation between its measures in 2005 and 2000 ($r = 0.960$), which again makes 'deterministic imputation' appropriate. We therefore replace missing *ACT* values in 2005 with expected values calculated from existing values in 2000.[7] The mean value is at 0.17 (standard deviation: 0.11), which is about the level of Malta. Vietnam holds the lowest value (0.02) and Sweden the highest (0.50).

To measure women's empowerment in the domain of positional achievement we use the *Gender Empowerment Index* (*GEM*), which covers women's representation in (i) political, (ii) administrative, and (iii) economic decision-making positions. The theoretical range of this index is between 0 and 1.0 and a description of index construction is found in Charmes and Wieringa (2003). For 2005, this index is available for 64 of the 83 societies of the Values Surveys. There is no coverage of additional societies by earlier measures of GEM, so there is no basis for imputations. The mean GEM is 0.62 (standard deviation: 0.16), the level where we find Cyprus. The minimum GEM is found in Saudi-Arabia (0.25), the maximum in Sweden (0.91).

A factor analysis of the three domain-specific measures of women's empowerment shows that they represent a single underlying dimension under the Kaiser-criterion. A reliability analysis of the three domains yields a Cronbach's alpha of 0.84. This indicates a high degree of domain-interchangeability. Accordingly, we can reliably impute missing data from one domain with existing data from other domains.

For 58 of the 83 societies[8] in the Values Surveys sample we have measures of all three domains of women's empowerment in 2005. For these societies, we calculate women's overall empowerment by adding up the three domain-specific empowerments and dividing the sum by three. This yields an index with a possible minimum of 0 and possible maximum of 1.0. For another 18 societies[9] we have measures of two of the three domains of empowerment. For those societies, we calculate an auxiliary version of women's empowerment by adding up the two available domains and dividing the sum by two. For yet another seven societies[10] we have measures for just one domain of empowerment and take this as the auxiliary measure of women's overall empowerment.

The incomplete auxiliary measures correlate with the complete measure of empowerment in a range from $r = 0.846$ to $r = 0.981$, once more making deterministic imputation appropriate. In this case, we use OLS regressions to transform scores in the incomplete measures into expected scores for the complete measure. For the 25 societies for which the complete measure is missing, we use the expected scores as a surrogate.[11] Doing so, we end up with a measure of women's overall empowerment for all 83 societies of the Values Surveys. On this measure, the mean is 0.45 (standard deviation: 0.15), which is about the level of Chile. The minimum (0.27) is found in Uganda and the maximum (0.79) in Sweden.

In order to do justice to the fact that the measure of women's overall empowerment is more reliable when it is calculated from three components than when it is calculated from two or only one component, we weight each society by the number of components from which the overall empowerment index has been calculated. Accordingly, the 58 societies with all three measures obtain a weight of 1.0; the 18 societies with two measures obtain a weight of 0.66; and the seven societies with one measure obtain a weight of 0.33. For reasons of correctness, these weights are used in all of the following analyses, yet it has to be noted here that results remain the same when unweighted data are used.

The Mediating Variable: Emancipative Values

It is unlikely that a belief in the empowerment of women emerges in isolation. More plausibly, a belief as inherently emancipative as this emerges in connection with other emancipative orientations, forming a generally emancipative orientation. As 'emancipative' we denote a belief that emphasizes the equal empowerment of all people to freely actualize their potentials, irrespective of group differences, including those of sex.

To measure emancipative beliefs we construct an index that summarizes emancipative orientations over the four domains depicted in Table 1: (i) *equity*: an orientation that prioritizes gender equality over patriarchy; (ii) *liberty*: an orientation that prioritizes sexual freedom over restriction; (iii) *autonomy*: an orientation that prioritizes self-determination over obedience; (iv) *expression*: an orientation that prioritizes voice over security. In combination, these domain-specific orientations add up to an overall emancipative belief in the

Table 1 A formative index of emancipative beliefs based on the values surveys

Items	Agree that woman can be by herself	Disagree that men better political leaders	Disagree education to be more important for boys	Disagree that men have more right for job	Agree that abortion can be justified	Agree that homosexuality is justified	Agree that divorce is justified	Autonomy indicated as goal in education	Imagination as goal in education	Obedience not a goal in education	Faith not a goal in education	Priority on giving people more say in government affairs	Priority on giving people more say in local affairs	Priority on protecting freedom of speech
Variables in VS	V59	V61	V62	V44	V204	V202	V205	V12	V15	V19	V21	V71, 72	V69, 70	V71, 72
Coding	for each item 0, 0.33, 0.66, 1.0 from least to most egalitarian position				for each item 0, 0.1, 0.2, …, 0.9, 1.0 from least to most liberal position			for each item 0 for the non-autonomy position and 1.0 for the autonomy position				for each item 0, 0.5, 1.0 from least to most expressive position		
Subindex	EQUITY: priority on gender equality over patriarchy				LIBERTY: priority on sexual freedom over restriction			AUTONOMY: priority on self-determination over obedience				EXPRESSION: priority on voice over security		
Scaling	Item scores added and divided by 4 (multi-point 0 to 1.0 scale)				Item scores added and divided by 3 (multi-point 0 to 1.0 scale)			Item scores added and divided by 4 (multi-point 0 to 1.0 scale)				Item scores added and divided by 3 (multi-point 0 to 1.0 scale)		
Overall Index	Emancipative beliefs													
Scaling	Subindex scores added and divided by 4 (multi-point 0–1.0 scale)													

equal empowerment of every person to actualize her potentials, irrespective of group differences. The *specific* belief in *women's* empowerment is an embedded domain of this *general* belief in *human* empowerment.

Analysed over the country-pooled individual-level dataset, the four domain-specific beliefs are one-dimensional under the Kaiser-criterion, with factor loadings of 0.76 (liberty), 0.73 (equity), 0.64 (expression) and 0.54 (autonomy). The Kaiser–Meyer–Olkin measure for the quality of the one-dimensional solution is 0.67 and thus above the conventional acceptance threshold (0.60). Cronbach's alpha for the 14 items involved here is 0.74, showing a degree of reliability for the summary scale above the conventional acceptance threshold (0.70).

All four domain-specific beliefs are recoded into the same scale range with minimum 0 and maximum 1.0. The domain-scores are added up and the sum divided by four, yielding a multiple-point scale of emancipative beliefs from 0 to 1.0. For each society, we calculate its population's average score, which can be any fraction between 0 and 1.0. For 1995, this measure is available for 54 societies.[12] For another 29 societies[13] for which the 1995 measure is missing we replace the missing values with expected values calculated from the existing 2000 measure, using OLS regression.[14] This 'deterministic imputation' is appropriate for measures with very high temporal autocorrelation. Emancipative beliefs show a very high temporal autocorrelation ($r = 0.923$). The mean value in emancipative beliefs across 83 societies is 0.43 (standard deviation: 0.11), which is about the level of Chile. The lowest value (0.21) is found in Jordan, the highest value (0.67) in Sweden.

The Start Variables: Objective Opportunity Structures

The rise of post-industrial knowledge societies in advanced welfare states with established democratic procedures has widened the opportunities of women to advance to power in various ways (Darcy *et al.*, 1994; Matland, 1993; Paxton, 1997; Kenworthy and Malami, 1999; Hakim, 2000; Inglehart and Norris, 2003, pp. 1–72; Paxton and Kunovich, 2003; Paxton and Hughes, 2007). The spread of contraceptive knowhow has given women control over their fertility (Hakim, 2000, pp. 44–50) and modern household technology has shortened housework. Both developments free up time for women to invest in a career and to participate in activities

outside the household. At the same time, welfare systems have taken a portion of caretaking activities out of households and re-organized them as professional services, creating job opportunities for women in the private and public service sector. Growing incomes and fewer children provide families with the opportunity to invest into the education of both boys and girls. Greater investment into the education of girls meets the demands of knowledge economies whose emphases shift from a physically strong workforce in manufacturing to an intellectually skilled workforce in services (Hakim, 2000, p. 63). In the context of democratic structures, this levelling in the sex-related distribution of career opportunities creates a further opportunity for women to participate in politics, build political skills, and run for office.

To measure the various factors that affect women's opportunities to advance to power, the literature uses measures of socio-economic development, state capacity building, and democratic institutions. We follow this practice, using the following indicators.

Socio-economic development

The literature assumes that socio-economic development widens the opportunities of women because higher incomes free up resources for the education of girls and because the demands of the growing knowledge sector require an intellectually skilled and thus sexually mixed workforce (Hakim, 2000, p. 63). To measure economic development, most scholars use per capita GDP data. We also use GDP/capita figures for 1995 (at purchasing power parities) from the World Development Indicators (World Bank 2005). In addition, we use the World Bank's Knowledge Index ('KI') as of 1995.[15] 'The KI is the average of the normalized scores of a society on the key variables in the three knowledge economy pillars: education, innovation, and ICT' (World Bank, 2007). An inverse indicator of economic development that is supposed to indicate patrimonial structures and hence lack of opportunities for women to advance to power, is Ross's (2008) measure of a society's per capita oil and gas rent as of 1995. The per capita oil/gas rent measures 'a country's total rents from oil and gas divided by its mid year population' (Ross, 2008, p. 111).[16]

State capacity building

The literature assumes that state capacity building widens women's opportunities because establishing rule of law and effective state control over the means of violence reduce women's exposure to male coercion. Also, the provision of public services that were formerly women's responsibilities in the household creates career opportunities for women. We test the impact of state capacities using the World Bank's 'good governance' indicators as of 1996, the earliest year for which these data are available. These indicators are based on expert and population assessments of 'government effectiveness', 'regulatory quality', and 'rule of law', among other themes. We average the assessments of the latter three aspects into one overall indicator of *state capacities*.[17] To test the impact of public service provision, we use two indicators: the 1995 ILO (International Labor Organization) measure of the share of the public sector in a population's total employment and a 1995 measure of non-military public expenditure as a share of GDP. The latter is calculated by subtracting the SIPRI (Swedish Institute for Peace Research) 1995 military expenditure measure[18] from the World Bank's 1995 measure of total government expenditure.

Democratic institutions

The literature expects democratic institutions to widen women's opportunities because, when democracy is more strongly institutionalized, women become beneficiaries of a larger body of equal rights. Also, when democratic institutions endure for a longer time, women gain more experience in practicing their rights. We measure the levels at which democracy is institutionalized over 1990–1995, combining the three most established indicators: the autocracy–democracy index from the Polity IV project, the empowerment rights index from the CIRI project, and the civil and political freedom ratings from Freedom House.[19] We combine these three measures into an overall index of the level of democracy. To measure the endurance of democracy we use Gerring *et al.*'s (2005) 'democracy stock' variable as of 1995.[20] It adds the Polity IV democracy scores a country has accumulated over time, with a 1 per cent depreciation rate for each year to the past of 1995. We label this variable 'enduring democracy'.

Religious traditions

A factor that is very different in nature from objective opportunity structures but is also often invoked in explanations of women's empowerment addresses the ideological legacies of different religions. In line with the literature, we expect religious traditions to affect women's advancement to power only by their tendency to impede or facilitate the rise of emancipative values. For instance, Inglehart and Norris (2003) show that the dominance of Islam in a society is linked with an

ideological legacy that impedes the rise of emancipative beliefs, while the ideological legacy linked with the dominance of Protestantism has the opposite effect. To measure the relative dominance of Islamic and Protestant traditions we use the percentages of denominational Muslims and Protestants as of the mid 1990s, using data published by Inglehart and Welzel (2005, p. 279). We also use their indicator of 'Protestantism versus Islam', which is the percentage difference between Protestants and Muslims.

Institutional variants of democracy

A growing body of literature emphasizes institutional variations of democracy as factors that condition the effects of other factors on women's empowerment. The institutional factors include: a suffragist institutional tradition, a dominance of leftist parties, and a large district magnitude. The positive influence of a longer suffragist tradition is obvious. In terms of left party dominance, the women's movement has been linked to leftist parties and these parties have proven more supportive of feminist issues than parties of the Centre or Right (Jenson, 1982; Lovenduski and Norris, 1993; Katzenstein and Mueller, 1987, p. 6). Moreover, studies that look directly at the relationship between party ideology and women's inclusion find a strong positive relationship between women's recruitment and leftist party ideology (Kittilson, 1999, 2006). In addition to party attributes, many studies highlight the influence of electoral systems on women's recruitment to parliaments (Rule, 1994), the representation of minority interests, including the interests of women (Lijphart, 1999) and the expansion of the welfare state (Lijphart, 1999). Paxton and Hughes (2007, p. 139) suggest that the key attribute of proportional systems that facilitates these processes is larger district magnitudes.

To establish that emancipative beliefs have an unconditional effect on women's empowerment, we must test their impact against the potential conditioning role of institutional factors. However, these factors vary in meaningful ways only among minimally democratic countries, so we must move the analysis to a smaller subset of societies. This requires a separate analysis that we reserve for the end.

The suffragist institutional tradition is measured by the number of years since a country has (active and passive) female suffrage (UNDP, 2007). The dominance of leftist government is calculated from the Database of Political Institutions (Beck et al., 2001). We use the years between 1975 and 1995 that a left party was the major party in control of government. Data on average district magnitude is also taken from

the Database of Political Institutions. The average is calculated based on the years between 1975 and 1995.

Findings

Hypothesis 1: Routing

Our first hypothesis suggests that the effects of objective opportunity structures on the empowerment of women drop considerably once we control for emancipative beliefs. Does the empirical evidence support this hypothesis?

The rows in Table 2 list several alternative measures for each of the explanatory factors introduced in the previous section. These measures cover the period from 1990 to 1995. The left-hand column displays beta-coefficients (βs) from bivariate regressions, showing how strongly each indicator influences subsequent measures of women's empowerment, covering the period 2000–2005. As is obvious, quite a number of indicators show an astoundingly strong impact. Enduring democracy, state capacities, and knowledge economies impact, respectively, at $\beta = 0.62$, 0.73, and 0.90 on women's empowerment. Indicators of a society's religious tradition, by contrast, impact much weaker on women's empowerment, even though these effects are also statistically significant and show the expected signs.

Looking at a population's prevailing beliefs, the overall indicator of emancipative beliefs impacts as strongly on women's empowerment as the strongest objective indicator, at an exceptional $\beta = 0.90$. Moreover, no single component of emancipative beliefs shows an impact as strong as that of the overall measure of emancipative beliefs. Gender-egalitarian orientations *in isolation* do not favour women's empowerment as strongly as gender-egalitarian orientations *embedded in* a wider set of emancipative beliefs.

The middle column of Table 2 shows how strongly each of the objective conditions—religious, institutional, and economic—affects women's empowerment when we control for emancipative beliefs. Vice versa, the right-hand column shows results from the same regressions, indicating the impact of emancipative beliefs under control of the respective objective condition. Two results are noteworthy. First, each objective condition's effect on women's empowerment drops drastically after controlling for emancipative beliefs. Second, under control of any objective condition, the effect of emancipative beliefs drops, too, but in each case it remains considerably stronger than that of the respective objective condition. This result is a first confirmation of Hypothesis 1: the empowering

Table 2 1990–1995 predictors of women's empowerment 2000–2005

| Predictors (1990–1995)	Effects on Women's Empowerment 2000–2005: standardized β-coefficients (N)		
	Effect of left-hand side predictor without controls	Effect of left-hand side predictor controlled for Emancipative Beliefs	Effect of Emancipative Beliefs controlled for left-hand side predictor
Socio-economic development			
GDP/capita	0.73*** (153)	0.48*** (75)	0.75*** (75)
Oil rent/capita	0.12 (152)	−0.09 (78)	0.78*** (78)
Knowledge economy	0.90*** (135)	0.59*** (78)	0.63*** (78)
State capacity building			
Total state expenditure	0.32*** (151)	0.14 (74)	0.85*** (74)
Non-military state expenditure	0.44*** (137)	0.23* (73)	0.82*** (73)
Public sector size	−0.18 (59)	0.12 (45)	0.88*** (45)
State capacities	0.73*** (165)	0.49*** (81)	0.70*** (81)
Democratic institutions			
Democracy level	0.59*** (167)	0.26* (83)	0.73*** (83)
Active female suffrage	0.42*** (165)	0.04 (80)	0.85*** (80)
Passive female suffrage	0.42*** (165)	0.04 (80)	0.85*** (80)
Enduring democracy	0.62*** (161)	0.39*** (79)	0.78*** (79)
Religious dominance			
% Protestants	0.26** (168)	0.01 (83)	0.84*** (83)
% Catholics	0.23* (168)	0.17 (83)	0.87*** (83)
% Orthodox	0.11 (168)	−0.12 (83)	0.89*** (83)
% Muslims	−0.31*** (168)	−0.06 (83)	0.83*** (83)
Protestantism versus Islam	0.36*** (168)	−0.04 (95)	0.81*** (95)
Subjective beliefs			
Emphasis on equity	0.68*** (94)		
Emphasis on liberty	0.82*** (95)		
Emphasis on autonomy	0.63*** (95)		
Emphasis on expression	0.57*** (95)		
Emancipative beliefs	0.90*** (95)		

Significance levels: *$P<0.10$, **$P<0.01$, ***$P<0.001$.

effects of the objective conditions depend largely on their linkage to emancipative beliefs.

Results of multivariate analyses can differ from models including only two predictors. Model A in Figure 1 tests the effects of the most important objective conditions against each other. To do this we select from each category of conditions the one that proved to be most powerful in the previous analysis. Hence, we end up with a model in which the indices of the knowledge economy, state capacities, enduring democracy, and Protestantism versus Islam are tested against each other. The result shows that, under mutual controls, only the knowledge economy has a significant effect on women's empowerment. This is remarkable because, without controls, each of the

contested conditions showed a pronounced effect on women's empowerment. As it seems, state capacities, enduring democracy, and Protestantism versus Islam affect women's empowerment only insofar as they exist in connection with knowledge economies. This result is not driven by multicollinearity. Collinearity statistics for Model A are within acceptable limits (variance inflation factors below 5.0).

The next question is whether and to what extent the strong effect of the knowledge economy on women's empowerment is mediated by its tendency to generate emancipative beliefs. Should such mediation exist, three things should be observed: (i) the direct effect of the knowledge economy on women's empowerment drops drastically; (ii) emancipative beliefs show a
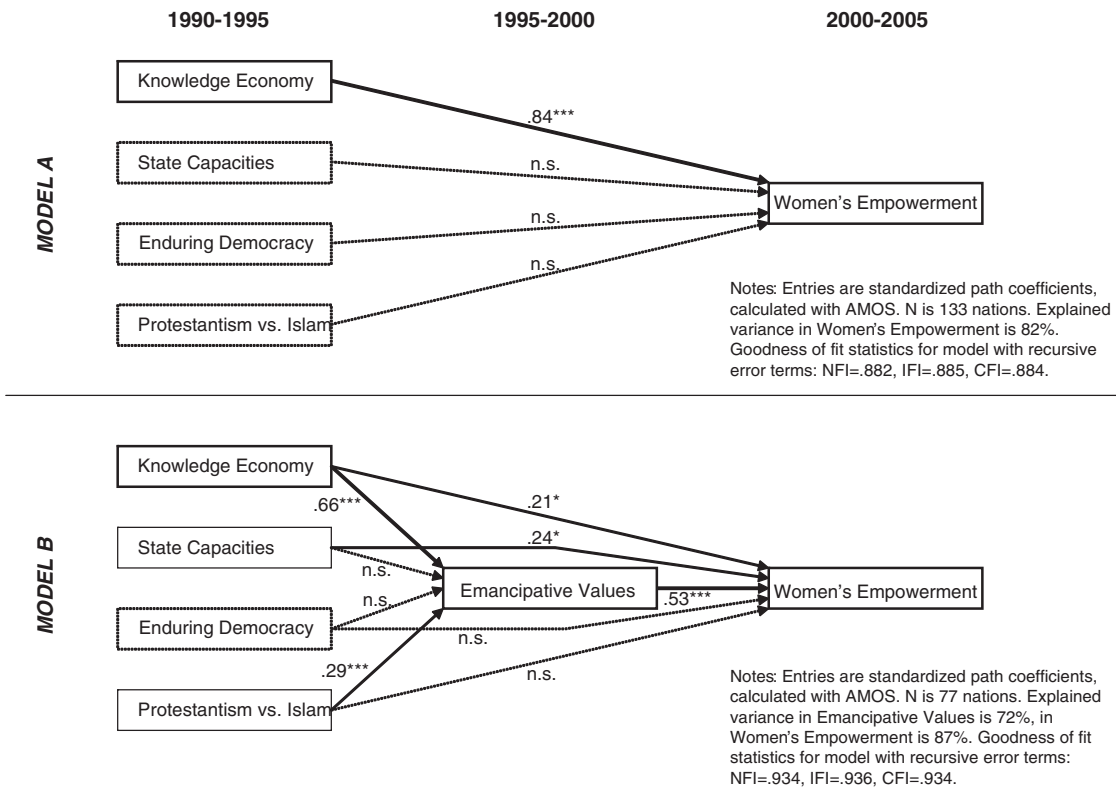
Figure 1 Mediation analysis of the effect of emancipative beliefs on women's empowerment

stronger direct effect on women's empowerment than the knowledge economy; (iii) the knowledge economy retains a strong indirect effect on women's empowerment by positively affecting emancipative beliefs.

Model B in Figure 1 confirms all three expectations. Compared to Model A in which the effect of the knowledge economy on women's empowerment amounts to a β-coefficient of 0.84, this direct effect drops to 0.21. This effect is much weaker than the direct effect of emancipative beliefs, which amounts to $\beta = 0.53$. Still, the knowledge economy retains a pronounced indirect effect by strongly affecting emancipative mass values ($\beta = 0.66$).

Model B in Figure 1 suggests that women's empowerment advances primarily by a sequence in which an emerging knowledge economy gives rise to emancipative beliefs, which in turn legitimize the practices that bring about women's empowerment in resource acquisition, public activism, and positional achievement. Figure 2 illustrates the two key relationships in this presumed sequence. The illustration speaks for itself.

In light of the evidence, Hypothesis 1 is confirmed: a rising knowledge economy and other conditions of an objective economic, social and institutional nature impact on women's empowerment mostly by their tendency to favour the emergence of emancipative beliefs.

Hypothesis 2: Co-dynamic

A causal process must be dynamic, requiring that change in a hypothesized effect can be explained by a corresponding change in the hypothesized cause. Thus, the second hypothesis suggests that *change* in women's empowerment can be explained by corresponding *change* in emancipative beliefs. We can test this by calculating the change in women's empowerment from the earliest (1990) to the most recent (2005) measure and relating this change to the corresponding change in emancipative beliefs. The result of this test is displayed in Figure 3.

As the change scores in Figure 3 reveal, apart from a few exceptions, notably Russia, Turkey, and China, the

overwhelming majority of societies moved toward stronger emancipative beliefs, even though the amount of progress varies from tiny changes in Malta and South Korea to massive changes in Spain, Sweden, and Switzerland. Likewise, with the exception of Russia and South Africa, all countries experienced progress in women's empowerment but again the amount of progress varies from tiny improvements in Turkey and the Baltic countries to major improvements in India, Spain and Belgium.

Change in emancipative beliefs tends to translate into a corresponding change in women's empowerment. However, even though this tendency is statistically highly significant, it only accounts for 26 per cent of the variation in women's empowerment. This might not seem like much. However, we did not take into account that societies vary enormously in their potential for progress, depending on the level of emancipative beliefs and women's empowerment from which they start. Societies on lower start levels have much greater potential to make progress than societies whose start level is already high. This has to be taken into account. Otherwise, one compares changes across societies with incomparable change potentials. Thus, we have to compare changes that are standardized for the potentials of change. To do this, the right-hand diagram in Figure 3 plots the changes in emancipative beliefs and in women's empowerment insofar as they exceed or fall short of what the start levels in these variables predict. This way we standardize the change variables for the different change potentials, which make the relationship between progress in emancipative beliefs and women's empowerment considerably stronger, raising the explained variance to 43 per cent.

This relationship shows two leverage cases, Spain at the upper end and Russia at the lower end, and three outliers, with Malta and Belgium being overachievers and South Africa being an underachiever. However, removing these five influential cases does not make the relationship insignificant, nor does it lower the explained variance. In summary, then, we can conclude that Hypothesis 2 is confirmed because change in emancipative beliefs does explain a significant proportion of change in women's empowerment.

Hypothesis 3: Direction

The analyses so far do not foreclose that the relationship between emancipative beliefs and women's empowerment exists mainly because women's empowerment generates emancipative beliefs. In fact, we do not consider it implausible that there is reciprocity involved. However, as much as we agree that women's

empowerment might reinforce emancipative beliefs that are already in place, we do not think that women's empowerment generates emancipative beliefs where they have not yet emerged. We think that the prime, though not sole, direction of the relationship between emancipative beliefs and women's empowerment is from beliefs to empowerment, as suggested in our third hypothesis.

Since we possess measures of both emancipative beliefs and women's empowerment at two sufficiently remote points in time, the direction in the relationship can be tested by answering the question 'Which effect is more significant and stronger: that from prior emancipative beliefs on subsequent women's empowerment or that from prior women's empowerment on subsequent emancipative beliefs?'

To answer this question in a conclusive way, two additional possibilities are to be taken into account: both of the variables cause themselves to persist over time (temporal autocorrelation) and both variables are caused by a third variable. To take these two possibilities into account, the direction test has to control for two additional conditions. First, the effect of emancipative beliefs on women's empowerment has to be controlled for prior women's empowerment. This is necessary to make sure that emancipative beliefs explain variation in women's empowerment that is not explained by the latter variable's autocorrelation over time. For the same reason the effect of women's empowerment on emancipative beliefs has to be controlled for prior emancipative beliefs. Second, in order to test the possibility that the effect of emancipative beliefs on women's empowerment or that of women's empowerment on emancipative beliefs only exist because both variables are caused by a third factor, these effects have to be controlled for a plausible third cause. As the previous analyses show, the knowledge economy is the most plausible candidate of a third cause. We therefore include the knowledge economy as an additional control.[21]

The result of the path analysis in Figure 4 is straightforward. Under control of a possible third cause, the knowledge economy, and under control of both variables' autocorrelation over time, women's empowerment in 1995 has no significant effect on emancipative beliefs in 2005. Vice versa, however, emancipative beliefs in 1995 do have a significant effect on women's empowerment in 2005. Certainly, this effect is not very strong by itself but it is significant and operates in the expected direction, which is a strong indication of the dominant causal direction when reverse causation, temporal autocorrelation, and
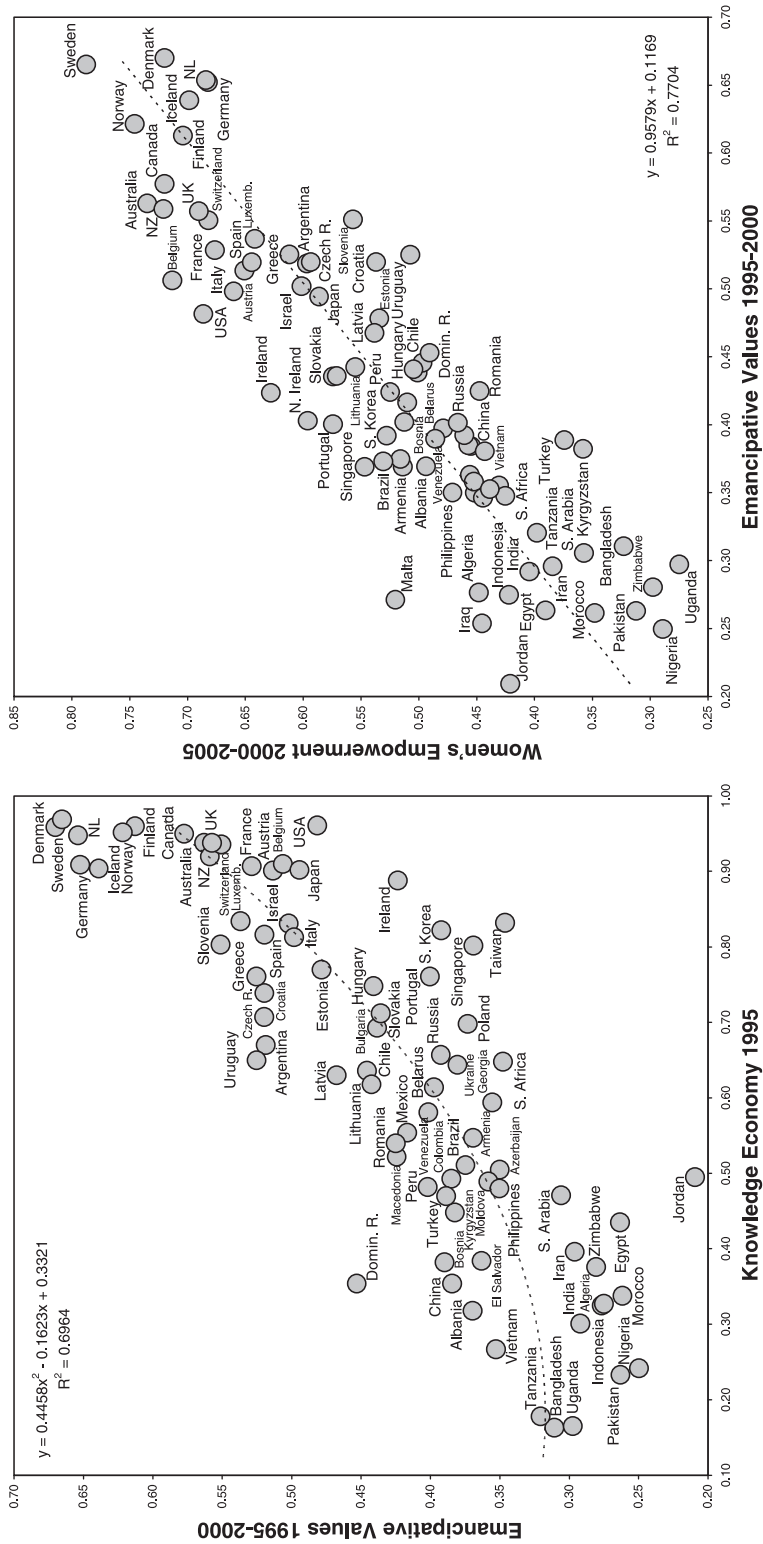
Figure 2 The Effects of the knowledge economy on emancipative beliefs and of emancipative beliefs on women's empowerment
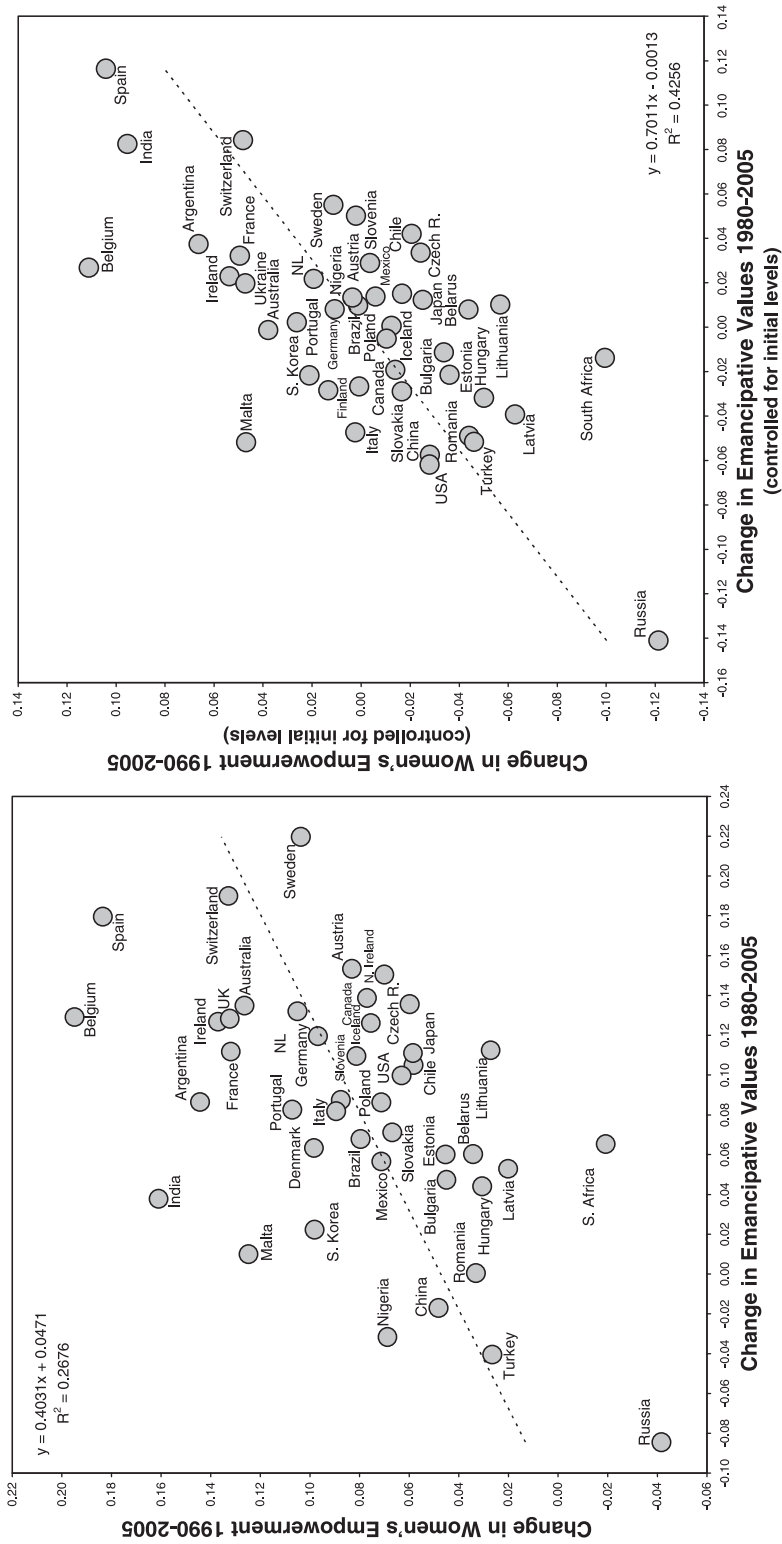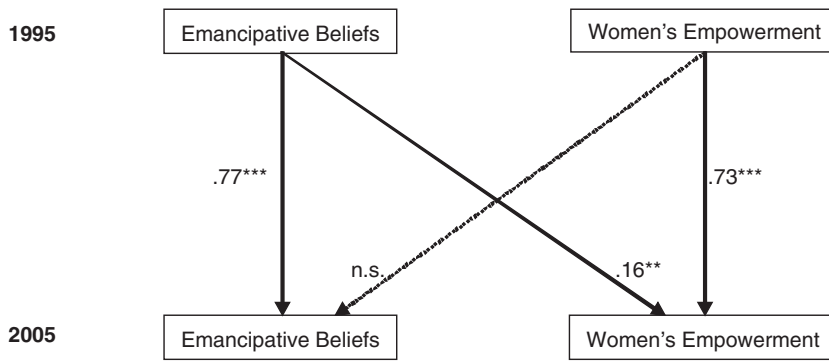
Figure 3 Change in women's empowerment and change in emancipative beliefs

Notes: Entries are path coefficients, calculated with AMOS. N is 72 nations. Model controls for the impact of the Knowledge Economy in 1995 on both Emancipative Values and Women's Empowerment in 2005 (the Knowledge Economy's own effects not displayed for reasons of simplicity). Goodness of fit statistics for model with recursiveerror terms: NFI=.998, RFI=.976, IFI=.999, TLI=.992, CFI=.999. Explained variance in Women's Empowerment is 93%, in Emancipative Values is 92%.

Figure 4 The direction in the relation between emancipative beliefs and women's empowerment

alternative causality are all controlled for. The results suggest that the dominant direction in the relation between emancipative beliefs and women's empowerment is from beliefs to empowerment rather than the other way round.

Hypothesis 4: Non-conditionality

Our fourth hypothesis suggests that the effect of emancipative beliefs on women's empowerment is unconditional. Controlling for the potentially conditioning role of institutional variations among minimally democratic societies, emancipative beliefs should still have a significantly positive effect on women's empowerment.

The analysis in Table 3 regresses women's empowerment in 2000–2005 on emancipative beliefs as of 1995 and a number of institutional factors (also of 1995) that are measured for a subsample of minimally democratic countries ($N = 42$).[22] As one can see from the zero-order correlations shown in the right-hand column of Table 3, only two of these factors (years of female suffrage, left party dominance) show a significant zero-order effect on our broad measure of women's empowerment. These effects are modest at best. What is more important, under mutual controls and tested against emancipative beliefs, none of the institutional factors, except the years of female suffrage, have a significant effect on women's empowerment. Vice versa, the effect of emancipative beliefs on

women's empowerment remains virtually undiminished in both significance and strength controlling for all institutional variables.

For illustrative purposes, the partial regression plot in Figure 5 displays the effect of emancipative beliefs on women's empowerment under control of all institutional factors included in Table 3. As can be seen, the extent to which emancipative beliefs over 1995–2000 exceed or fall short of what all institutional factors predict, explains about 59 per cent of the extent to which women's empowerment over 2000–2005 exceeds or falls short of what all institutional factors predict. Hypothesis 4 is confirmed: the empowering effect of emancipative beliefs is not conditioned by institutional variations found among minimally democratic societies.

Hypothesis 5: Micro-foundation

Is there a micro-foundation to our macro-level findings? If the macro-level effect of emancipative beliefs on women's empowerment is not an ecological artifact of aggregation, women's emancipative beliefs *must* have an activating effect, encouraging them to take on roles outside the household. Participation in expressive public actions is arguably a valid indication of such an activation effect. Thus, we examine in a multi-level model the effect of women's emancipative beliefs on their actual and intended participation in expressive public actions. As Hypothesis 5 suggests, this effect

Table 3 The impact of emancipative beliefs on women's empowerment controlling for institutional factors

Dependent variable: women's Empowerment 2000–2005

Predictors 1995–2000	Beta (β)	T-value	VIF	Zero-order r
Emancipative beliefs	0.76	7.45***	1.93	0.88***
Suffragist tradition	0.25	2.71*	1.63	0.63***
Left party dominance	0.12	1.41	1.26	0.39**
District magnitude	−0.10	−1.32	1.12	0.11
Adj. R^2		0.78		
N		42		

Notes: *Cases weighted for number of measured components in Women's Empowerment.*
*Significance levels: *P < 0.10, **P < 0.01, ***P < 0.001.*
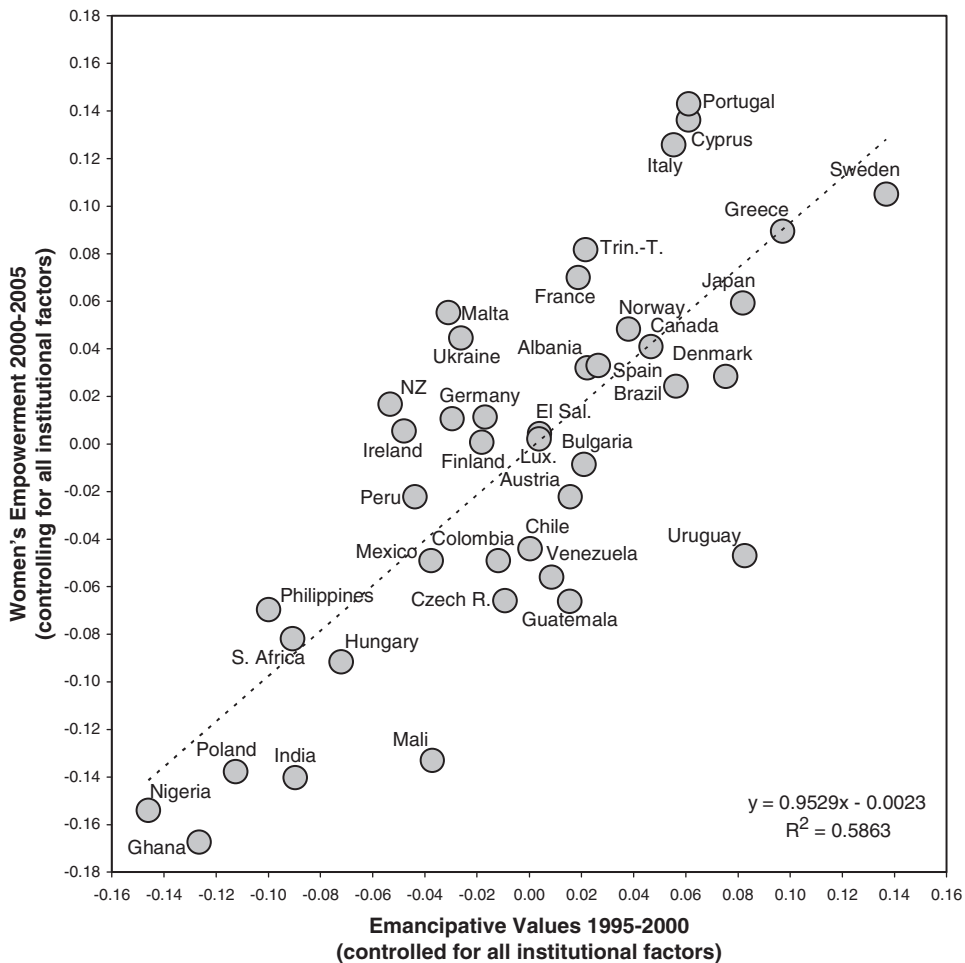
Figure 5 The effect of emancipative beliefs controlling for institutional factors

Table 4 Explaining women's public activism

Effects	Dependent Variable: Actual (coded 1.0) and intended activity (coded 0.3) in petitions, boycotts, and demonstrations)
Intercept	0.26*** (25.67)
Country-level effects	
Knowledge economy	Not significant
Protestantism versus Islam	Not significant
Emancipative beliefs	0.19*** (12.43)
Fixed individual-level effects	
Age	Not significant
Muslim Identification	Not significant
Education level	0.11*** (11.96)
Political interest	0.18*** (14.51)
Interpersonal trust	0.02*** (4.46)
Random individual-level effects	
Emancipative beliefs	0.31** (2.10)
* Knowledge economy	0.19** (2.49)
* Protestantism versus Islam	Not significant
* Emancipative beliefs (country mean)	0.63*** (3.33)
N (number of observations)	46,400 level-1 units (individuals) in 72 level-2 units (nations)
Explained variance (level-1)	17.3%
Explained variance (level-2, intercept)	53.3%
Explained variance (level 2, slope)	63.4%

Source: VS IV and V (1995–2007), women subsample. Analyses conducted with HLM 6.01. Entries are unstandardized regression coefficients based on robust standard errors, with T-ratios in parentheses. Individual-level variables (except dummies for Muslim identiification and interpersonal trust) are country-mean centered. Country-level variables are global-mean centered. Explained variances calculated from change in random variance component related to 'null model'. See Note 12 in the Supplementary Data for the operationalization of age, sex, education, Muslims identification and political interest.

Significance levels: *P < 0.05, **P < 0.10, ***P < 0.001.

should be of a general nature and hold everywhere, irrespective of key societal-level characteristics.

The multi-level model in Table 4 tests (i) whether there is a significant individual-level effect of emancipative beliefs on women's public action, (ii) whether this effect holds against controls of other individual-level factors such as age, education, interpersonal trust and political interest, and (iii) whether this effect remains significant and retains its positive sign irrespective of key societal-level characteristics. The dependent variable of this multi-level analysis is actual and intended participation in expressive public actions, including boycotts, demonstrations, and petitions. Actual participation is coded 1.0 for each of these three activities while intended participation is coded 0.30 for each of these activities. Adding the codes for these three activities and dividing the sum by three yields a multi-point scale with minimum 0 and maximum 1.0. The logic of the scale is to give actual participation much greater weight than intended participation, so that even three intended participations weigh less than one actual participation. Yet, instead of flatly ignoring intended participation it is

given some weight because intended participation is a form of mental activation, which can be an important pre-stage to actual activation.

The societal-level characteristics included in the multi-level analysis are those found to affect emancipative beliefs at the macro-level, namely the knowledge economy and Protestantism versus Islam. The reason to include these variables is to test the possibility that societal-level characteristics moderate the activating effect of emancipative beliefs at the individual level.

A third societal-level characteristic included in the multi-level analysis is a society's mean level of emancipative beliefs. This is important because it helps us determine whether the activating effect of women's emancipative beliefs depends on the overall emancipative climate in a society. When a society's mean level of emancipative beliefs is high, many people hold strongly emancipative beliefs and so the overall climate is strongly emancipative. In a 'social proof' logic it is plausible that individual women's emancipative beliefs mobilize them into expressive actions only if an overall emancipative climate encourages this step.

The results of the multi-level analyses are shown in Table 4. As is evident, women's emancipative beliefs do have a significant activation effect. By its magnitude, this is the strongest activating effect at the individual level, even controlling for level of education and intensity of political interest. Moreover, because the activating effect of women's emancipative beliefs remains significant even after controlling for its interaction with society-level characteristics, the positivity of this activation effect is unconditional. Yet, the positive strength of the activation effect does vary with two society-level characteristics. This is obvious from the positive interactions with the knowledge economy and with the population mean of emancipative beliefs. Apparently, emancipative beliefs generally activate women but do so even more strongly in societies where a stronger knowledge economy provides women with more skills. In addition, the activating effect of emancipative beliefs is larger when a society's mean level of emancipative beliefs is higher. Women's emancipative beliefs translate easier into public action when an overall emancipative climate encourages such action.

In light of these findings, we see Hypothesis 5 confirmed. The macro-level effect of emancipative beliefs on women's empowerment does have a micro-foundation because women's emancipative beliefs have a general activation effect that is positive and significant irrespective of society-level characteristics.

Conclusions

We looked at women's empowerment as an encompassing social process that penetrates a wide range of social domains. We argued that progress in such an encompassing process requires a systematic extension in women's objective opportunity structures which in turn generates a change in subjective beliefs so that women's empowerment becomes a valued goal. We also argued that such a belief is of an inherently emancipative nature and is most likely to emerge in connection with other emancipative orientations. We concluded that women's empowerment is a belief-mediated process in which the impact of social conditions of a purely objective nature, such as the strength of the knowledge economy, are mediated by their tendency to nurture emancipative beliefs.

We tested this basic claim from five different angles of causality. If only one or a few of these tests had shown the expected result, our conclusion would be ambivalent. However, since we found that each of these tests to confirm our basic assumption, we feel confident about the validity of our claim. We conclude that women's empowerment is best understood as the outcome of a broader process of human empowerment in which the widening opportunities of rising knowledge societies nurture emancipative beliefs. These beliefs inspire the strategies that foster the empowerment of women.

Supplementary data

Supplementary data available at *ESR* online.

Acknowledgements

Funding

Notes

1. Believing merely in the *legitimacy* of a social practice implies *passive acceptance* of it but not necessarily *active support*. To motivate active support, a belief in the *desirability* of a social practice, not only in its legitimacy, is necessary.
2. Strongly overlapping with our three-fold conception of women's empowerment, Plantenga, Remery, Figueiredo and Smith (2009) introduced a four-component 'Gender Equality Index' for the EU-countries, covering equality in the domains of (1) paid work, (2) incomes, (3) decision-making power, and (4) unpaid time. Domains (1) and (2) of the Gender Equality Index coincide with the resource domain in our index of women's empowerment. Domain (3) is conceptually identical to the domain of positional achievement in our index of women's empowerment. Domain (4) comprises civic activism and thus coincides with

the domain of public activism in our index of women's empowerment. Most of the data for the EU Gender Equality Index are not available for countries outside the EU. For this reason, we use our own operationalization.

3. See Note 1 in the Internet Appendix at http://www.worldvaluessurvey.org/publications for the regression equation.

4. See Note 2 in the Internet Appendix at http://www.worldvaluessurvey.org/publications for a more detailed justification of this procedure.

5. See Note 13 in the Internet Appendix at http://www.worldvaluessurvey.org/publications for a more detailed operationalization. Alternatively, we could have used VS data on membership in voluntary associations to measure women's activity level. But then it would have been important to focus on 'active membership', which is problematic with VS data because the question format to capture active membership has been used inconsistently. Data on women's participation in elections are not available before round five (2005–2007) of the VS.

6. See Note 3 in the Internet Appendix at http://www.worldvaluessurvey.org/publications for the list of countries.

7. See Note 4 in the Internet Appendix at http://www.worldvaluessurvey.org/publications for the regression equation.

8. See Note 5 in the Internet Appendix at http://www.worldvaluessurvey.org/publications for the list of countries.

9. See Note 6 in the Internet Appendix at http://www.worldvaluessurvey.org/publications for the list of countries.

10. See Note 7 in the Internet Appendix at http://www.worldvaluessurvey.org/publications for the list of countries.

11. See Note 8 in the Internet Appendix at http://www.worldvaluessurvey.org/publications for the details on the imputing regressions.

12. See Note 9 in the Internet Appendix at http://www.worldvaluessurvey.org/publications for the list of countries.

13. See Note 10 in the Internet Appendix at http://www.worldvaluessurvey.org/publications for the list of countries.

14. The regression formula is: $EMANC_{1995} = 0.018 + 0.948*EMANC_{2000}$.

15. The knowledge economy index is available for download at: http://info.worldbank.org/etools/kam2/ KAM_page5.asp.

16. We thank Michael Ross for his generosity in sending us his data.

17. The 'good governance' indicators are available for download at: www.govindicators.org.

18. The SIPRI military expenditure data are available for download at: www.sipri.org/contents/milap/milex.

19. See Note 11 in the Internet Appendix at http://www.worldvaluessurvey.org/publications for the scale construction of the level of democracy variable.

20. We thank John Gerring for his generosity in sending us his data.

21. The effects of the knowledge economy in Figure 4 are omitted because they are not themselves of central interest here and are only included as a check of the robustness of the effects of interest.

22. As 'minimally democratic' we analyze all countries classified as 'electoral democracies' over the period 2000–2005 by Freedom House.

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