Association membership and generalized trust: are connections between associations losing their value?

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Association Membership and Generalized Trust: Are Connections Between Associations Losing their Value?

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ABSTRACT Research linking civic engagement to citizens’ democratic values, generalized trust, cooperative norms, and so on often implicitly assumes such connections are stable over time. This article argues that, due to changes in the broader institutional environment, the engagement-values relation is likely to generally lack temporal stability. We investigate this empirically by analysing the engagement-trust relation using World Values Survey (WVS) data from the 1990 and 2000 waves. Overall, our results show that voluntary association memberships remain positively associated with generalized trust in both samples, but evidence that memberships in connected associations are better than in isolated ones appears, at best, scant in more recent years.

KEY WORDS: Voluntary associations, generalized trust, World Values Studies, social networks, longitudinal analysis

Introduction

Over the past decade, a lively debate has developed regarding the decline in civic participation observed by some, but not by others, across a number of Western democracies (Paxton, 1999; Putnam, 2000; Stolle & Hooghe, 2003; Dekker & van den Broek, 2005; Listhaug & Grønflaten, 2007). The importance of this debate lies not only in establishing whether Western societies have become more individualistic over time and its citizens increasingly ‘hunker down’ (to borrow the colloquialism introduced in this respect by Putnam, 2007), but also reflects the central role often attributed to civic engagement for the development and maintenance of democratic values, generalized trust, cooperative norms, racial and religious tolerance, and so on (e.g., Putnam, 2000; Delhey & Newton, 2005; Li, Pickles & Savage, 2005; Terriquez, 2012). When civic engagement is intimately associated with a wide range of social values, its decline can be feared to provoke a concomitant decline throughout society in inter-personal trust, tolerance, cooperation and so on (Putnam, 2000). Conversely, however, a close engagement-values relation also holds significant promise, especially to politicians, as it would imply that policies to stimulate civic engagement can become reflected in a parallel change in social and democratic values. Exactly for this reason, political leaders in, for instance, the United States, United Kingdom, Germany and the European Union have in recent years shown a strong interest in stimulating civic engagement as a means to (help) address societal changes induced by, for instance, large-scale migration and globalization. To give only one example from the United Kingdom, the Conservative Party’s election manifesto for the May 2010 general election stated that the restoration of the United Kingdom’s social fabric and citizen involvement was a top priority. After the election, David Cameron again stressed this point in his first speech as Prime Minister.
Still, from a theoretical perspective, such direct translation of temporal patterns in civic engagement into parallel temporal patterns in civic values might be questionable as it crucially relies on a sufficiently stable engagement-values relation over time. Suppose, for instance, that the connection between civic engagement, whether in general or for certain types of engagement (I will return to various typologies below), and generalized trust is weakening over time. Increasing/decreasing levels of engagement over time will then at some point no longer come together with increasing/decreasing levels of trust (independent of the causal nature of the connection between both elements, which is a hotly disputed topic in its own right; e.g., Brehm & Rahn, 1997; Wollebaek & Selle, 2007). Hence, to better predict the likely consequences of changes in civic engagement—and evaluate recent policy initiatives to stimulate such engagement noted above—a deeper understanding of possible temporal patterns in the engagement-values relation, as well as the causal drivers of such temporal patterns, is required. In this article, we take a first step towards addressing the former issue by explicitly testing the (lack of) stability of the engagement-trust relation using information from the 1990 and 2000 waves of the World Values Survey (WVS).

The empirical analysis thereby builds on recent work by Paxton (2007) to allow easy reference to existing findings. Building on social identity theory (e.g., Tajfel, 1978) and social network analysis (e.g., Coleman, 1990), Paxton (2007, p. 51, italics in original) argues that the generalization of trust beyond a given voluntary association ‘is critically dependent on whether an individual belongs to an association that is connected to other associations or one that is isolated’. For ease of reference, the former will in the remainder of this article be referred to as ‘connected memberships’, while the latter are designated as ‘isolated memberships’. Using this terminology, connected memberships are argued to expand individuals’ networks beyond one single association (Paxton, 2007; see also Moody & White, 2003; Cornwell & Harrison, 2004), thus allowing members to ‘transfer trust gained within their association to individuals outside the association’ (Paxton, 2007, p. 51). Isolated memberships, however, ‘are inherently bounded, and should therefore be less likely to transfer trust’ (Paxton, 2007, pp. 53-54). Empirical evidence using data from the 1990 wave of the World Values Survey (WVS) supports this theoretical argument.

To test the temporal stability (or lack thereof) of the engagement-values relation—both in general and for connected versus isolated memberships—the present study takes Paxton’s (2007) analysis as a starting point and extends it to include both the 1990 and 2000 WVS waves. The resulting findings show that, while civic engagement remains positively associated with generalized trust in both time periods, the superior performance of connected versus isolated associations, observed in 1990, substantially weakens in 2000. This holds especially at the country-level, and is even more pronounced when using a measure of connected-versus-isolated associations that controls for the relative size of associations (as presented in Coffé & Geys, 2008). This strongly suggests that a purely comparative approach—which predominates in the current literature—may well be insufficient to understand the complexity and variability of the engagement-values relation. It also highlights a need to develop theories that take into account the possibility of an unstable engagement-values relation.

Theoretical Background

In the foregoing literature, two central arguments have been employed to connect individuals’ memberships in voluntary associations and their civic attitudes (Wollebaek & Selle, 2007). The first rests on a self-selection argument stating that people with sufficiently ‘pro-social’ characteristics are more likely to engage in society and join voluntary associations compared to people lacking such characteristics. As a result,
individuals in voluntary associations display higher levels of desirable social attitudes simply because they selected themselves into such associations due to their pro-social attitudes (e.g., van Deth, et al., 1999). The second view rests on a socialization argument and states that membership in voluntary associations induces a process of appropriating norms, attitudes, values and roles (e.g., Putnam, 2000). In this case, membership is expected to lead individuals to develop ‘new’ values through interactions with co-members.2

Given the importance of formal and informal institutions for governing people’s behaviour (e.g., North, 1990; Thelen, 1999) and earlier findings linking the institutional environment to the development of specific types of voluntary associations (e.g., Berman, 1997; Schofer & Fourcade-Gourinchas, 2001; Kääriäinen & Lehtonen, 2006), it is surprising that both lines of argument ignore the socio-political and institutional environment within which the individual and the association exist. This is especially injudicious since the nature and internal homogeneity of the voluntary organization that arises in specific contexts, as well as the societal relevance of that group and the issues it stands for, influence members’ integration process within the association. Indeed, these characterizing elements of the organizational identity are shown to be crucial determinants of individuals’ integration processes in the socialization literature (e.g., Checkel & Katzenstein, 2009), and play a key role to explain ‘peer effects’ in research on group interaction in social psychology.3 Consequently, as ‘the definition of interests and objectives is created in institutional contexts and is not separable from them’ (Zysman, 1994, p. 244), any self-selection and socialization processes are unlikely to be unconditioned, but rather will depend on, and be influenced by, the broader institutional environment. Hooghe (2003, p. 93) implies a similar idea when arguing that association membership is unlikely to ‘introduce qualitatively new values, but enforces already existing values’ (see also Katz & Lazarsfeld, 1955; Bardi & Goodwin, 2011).

Why does this relative neglect of the socio-political and institutional environment matter? Based on the idea that institutions get ‘locked in’ as a result of self-reinforcement, self-reproduction and path dependence (e.g., Collier & Collier, 1991; Mahoney, 2000; Pierson, 2000), institutions have long been viewed as stable and resistant to change until ‘exogenous shocks (…) bring about radical institutional reconfigurations’ (Mahoney & Thelen, 2010, p. 2). In recent work, however, scholars have moved away from this emphasis on what could be termed ‘interrupted stability’ (resembling the idea of punctuated equilibria in evolutionary biology) and explicitly recognize the existence of ‘shifts that unfold incrementally’ (Mahoney & Thelen, 2010, p. 2). Although such endogenous incremental changes can take different forms (see Streeck & Thelen, 2005; Boas, 2007; Mahoney & Thelen, 2010), they all have in common that ‘the effect of the institution is transformed’ in a gradual process (Boas, 2007, p. 34, italics in original). This changing environment, in turn, generates an adjustment process in terms of individuals’ membership decisions, the core values of voluntary associations and any intra-association socialization processes (see above). Although during this transformation process individual A may (but need not) still be in association B, changes in the institutional environment induce changes in individual A as well as association B. As a direct consequence, the societal implications of association memberships will likewise exhibit a gradual transformation over time.

Clearly, however, not all institutional change occurs gradually. Exogenous shocks can function as ‘critical junctures’ that instigate ‘broadly different development paths’ and lead to a substantive institutional readjustment (Thelen, 1999, p. 387; see also Collier & Collier, 1991; Capoccia & Kelemen, 2007). Such unsettled times ‘open possibilities for change’ (Thelen, 1999, p. 397) because ‘groups or entire societies (…) are involved in constructing new strategies for action’ (Swidler, 1986, p. 278). Wars, terrorist activity or natural disasters therefore have the potential to induce sudden, although possibly temporary, shifts in people’s attitudes and value patterns (e.g., Ladd
For the same reason as above, this may lead the societal implications of association memberships to shift abruptly. Whether change is incremental or substantive, the above discussion strongly suggests that the engagement-values relation will generally lack temporal stability. This argument obviously need not be constrained to civic engagement in general, but is likely to similarly hold for diverse types of civic engagement. In the empirical analysis below, this will be verified for the isolated/connected distinction discussed in Paxton (2007; see above). Nonetheless, the same might likewise hold for other distinctions recently proposed in the literature: e.g., the bridging/bonding distinction based on the socio-demographic diversity of an association’s memberships (see Stolle & Rochon, 1998; Putnam, 2000; Coffé & Geys, 2007), the inclusive/exclusive distinction based on associations’ constitutive purposes (Warren, 2001, 2004; Zmerli, 2003; Geys & Grieshaber, 2012), or the typology based on associations’ ‘primary concerns’ (i.e., recreational, members’ interests, or broad social interests; see van der Meer, Te Grotenhuis & Scheepers, 2009). Moreover, in principle, nothing constrains any temporal trends in the engagement-values relation to be similar across such subtypes of civic engagement. That is, the connection between, say, exclusive civic engagement and generalized trust may be weakening over time, while trust’s association to inclusive engagement may remain unchanged (or strengthen).

It should be noted, however, that throughout the above discussion we implicitly relied on the idea that values can, and do, change over time. It is worth emphasizing in this respect that psychologists long viewed values as ‘relatively stable’ (Bardi & Goodwin, 2011, p. 271). Here too, however, recent research increasingly suggests change does occur. Moreover, ‘the occurrence of new environmental cues’ is one important way through which values do change over time (Bardi & Goodwin, 2011, p. 278).

**Data and Empirical Model**

To assess the temporal stability, or lack thereof, of the engagement-values relation – both in general and for connected or isolated memberships – we collected data from the 1990 and 2000 waves of the World Values Survey (WVS) and implemented a multi-level modelling approach that closely follows Paxton (2007). For the 1990 sample, we extract information on trust, voluntary association membership and background characteristics (defined below) for 41,531 individuals in 29 countries. For the 2000 sample, we have 33,838 observations from the same 29 countries. Our dependent variable – Trust – is respondents’ answer to: ‘Would you say that most people can be trusted or that you can’t be too careful in dealing with others?’ It is coded 1 for ‘trust’ and 0 for ‘don’t trust’. Given its dichotomous nature, we employ a Bernoulli distribution with logit link function for the estimation. This leads to the following baseline specification at the individual level:

$$\log\left(\frac{p_{ij}}{1 - p_{ij}}\right) = \beta_{0j} + \beta_{1j}MEMBER_{ij} + \sum_{k=2}^{N+1} \beta_{kj}X_{kj}$$

where $p_{ij}$ indicates the probability that respondent $i$ in country $j$ trusts (i.e. Trust = 1).

The control variables in $X_{ij}$ first of all include respondents’ age (in years) and level of education, which in the WVS is measured as age when obtaining one’s highest degree. Both age and education have in previous work been shown to be strongly associated with trust; in particular, individuals tend to become more trusting between 18 and 40, and with higher educational attainment (Robinson & Jackson, 2001). In the absence of data on individuals’ income levels that are fully comparable across countries,
we follow Paxton (2007) in introducing a dummy variable equal to 1 when a respondent is employed and a measure of occupational prestige (based on Ganzeboom, et al., 1992) to capture the idea that individuals with more limited resources and a more disadvantaged position in life may find it harder and/or riskier to trust others (e.g., Whiteley, 1999; Newton, 1999). We also include an indicator variable equal to 1 if the respondent is divorced. As divorce is a defining event in one’s life, which may well ‘reduce an individual’s assessment of the goodwill of others’ (Paxton, 2007, p. 49), it can be expected to reduce an individual’s confidence in others’ trustworthiness (e.g., Rahn and Yoon, 2009). Similarly, having children at home may ‘increase an individual’s sense of vulnerability and thereby decrease his level of trust’ (Paxton, 2007, p. 49), which we address via an indicator variable equal to 1 for respondents with children in their home. Finally, we include a variable measuring the importance the respondent attaches to friends (measured on a four-point scale from 1 ‘very important’ to 4 ‘not at all important’). This intends to capture ‘individual-level extroversion, which could impact both association memberships and trust’ (Paxton, 2007, p. 58). Note that all ‘non-dummy individual-level independent variables are grand-mean centered, (…) which is appropriate when aggregate versions of the variables are not included in the model’ (Paxton, 2007, p. 60).

To account for potential country-level determinants of generalized trust, we allow the intercept $\beta_0$ above to vary across countries depending on a number of institutional, socio-demographic and cultural characteristics. First, democratic rule has been argued to enhance the protection of minority rights, which, in turn, may stimulate trust among people with diverse backgrounds (e.g., Tilly, 2004). As such, a country’s democratic nature ($DEMO$; i.e. Polity IV democracy score) is included to evaluate the idea that democracies are likely to enhance trust (see also Levi, 1988). Second, the relation between ethnic and religious diversity, on the one hand, and social capital, civic engagement and trust, on the other hand, has attracted significant scholarly discussion in recent years (e.g., Alesina & La Ferrara, 2000, 2002; Delhey & Newton, 2005; Hallberg & Lund, 2005; Coffe & Geys, 2006; Putnam, 2007; Gijsberts, van der Meer & Dagevos, 2012). We therefore control for ethnic-cultural diversity’s potential role as an impediment to trust by including a measure of ethnic and religious fractionalization ($ETHNIC$ and $RELIB$; Herfindahl indices taken from Alesina et al., 2003). Third, if individuals with more limited resources find it harder and/or riskier to trust others (see above), the same might likewise hold at a more aggregated level. Hence, countries with lower levels of economic development might be characterized by lower levels of trust (Paxton, 2007). To control for this, we include the logarithm of a country’s energy consumption ($INDUSTR$; taken from World Development Indicators). Finally, we introduce an indicator variable equal to 1 for countries in Eastern Europe ($EASTEUR$) to accommodate their cultural and historical particularity. This generates the following specification at the country-level:

$$
\beta_{0j} = \gamma_{00} + \gamma_{01}DEMO + \gamma_{02}INDUSTR + \gamma_{03}ETHNIC + \gamma_{04}RELIB + \gamma_{05}EASTEUR + \gamma_{06}PERCMBE + u_{0j}$$

Before estimating the above model specification, we still have to discuss the central membership variables in more detail. The vector $MEMBER$ at the individual level and $PERCMBE$ at the country level contain different variables according to the model estimated. In the most basic model, we follow Paxton (2007) in specifying a dummy variable at the individual level indicating whether respondents claim membership in at least one of the 14 association types surveyed in WVS and, at the country level, a variable equal to the percentage of respondents in a given country having any memberships (i.e., the $PERCMBE$ is aggregated from the survey data). Findings
using this specification are reported in Columns (1) and (2) in Tables 1 and 2 (for the 1990 and 2000 sample respectively).

Tables 1 and 2 about here

Then, we disentangle connected and isolated memberships. Associations’ connectedness is estimated by ‘looking at the multiple memberships of their members’ (Paxton, 2002, 2007). Paxton (2007) designates associations as connected when their members’ average level of additional memberships is higher than the lowest three values observed in the data. Members in these associations are coded as having connected memberships, while members in the three least connected associations (i.e., trade unions, sports or recreation clubs and religious associations) are coded as having isolated memberships. Findings using this specification are reported in Columns (3) and (4) in Tables 1 and 2. Once again, country-level membership variables are aggregated from the survey data and reflect the percentage of respondents in a given country with isolated or connected memberships.

Still, such an approach assumes that the relative size of associations is irrelevant. As multiple memberships are by definition symmetric, this is inaccurate and generates an increased ‘probability that any small group has higher rates of intergroup relations (…) than does any larger one’ (Blau, 1977, p. 23-24). We correct for this using the approach brought forward in Coffé & Geys (2008), which involves running ‘an OLS regression model with the observed number of interconnections as the dependent variable and the membership level of the associations as the explanatory variable. (…) The residuals of this estimation (…) denote the relative [connected or isolated] nature of each association net of the membership size effect’ (Coffé & Geys, 2008, p. 362, italics in original). In other words, associations with higher (lower) residuals have higher ‘bridging potential’ per member.7 Findings using this corrected measure of connected-versus-isolated are given in Columns (5) and (6) in Tables 1 and 2.

Results

We estimate the multi-level model developed in section 2 using MLWin. The results for the 1990 sample are given in Table 1. Looking first briefly at our set of individual-level control variables, we observe that education, age, being employed, finding friends important (remember that the scale for this variable goes from 1 ‘very important’ to 4 ‘not at all important’) and having a high-prestige job are associated with higher trust. In contrast, being divorced is linked to lower trust. All these results are in line with the theoretical predictions from the previous section. The country-level controls perform less well since only Eastern Europe and democracy (in two out of three models) present a statistically significant coefficient estimate. The latter is also unexpectedly negative.

Turning now to the central membership variables, we find that respondents with at least one voluntary association membership are significantly more likely to agree that most people can be trusted, while the country’s share of association members has no additional explanatory power. Differentiating between connected and isolated associations in Columns (3) and (4), members of connected associations are significantly more likely to trust (see Wald test at the bottom of the table). Moreover, the country’s share of respondents with connected memberships is associated with a significantly higher probability of trusting, supporting theoretical predictions (Note that these results very closely replicate those in Paxton, 2007, showing the robustness of her findings to slight differences in our respective samples and the variables included in our models).
Interestingly, Columns (1) through (4) in Table 2 largely reproduce these results using the 2000 sample. In effect, the engagement-trust relation in general appears to strengthen between both periods. For instance, the point estimates and significance levels for any membership variables in Columns (1) and (2) in both Tables edge up somewhat, and the same holds for the individual-level membership variables in Columns (3) and (4). Yet, there is one central element along which both sets of results diverge substantially. Indeed, in the 2000 sample, the country-level percentage of respondents with connected (isolated) memberships [Column (4)] is associated with a lower (higher) probability of trusting. While these country-level variables are once again at best statistically significant at the 90% confidence level, their sign reversal between both WVS waves is intriguing. Moreover, the difference between both types of associations now also remains statistically insignificant ($\text{Chi}^2 = 1.301$, $p > 0.10$; see the bottom row of Column (4) in Table 2 as compared to the bottom row of Column (4) in Table 1). Both elements taken together – i.e., the apparent sign reversal and the reduced statistical significance of the difference between the coefficient estimates of connected (isolated) memberships – induce serious reservations concerning the temporal persistence of Paxton’s (2007) findings.

Columns (5) and (6) in both tables show the results after adjustment of the connected-versus-isolated measure using the approach presented in Coffé & Geys (2008). While it generates a more appropriate measure of the connected-versus-isolated nature of association types, this alternative specification can also be seen as a robustness check to the results presented above. This indicates that the introduced adjustment substantially weakens the difference between connected and isolated association memberships at both the individual- and country-level, both in absolute terms and in terms of significance levels, and in both samples. Specifically, in Table 1, the difference in the membership-trust relation of both association types at the individual level drops from 0.137 (i.e., 0.307 – 0.170 = 0.137; see Column 3) to 0.104 (i.e., 0.285 – 0.181 = 0.104; see Column 5), while the significance level of this difference drops from 99% to 95% confidence (see Wald test in bottom row of Table 1). At the country level, the difference between both association types drops from 0.019 (i.e., 0.014 + 0.005 = 0.019; see Column 3) to 0.014 (i.e., 0.001 + 0.013 = 0.014; see Column 3), and loses significance at conventional levels (see Wald test in bottom row of Table 1). In Table 2, using the 2000 sample, very similar results are obtained, although confidence levels fall even further at the individual level. Moreover, a similar sign reversal is notable between both WVS waves – though this time in the opposite direction. Overall, these findings first of all indicate that correcting for relative association size is likely to matter for the implications drawn from the analysis. More importantly, however, these additional results confirm our earlier observation that the standard assumption regarding the temporal stability of the engagement-values relation is questionable at both the individual level (where there appears a gradual trend over time) and the country level (where a sign reversal is observed for both isolated and connected memberships whether we use Paxton’s, 2007, approach or the Coffé & Geys, 2008, correction).

Conclusion and Discussion

For civic engagement to act as a ‘school for democracy’, citizen’s engagement should be coupled with a positive engagement-values relation. Both elements are mutually conditional in the sense that they are jointly necessary to obtain the desired outcome (Goertz, 2006; Delhey, Newton & Welzel, 2011). Whereas significant research has previously studied the presence/absence of inter-temporal shifts in civic engagement across Western democracies (Paxton, 1999; Putnam, 2000; Stolle & Hooghe, 2003), similar debates regarding the existence and/or drivers of inter-temporal shifts in the
engagement-values relation have been much slower to emerge. This article took a first step to bridge this gap. Specifically, we argued that changes in the broader institutional environment within which such engagement takes place can induce alterations in the engagement-values relation. In support of this theoretical proposition, empirical evidence from the 1990 and 2000 waves of the WVS illustrates the temporal instability of the engagement-values relation. Particularly, the empirical support for the idea that memberships in connected associations are better than in isolated associations has become weaker in more recent years. While voluntary association memberships are positively associated with generalized trust in both the 1990 and 2000 wave of WVS, memberships in connected voluntary associations no longer seem equally beneficial for generalized trust than memberships in isolated associations in 2000 than they were in 1990.

Clearly, from a policy perspective, the possibility that the engagement-values relation changes over time might have important implications. If this relation is indeed unstable over time, temporal changes in individuals’ (or, in a broader sense, societies’) civic engagement may not always be an accurate predictor for similar temporal patterns in civic values. It also implies that it may, at certain times or under certain conditions, become ineffective – or even counterproductive – for governments to invest in policies aimed at stimulating the population’s level of civic engagement (assuming a causal link exists between engagement and value change; see above).

Although the empirical analysis in this article suggests some temporal instability in the engagement-values relation and we provide one possible general explanation underlying such changes in terms of broader changes in the associations’ institutional environment, more work is clearly needed. Such future research should first of all aim to establish the presence/absence of possible temporal patterns in the engagement-values relation in other settings and time periods. This is important since one potential explanation for the findings of our empirical analysis might simply be that either year is an exceptional case (or, phrased more negatively, that the strong effect in 1990 and/or the weak effect in 2000 are statistical artefacts). It would, however, require data with a significantly longer time-frame to clarify this possibility. Unfortunately, such data were not readily available to us in cross-national perspective. Secondly, and possibly more importantly, the origins and causal drivers of such temporal patterns are currently, at best, poorly understood and deserve much more attention in future work.

Finally, we should point out that the connectedness measure employed in this article only regards connections between groups, and ignores those within associations (a differentiation of association types based exclusively on the socio-demographic composition of association membership is presented in Stolle & Rochon, 1998; Coffé & Geys, 2007). When the relative importance of both these characteristics of voluntary associations for trust changes over time, reduced importance of one dimension may show up in an analysis focusing on this dimension, while the strengthening of the other is not picked up. Circumstantial, though suggestive, evidence of such an effect was recently presented in Geys & Murdoch (2010). They not only propose a simple procedure to integrate both approaches (i.e., connectedness/isolatedness and socio-demographic make-up of associations), but, crucially, illustrate that this combined measure generates more consistent empirical results using two distinct datasets from Flanders and the UK. Although the limited country-level sample sizes in WVS unfortunately do not allow evaluating to what extent a similar effect plays here, exploiting the often larger sample-size in country-specific surveys (such as the German and Swiss Freiwilligensurveys (volunteering surveys) or the US Social Capital Community Survey) may help remedy this in future work.

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References


Table 1: Membership and Trust (1990 sample)

<table>
<thead>
<tr>
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<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
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<tr>
<td></td>
<td>Baseline individual-level model</td>
<td>Baseline multi-level model</td>
<td>Separating isolated and connected memberships</td>
<td>Membership-size corrected isolated-connected memberships</td>
<td></td>
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<td><strong>Individual-level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>-1.431 *** (0.118)</td>
<td>-3.247 *** (1.385)</td>
<td>-1.377 *** (0.117)</td>
<td>-3.831 *** (1.439)</td>
<td>-1.407 *** (0.118)</td>
<td>-3.132 ** (1.429)</td>
</tr>
<tr>
<td>Education</td>
<td>0.030 *** (0.002)</td>
<td>0.031 *** (0.002)</td>
<td>0.028 *** (0.002)</td>
<td>0.029 *** (0.002)</td>
<td>0.029 *** (0.002)</td>
<td>0.030 *** (0.002)</td>
</tr>
<tr>
<td>Age</td>
<td>0.004 *** (0.001)</td>
<td>0.005 *** (0.001)</td>
<td>0.004 *** (0.001)</td>
<td>0.004 *** (0.001)</td>
<td>0.004 *** (0.001)</td>
<td>0.004 *** (0.001)</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.007 (0.023)</td>
<td>-0.007 (0.023)</td>
<td>-0.012 (0.023)</td>
<td>-0.012 (0.023)</td>
<td>-0.010 (0.023)</td>
<td>-0.010 (0.023)</td>
</tr>
<tr>
<td>Divorced</td>
<td>-0.243 *** (0.058)</td>
<td>-0.250 *** (0.059)</td>
<td>-0.241 *** (0.058)</td>
<td>-0.247 *** (0.059)</td>
<td>-0.242 *** (0.058)</td>
<td>-0.248 *** (0.059)</td>
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<tr>
<td>Employment status</td>
<td>0.137 *** (0.026)</td>
<td>0.140 *** (0.026)</td>
<td>0.136 *** (0.026)</td>
<td>0.139 *** (0.026)</td>
<td>0.132 *** (0.026)</td>
<td>0.135 *** (0.026)</td>
</tr>
<tr>
<td>Occupational prestige</td>
<td>0.007 *** (0.001)</td>
<td>0.007 *** (0.001)</td>
<td>0.007 *** (0.001)</td>
<td>0.007 *** (0.001)</td>
<td>0.007 *** (0.001)</td>
<td>0.007 *** (0.001)</td>
</tr>
<tr>
<td>Children</td>
<td>0.039 (0.029)</td>
<td>0.042 (0.030)</td>
<td>0.038 (0.029)</td>
<td>0.041 (0.030)</td>
<td>0.035 (0.029)</td>
<td>0.037 (0.030)</td>
</tr>
<tr>
<td>Importance of friends</td>
<td>-0.261 *** (0.016)</td>
<td>-0.266 *** (0.017)</td>
<td>-0.258 *** (0.016)</td>
<td>-0.263 *** (0.017)</td>
<td>-0.259 *** (0.016)</td>
<td>-0.264 *** (0.017)</td>
</tr>
<tr>
<td>Any membership</td>
<td>0.312 *** (0.024)</td>
<td>0.317 *** (0.024)</td>
<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>Isolated membership</td>
<td>-</td>
<td>-</td>
<td>0.170 *** (0.025)</td>
<td>0.173 *** (0.025)</td>
<td>0.181 *** (0.030)</td>
<td>0.182 *** (0.031)</td>
</tr>
<tr>
<td>Connected membership</td>
<td>-</td>
<td>-</td>
<td>0.307 *** (0.025)</td>
<td>0.311 *** (0.025)</td>
<td>0.285 *** (0.024)</td>
<td>0.289 *** (0.025)</td>
</tr>
<tr>
<td><strong>Country-level</strong></td>
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<td></td>
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</tr>
<tr>
<td>Eastern Europe</td>
<td>-</td>
<td>-0.711 *** (0.154)</td>
<td>-</td>
<td>-0.475 *** (0.198)</td>
<td>-</td>
<td>-0.642 *** (0.181)</td>
</tr>
<tr>
<td>Democracy</td>
<td>-</td>
<td>-0.055 ** (0.027)</td>
<td>-</td>
<td>-0.043 (0.027)</td>
<td>-</td>
<td>-0.059 ** (0.027)</td>
</tr>
<tr>
<td>Ethnic fractionalization</td>
<td>-</td>
<td>-0.274 (0.406)</td>
<td>-</td>
<td>-0.412 (0.390)</td>
<td>-</td>
<td>-0.345 (0.410)</td>
</tr>
<tr>
<td>Religious fractionalization</td>
<td>-</td>
<td>0.146 (0.357)</td>
<td>-</td>
<td>-0.077 (0.369)</td>
<td>-</td>
<td>0.111 (0.361)</td>
</tr>
<tr>
<td>Industrialization</td>
<td>-</td>
<td>0.274 (0.210)</td>
<td>-</td>
<td>0.345 (0.210)</td>
<td>-</td>
<td>0.275 (0.215)</td>
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<tr>
<td>Percent any membership</td>
<td>-</td>
<td>0.004 (0.005)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Percent isolated membership</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.005 (0.006)</td>
<td>-</td>
<td>0.013 (0.021)</td>
</tr>
<tr>
<td>Percent connected membership</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.014 * (0.008)</td>
<td>-</td>
<td>-0.001 (0.008)</td>
</tr>
<tr>
<td><strong>Hypothesis tests on isolated versus connected associations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Wald-test (country level)</td>
<td></td>
<td></td>
<td>2.262 *</td>
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Note: Nᵢ=37515, Nⱼ=29; standard errors between brackets; *** significant at 1%, ** at 5% and * at 10%. Wald-tests evaluate the difference in the effect of isolated versus connected memberships and have a Chi² distribution with one degree of freedom.
Table 2: Membership and Trust (2000 sample)

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
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<th>(5)</th>
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<tr>
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<td>Baseline individual-level model</td>
<td>Baseline multi-level model</td>
<td>Separating isolated and connected memberships</td>
<td>Membership-size corrected isolated-connected memberships</td>
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<tr>
<td>Intercept</td>
<td>-1.647 ***</td>
<td>-0.716</td>
<td>-1.589 ***</td>
<td>-0.418</td>
<td>-1.635 ***</td>
<td>-0.938</td>
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<td></td>
<td>(0.134)</td>
<td>(1.447)</td>
<td>(0.133)</td>
<td>(1.475)</td>
<td>(0.134)</td>
<td>(1.535)</td>
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<td>0.358 ***</td>
<td>0.363 ***</td>
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</tr>
<tr>
<td></td>
<td>(0.027)</td>
<td>(0.028)</td>
<td></td>
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<tr>
<td>Isolated membership</td>
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<td>-</td>
<td>0.208 ***</td>
<td>0.210 ***</td>
<td>0.223 ***</td>
<td>0.229 ***</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(0.028)</td>
<td>(0.029)</td>
<td>(0.034)</td>
<td>(0.034)</td>
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<tr>
<td>Connected membership</td>
<td>-</td>
<td>-</td>
<td>0.368 ***</td>
<td>0.378 ***</td>
<td>0.320 ***</td>
<td>0.324 ***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.029)</td>
<td>(0.029)</td>
<td>(0.028)</td>
<td>(0.028)</td>
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<tr>
<td><strong>Country-level</strong></td>
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</tr>
<tr>
<td>Percent any membership</td>
<td>-</td>
<td>0.011 **</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.005)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent isolated membership</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.014 *</td>
<td>-</td>
<td>-0.010</td>
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<td></td>
<td></td>
<td>(0.008)</td>
<td></td>
<td>(0.015)</td>
</tr>
<tr>
<td>Percent connected membership</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.006</td>
<td>-</td>
<td>0.015 *</td>
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<tr>
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<td></td>
<td></td>
<td>(0.010)</td>
<td></td>
<td>(0.008)</td>
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<tr>
<td><strong>Hypothesis tests on isolated versus connected associations</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Wald-test (indiv. level)</td>
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<td></td>
<td>13.252 ***</td>
<td>13.919 ***</td>
<td>4.467 *</td>
<td>4.112 *</td>
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<tr>
<td>Wald-test (country level)</td>
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</tr>
</tbody>
</table>
| Note: Ni=31597, Nj=29; standard errors between brackets; *** significant at 1%, ** at 5% and * at 10%. Wald-tests evaluate the difference in the effect of isolated versus connected associations and have a Chi² distribution with one degree of freedom. Controls as in Table 1 included in all specifications. Results for all control variables – suppressed to preserve space – are in line with those in Table 1.
1 While several scholars have admittedly employed time-series cross-section data, such studies have failed to exploit the time dimension present in their data. Rather, one coefficient estimate is provided for the entire sample, implicitly assuming that this reflects the (stable) engagement-values connection across both space and time.

2 Some scholars have argued that both effects are simultaneously at work – leading to a process where, say, some level of social trust is required to join, and joining subsequently reinforces trust (e.g., Brehm and Rahn, 1997).

3 Castells (1997) similarly argues that whoever constructs a collective identity determines the symbolic meaning of this identity for those identifying with it, and those placing themselves outside of it. As such, the formation of a collective (or group) identity directly shapes the identification processes relative to this group.

4 For instance, in the aftermath of the 9.0 earthquake and ensuing tsunami and nuclear crisis in Japan, the demand for weddings increased as people were “jolted into adjusting priorities in life” (Jiang, 2011). Similarly, the 9/11 attack on the New York World Trade Centre, and the subsequent 2004 Madrid and 2005 London bombings had a significant impact on “the thoughts, feelings and behaviors of individuals” (Woods, 2011, p. 214; see also Huddy, Khatib & Capelos, 2002; Li & Brewer, 2004; Yum & Schenck-Hamlin, 2005; Best, Krueger & Ladewig, 2006; Panagopoulos, 2006; Verkasalo, Goodwin & Bezenova, 2006; Colás, 2010).

5 These countries are Austria, Belgium, Bulgaria, Canada, Chile, China, Czech Republic, Denmark, East-Germany, Estonia, Finland, France, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Mexico, Netherlands, Romania, Russia, Slovenia, Spain, Sweden, UK, US and West-Germany.

6 Clearly, this is less than ideal, given that people may take time off from study and return to it later on. We experimented with truncating the education variable at age 21 (in line with Paxton, 2007), but this made no difference to our findings. Hence, we decided to report only the results with the untruncated education variable. Unfortunately, more direct measures such as an individual’s highest degree are unavailable in the WVS.

7 Note that we implicitly conflate the number of respondents in WVS claiming membership in a given type of association with the actual size of a real association of this type (i.e., the ideal data for the present analysis; see also Coffé & Geys, 2007, 2008). While this is clearly incorrect, the assumptions necessary for nonetheless applying this correction to our data are that a) observed membership sizes of association types in WVS tell us something about the relative sizes of real associations of different types and b) multiple memberships observed in WVS approximate the extent of connections between real groups of different association types. Both these critical assumptions are evidently also required to employ the original measure proposed in Paxton (2002, 2007).