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Is Europe an Optimal Political Area?

ABSTRACT   Employing a wide range of individual-level surveys, we study the extent of cultural and institutional heterogeneity within the European Union and how this changed between 1980 and 2009. We present several novel empirical regularities that paint a complex picture. Although Europe has experienced both systematic economic convergence and an increased coordination across national and subnational business cycles since 1980, this has not been accompanied by cultural or institutional convergence. Such persistent heterogeneity does not necessarily spell doom for further political integration, however. Compared with observed heterogeneity within EU member states themselves, or in well-functioning federations such as the United States, cultural diversity across EU members is of a similar order of magnitude. The main stumbling block on the road to further political integration may not be heterogeneity in fundamental cultural traits, but other cleavages, such as national identities.

The European Union is facing hard challenges. Throughout the EU, many citizens have become less trusting of EU institutions and less tolerant of supranational interference with domestic policies. As a result, the process of European integration is struggling—and, for the first time, has even reversed direction with Brexit. Populist parties, which blame the EU

for everything that is wrong in their own countries, have gained electoral support. Animosity between countries and, particularly, a North–South cleavage are evident.[1] Is this just a (temporary) by-product of the recent financial crisis, or are the recent tensions a manifestation of preexisting and deeper cleavages? Was the project of a federal Europe too ambitious, because Europeans are too heterogeneous in their economic interests, beliefs, and cultural values, or are the current difficulties mainly due to inadequate supranational institutions? The answers are not simple, and we uncover forces pushing in opposite directions.

We follow Alberto Alesina and Enrico Spolaore (1997, 2003) and Robert Barro (1991) in thinking of the optimal size of a political union as emerging from the trade-off between the benefits of integration in terms of economies of scale and scope, and the cost due to heterogeneity in preferences. There are economies of scale in Europe. To begin with, Europe has a large market with free trade. In addition, environmental protection, control of immigration, defense against terrorism, foreign policy, a common army, research, and innovation may all be best addressed at the European rather than at the national level, and more so today than 30 years ago. Europeans are aware of these advantages. In the 2016 Eurobarometer survey (European Commission 2016), a very large fraction of respondents favored more EU-level decisionmaking in areas such as fighting terrorism (80 percent in favor), promoting peace and democracy (80 percent), protecting the environment (77 percent), dealing with migration from outside the EU (71 percent), and securing energy supplies (69 percent).

Is there sufficient commonality of views among Europeans to make it possible to reap the benefits of these economies of scale? Specifically, how different are Europeans in fundamental cultural traits? And during the last 30 years, have they become more similar in terms of economic, institutional, and cultural fundamentals? To address these questions, we study the EU-15 countries plus Norway between 1980 and 2009. Thus, we do not investigate Central and Eastern Europe, nor do we study the consequences of the recent financial crisis.[2]

We begin by documenting a deep process of economic integration in goods, services, and financial markets. The first phase of this process, approximately between 1980 and the late 1990s, was also accompanied

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1. For an extensive discussion of the political difficulties facing the EU, including the rise of populist parties, see Beck and Underhill (2017).

2. The countries considered are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, and the United Kingdom.

by rapid economic convergence, with poorer European countries growing faster than richer ones. Convergence continued, although at a lower speed, until the 2008–09 global financial crisis. We also show increased comovement across EU economies (a relevant condition for optimal currency unions, if not for political ones), both at the national and subnational levels (using the NUTS3 regions;[3] see subsection I.C below). In addition, and contrary to the United States, overall after-tax income inequality has not increased within this group of countries since 1980.

One would expect economic integration and convergence to be accompanied by increased homogeneity in attitudes between citizens of different countries. Increasingly shared values were among the anticipated benefits posited by the founding fathers of the EU.[4] We find no evidence of this. On the contrary, between 1980 and 2009 Europeans became slightly more different in their attitudes toward trust, values such as appreciation of hard work or obedience, gender roles, sexual morality, religiosity, ideology, the state's role in the economy, and related economic issues. We show that these traits evolved over time and are not immutable national characteristics. Both Northern and Southern European countries became more secular, but the former at a faster rate than the latter, so cross-country differences increased.

European integration also deliberately attempted to harmonize institutions and policies in several areas, establishing common benchmarks and targets for institutional improvement. Did this lead to institutional convergence? We find mixed evidence: In some institutional areas, European countries became more similar, but in others the opposite happened. In particular, the quality of public administration and of legal systems did not converge, with Southern Europe falling further behind Northern Europe.

Does this mean that the project of a political union in Europe is doomed? *Not so fast.* In the second part of this paper, we show that preference heterogeneity and cultural diversity are about 10 times as large within each EU country in our sample than between them. This finding applies not only to individual data but also to regional averages. Within-country differences in regional averages are sometimes larger than differences between the average traits of regions belonging to different countries (think of Northern

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3. NUTS stands for *nomenclature des unités territoriales statistiques,* or nomenclature of territorial units for statistics.

4. See, for example, the Schuman Declaration of May 9, 1950 (https://europa.eu/european-union/about-eu/symbols/europe-day/schuman-declaration_en).

Italy versus Southern Germany, and Northern Italy versus Southern Italy). If the fully functioning democracies in Europe can handle a substantial amount of within-country cultural diversity, why could the EU not handle a similar level of heterogeneity between individuals in different countries?

A comparison with the United States leads to similar conclusions. Europeans are not more different from each other than Americans, who, incidentally are also becoming more different from each other. If the United States can handle these differences relatively well, what prevents Europe from also doing so? Relatively small cultural differences in Europe are probably vastly amplified by other cleavages, such as national identity and language. Cooperation and conflict resolution are much easier if individuals share a common history, centuries of nation building, and a common language, as in the United States. Thus, the critical issue for the future of European integration is not so much that Europeans are still too different from each other in terms of culture, policy preferences, or national interests. The important question is the evolution of national identities versus a European identity.

Our paper is related to several recent contributions. Spolaore (2013) adopts the same conceptual approach as our paper, emphasizing the benefit of scale and the cost of heterogeneity. He discusses Jean Monnet's theory, according to which any additional move toward integration in Europe cannot be reversed. On this point, Luigi Guiso, Paola Sapienza, and Luigi Zingales (2016) argue that the EU is stuck in the "middle of the river"—gone far enough to be very costly to abandon, but subject to too many forces pulling in a centrifugal direction. Guiso, Helios Herrera, and Massimo Morelli (2016) emphasize the German/Greek cultural divide during the sovereign debt crisis. Our more systematic evidence provides a different view, in terms of similarity of "cultural fundamentals." Markus Brunnermeier, Harold James, and Jean-Pierre Landau (2016) highlight how different economic ideas, especially between the French and the Germans, are a crucial impediment to further economic integration. These differences are clearly there, and in our analysis we confirm that cultural attitudes in France are quite different from those in Germany. However, we focus on deep cultural traits that we think are more important for the long-run viability of a political union, compared with possibly contingent ideas about the appropriate macroeconomic policy framework.

The paper is organized as follows. Section I discusses economic convergence in Europe. Sections II and III consider cultural and institutional convergence. Section IV compares cultural heterogeneity within and across the

EU countries. Section V compares the EU countries with the U.S. states, and section VI concludes.

I. Economic Convergence

One of the purposes of the EU has been to foster greater economic integration among its members. This goal has been vastly achieved. How did this affect economic convergence between European countries and regions? A large body of literature has addressed this question, with mixed results that depend on the sample of countries, time period, method of analysis, and type of convergence. Existing studies generally find evidence of economic convergence in GDP per capita in the long run, due to the catch-up in growth of the poorer countries (Greece, Ireland, Portugal, and Spain in the earlier period, and Eastern Europe more recently).[5]

An equally large body of literature asks whether trade and financial integration make business cycles more or less synchronized. A priori, the effect can go either way, because trade integration may lead to specialization and hence divergence, or complementarity in production and convergence. Likewise, financial integration could amplify the domestic effects of idiosyncratic shocks or increase the international transmission of such shocks, with ambiguous effects on synchronization. The evidence is mixed, although the prevailing view is that business fluctuations have become more synchronized within Europe, particularly in the eurozone.[6]

In this section, we revisit and complement the analysis of economic convergence and output comovement for the EU-15 countries plus Norway in the period 1980–2009. This is the same sample of countries and same period covered by the analysis of cultural convergence in section II. The data sources for the variables used in this section are described in table A.1 in the online appendix.[7]

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5. Several studies document how, up until the onset of the financial crisis in 2008, the various phases of EU deepening have led to greater trade integration (Gil-Pareja, Llorca-Vivero, and Martìnez-Serrano 2008), more financial integration (Jappelli and Pagano 2010), and more labor mobility (Portes 2015; European Central Bank 2015) between EU member states. Economic convergence has been studied, for instance, by Maćkowiak and others (2008), Kutan and Yigit (2009), Boldrin and Canova (2001), and Villaverde and Maza (2008).

6. See, for instance, Frankel and Rose (1998); Kalemli-Ozcan, Papaioannou, Peydró (2013); Gogas (2013); and Backus, Kehoe, and Kydland (1992).

7. The online appendixes for this and all other papers in this volume may be found at the *Brookings Papers* web page, www.brookings.edu/bpea, under "Past BPEA Editions."

Figure 1. Sigma Convergence between Countries, 1980–2009

Standard deviation of log GDP per capita
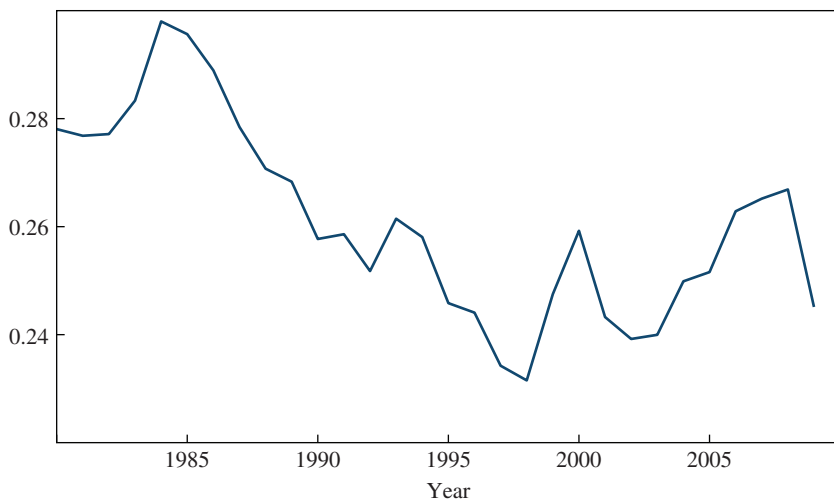
Source: Penn World Table 9.

I.A. *Trends in Average Per Capita Income*

We start with long-run convergence in GDP per capita. The source is Penn World Table 9 (Feenstra, Inklaar, and Timmer 2015).[8] Figure 1 depicts the standard deviation of real GDP per capita among the 16 countries in our sample. Barro and Xavier Sala-i-Martin (1992) pioneered this type of analysis, which they call sigma convergence. After an initial drop in the 1980s and 1990s, the dispersion in real GDP per capita remained roughly stable between the late 1990s and 2009.

This pattern is confirmed by the analysis of beta convergence (again using Barro and Sala-i-Martin's terminology). In figure 2, we illustrate a cross-country regression plot, where we estimate a linear regression of the growth of real GDP per capita between 1980 and 2009 against the initial level of real GDP per capita in 1980 (in logs) in the same sample of countries. The slope of the regression line is negative and statistically different from zero, indicating that throughout this period average growth was higher for the initially poorer countries. The evidence of beta convergence is much

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8. Our result also holds using GDP data from Cambridge Econometrics. The main difference between the two sources is that Cambridge Econometrics does not adjust for deviations of market exchange rates from purchasing power parity.

Figure 2. Beta Convergence between Countries, 1980–2009[a]

Average growth rate, 1980–2009[b]
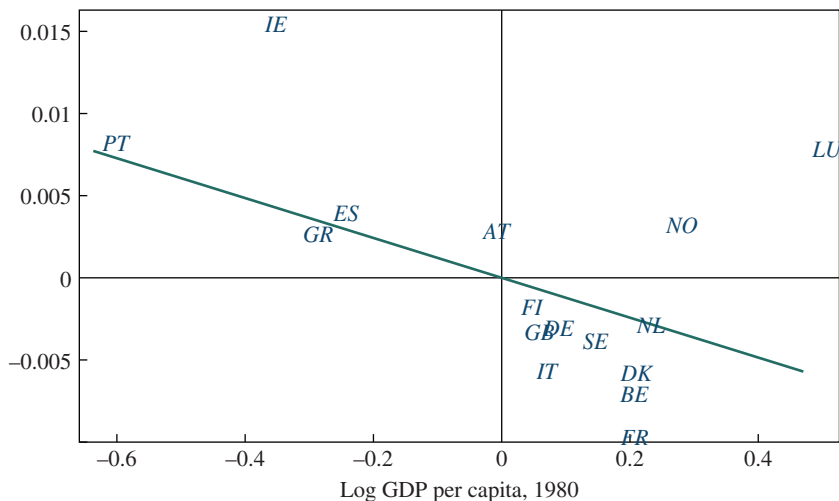
Source: Authors' calculations.
a. Country abbreviations are as follows: AT, Austria; BE, Belgium; DE, Germany; DK, Denmark; ES, Spain; FI, Finland; FR, France; GB, United Kingdom; GR, Greece; IE, Ireland; IT, Italy; LU, Luxembourg; NL, Netherlands; NO, Norway; PT, Portugal; SE, Sweden.
b. Statistics: $\beta = -0.0121$; standard error = 0.0055; $t = -2.2$.

weaker from the late 1990s onward, consistent with sigma convergence, but this is largely due to the strong performance of Norway (a high-income country), which benefited from the rise in oil prices in more recent years. The sample includes both those countries that belong to the Economic and Monetary Union (EMU) and those that do not, but the pattern is similar if we confine our attention to the EMU.

I.B. Income Inequality

We now turn to the dispersion of individual income within Europe. Income (which is highly correlated with education and occupational status) is a key determinant of cultural traits (Inglehart 1997). Anthony Atkinson (2015) and Thomas Piketty (2014), among others, document that inequality has increased in some (but not all) advanced countries. At the same time, there was convergence in average per capita income between countries in Europe. The net effect of these two forces is uncertain. How did overall income inequality evolve in Europe between the early 1980s and 2010?

To answer, we rely on micro data from the Luxembourg Income Study (LIS), which are obtained from independent income surveys and are ex post

harmonized. The data are available for only a subset of countries, namely, Denmark, Finland, France, Germany, Italy, Luxembourg, the Netherlands, Spain, and the United Kingdom. Income is measured as total disposable household income, net of taxes and transfers. It is converted to individual income using weighted household size by country, and to 2010 purchasing power parity–adjusted dollars for all years. We pool together all households in our sample, irrespective of nationality, and compute a yearly Gini coefficient.[9] The evolution of the after-tax Gini coefficient is roughly flat between 1985 and 2010 (see figure A.1 in the online appendix). The forces of economic convergence and the within-country dynamics of increased inequality appear to cancel out. Thus, in Europe as a whole (for the countries for which we have LIS data), inequality did not increase, contrary to what happened in the United States (Piketty and Saez 2003).

I.C. Correlation in Yearly Growth Rates

Next, we consider the issue of economic convergence within the EU at the business cycle frequency. The unit of analysis is the NUTS3 region, and the data are from Cambridge Econometrics. We split the sample into two subperiods, preceding and following the inception of the single currency: 1980–98 and 1999–2009. For each subperiod, we estimate a matrix of pairwise linear correlation coefficients, ρ_{ijt}, of the yearly growth rate of GDP between all regions in the sample, where i and j denote regions and $t = 1, 2$ denotes subperiods. We then compute the change in these correlation coefficients over the two subperiods, $\delta_{ij} = \rho_{ij2} - \rho_{ij1}$. Figure 3 illustrates the kernel density of these changes—the distribution of δ_{ij}—for (i, j) pairs of regions belonging to the same country (dotted line) and to different countries (solid line).[10] Although the same-country distribution centers approximately on zero, the distribution for regions belonging to different countries is clearly shifted to the right (the median and mean of the kernel density are positive). Thus, the introduction of the euro is associated with an increase in the correlation of yearly output growth for (i, j) pairs belonging to different countries, while within-country correlations have not changed substantially on average. In other words, since the euro began to be used, there has been increased synchronization of regional output across European countries at the yearly frequency, but not within countries.

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9. See Brandolini (2009) for the issues that arise in computing a supernational measure of income inequality.

10. The distribution has been fitted with the Epanechnikov kernel, with a bandwidth of 0.0466.

Figure 3. Change in GDP Growth Correlations within Countries and between Countries, 1980–98 to 1999–2009
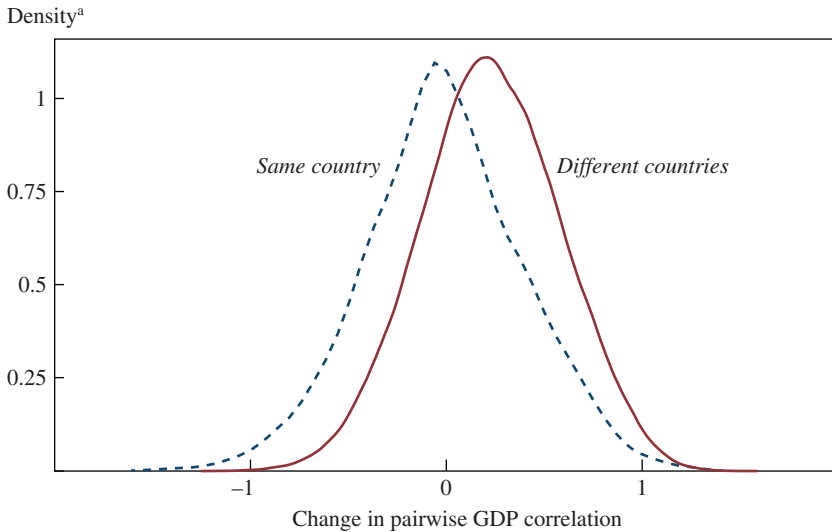
Density[a]

Change in pairwise GDP correlation

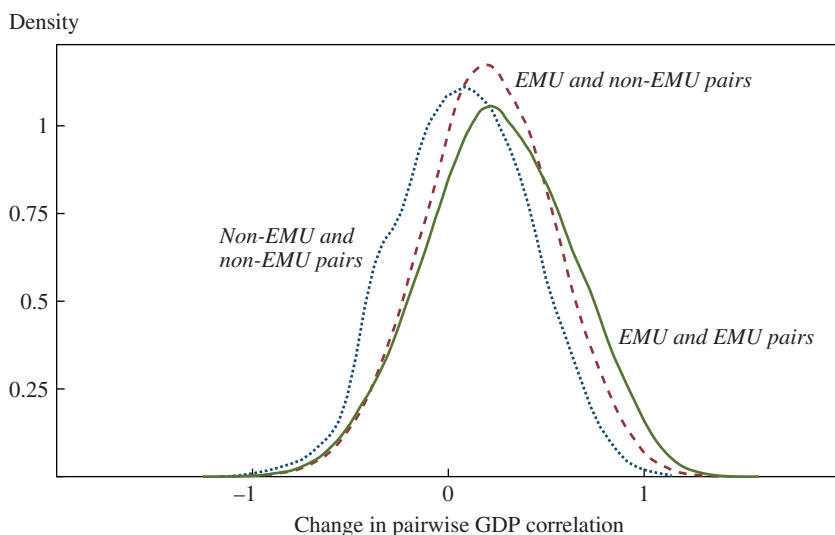Sources: Cambridge Econometrics; authors' calculations.
a. Kernel is Epanechnikov, with a bandwidth of 0.0466.

This result also holds when focusing only on (i, j) pairs of regions with a sum of log populations (measured in 1980) above the median or above the 75th percentile, and also for regional pairs with geographic distance of the regions' centroids above the median or above the 75th percentile. Thus, increased output comovement does not come solely for tiny or very close pairs of regions, but holds across all of Europe, and is not only due to the catching up of small regions. We have also disaggregated output by sector, and the result of enhanced comovement between regions belonging to different countries holds for all sectors, with the exception of agriculture.[11]

Finally, notice that while our estimates of ρ_{ijt} are likely carrying noise due to sampling variability, this particular issue should not affect the relative

11. We also explored comovement in regional employment, with the same method. On average, the correlation coefficients of the yearly growth of employment have gone down for regions belonging to the same country, whereas they have remained stable for regions belonging to different EU countries. In other words, in the more recent period there has been less comovement in employment within countries, but not across countries. Given the patterns described above for GDP growth, this is the mirror image of divergent productivity growth within (but not across) countries.

Figure 4. Change in GDP Growth Correlations between EMU and Non-EMU Countries, 1980–98 to 1999–2009[a]

Density

Change in pairwise GDP correlation

a. This figure only includes NUTS3 pairs belonging to different countries.

position of the distributions that we report—barring nonintuitive changes in sampling variability over time.

Is this enhanced correlation in yearly growth rates just a consequence of sharing a common monetary policy and a common currency, or does it reflect more general tendencies, such as commercial and financial integration? To address this question, we consider the change in correlation coefficients, δ_{ij}, between different groups of regions. Figure 4 depicts the distribution of δ_{ij} within the EMU, outside the EMU, and between regions both inside and outside the EMU. The shift to the right is most pronounced for regions within the EMU, but the change in correlation between EMU and non-EMU pairs also has a large density mass above zero, suggesting that the increased output synchronization is not just due to sharing a common monetary policy.

We next focus only on the EMU countries. We repeat the same exercise as figure 4, but for three groups of regions: (i, j) pairs within the core set of countries in the eurozone, pairs within the periphery only, and pairs between the core and periphery. The core countries are defined as Austria, Belgium, Finland, France, Germany, Luxembourg, and the Netherlands. The periphery consists of Greece, Ireland, Italy, Portugal, and Spain. There has been increased comovement in all three groups of regions, but it has

been most pronounced within the core and between the core and periphery, suggesting that the shocks that have hit the periphery have remained more idiosyncratic (recall that the second subperiod ends in 2009, so the analysis does not include the European sovereign debt crisis). Figure A.2 in the online appendix shows the results.

I.D. Cluster Analysis

Finally, we consider cluster analysis, which imposes less structure on the data, to look at comovements in regional output. Here, too, the raw data are yearly growth rates in regional real GDP, for the same two subperiods, 1980–98 and 1999–2009. We employ two methods of analysis. The first is a dimensionality reduction method—principal component analysis (PCA).[12] The second method is a partitioning cluster analysis—spectral clustering (SC). Dimensionality reduction methods aim to reduce a multidimensional problem into a lower dimensional one. For us this is equivalent to saying: Although the output dynamics of Europe at the regional level in our sample can be described by 966 different output time series (one for each NUTS3 region), we can do equally well by concentrating on only one or two main dimensions. This would be a valid approximation, for instance, if there were one or two groups of regions in Europe following nearly identical growth trajectories within each cluster. Spectral clustering is a subtler method, and aims not only to reduce the dimensionality of the problem but also to truly classify observations (regions) into groups of connected regions ("connected" meaning that i and j covary in terms of output in the graph represented by the adjacency matrix $\Gamma = \{\rho_{ijt}\}$).[13]

Figure 5 illustrates the results for the EU-15 countries. The left panel depicts the PCA approach and produces the scree plot profile of eigenvalues for the subperiods 1980–98 and 1999–2009. The scree plot "elbow" clearly has a sharper angle in the second period, indicating the possibility of representing the correlations among regions as a lower dimensional

12. In an earlier version of this paper, we also considered multidimensional scaling as an alternative dimensionality reduction approach.

13. More precisely, spectral clustering levers on the spectral properties of the graph that is associated with the similarity matrix of the problem, which for us is the matrix of real GDP correlation coefficients among regions, Γ. Think of each correlation coefficient as telling us the strength of the link between two regions. The correlation matrix is essentially equivalent to the adjacency matrix of a weighted undirected graph, where nodes are regions and the link weights are given by the correlation coefficients. It turns out that counting clusters in this network is the same as trying to find the number of connected components of the graph (visually, the bundles of nodes are tight to each other, but far away from other bundles). Trebbi and Weese (2015) offer additional discussion of some of these methodologies.

Figure 5. Eigenvalue Scree Plots of Estimated Clusters, 1980–98 and 1999–2009
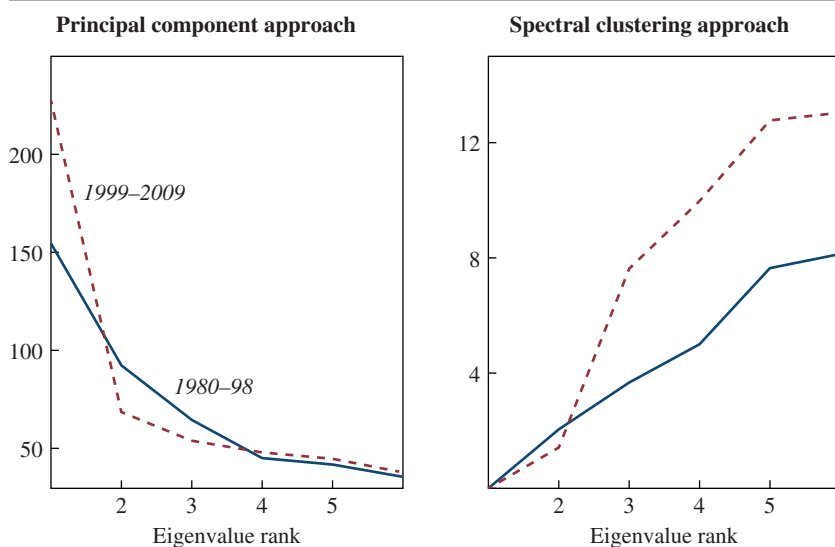
Sources: Cambridge Econometrics; authors' calculations.

space. The graph shows how regional output growth within Europe is almost one-dimensional in the 1999–2009 period.[14]

The right panel depicts the SC approach. Finding the number of connected components of Γ is equivalent to estimating the rank of Γ (Trebbi and Weese 2015). Let us indicate such rank as J and λ_k as the k-largest eigenvalue of Γ. Asymptotically, the first J of these eigenvalues will be positive and bounded away from zero, while the remaining $N - J$ will hover around zero. We report the lowest eigenvalues of Γ (that is, we try to visualize λ_k for $k \leq N - J$). Such a statistic has the same intuition of standard scree plots. A reduction in the number of estimated clusters is evident, because in the 1999–2009 period the curve moves away from zero faster than in the 1980–98 period, indicating fewer clusters in 1999–2009.

I.E. Discussion

The early phase of European integration in the 1980s and 1990s, which coincided with the development of the Single Market, saw economic convergence and catch-up growth by the poorer countries. This convergence slowed down in the second phase of European integration, from the late 1990s until

14. Virtually identical results are obtained if we restrict ourselves to EMU countries.

2008, which coincided with the single currency. Conversely, the single currency period was associated with increased comovement in regional output growth at the yearly frequency, especially between the EMU's core countries, but also between its core and periphery countries, and between regions both inside and outside it. Finally, overall income inequality remained stable between the mid-1980s and the onset of the 2008–09 global financial crisis.

II. Cultural Divergence

Europeans have not become culturally more similar during the last three decades. Several arguments would lead us to expect cultural convergence from 1980 onward. First, as argued above, this was a period of economic integration, with more mobility of goods, capital, and people within Europe. Increased economic exchange should strengthen mutual adaptation and understanding.[15] Second, economic convergence should lead to convergence of cultural traits. Third, the single currency led to correlated economic shocks (of a monetary nature) and policy coordination in Europe. This may also reinforce cultural similarities, as national media and public debates devote more attention to common European issues. Fourth, this period was not associated with an increase in income inequality, which could have bred cultural divergence. Conversely, there are also subtler reasons to expect divergence. Trade integration changes relative prices and the structure of production, leading different countries to specialize in different sectors, and in some cases this can push countries toward cultural divergence (Olivier, Thoenig, and Verdier 2008). Moreover, sharing common economic policies can increase conflicts and antagonize public opinion (Feldstein 1997).

We consider a broad range of questions in waves 1 through 4 of the European Values Survey (EVS), which are approximately 10 years apart, with the first one in 1980–81 and the last one in 2008–09. We have data for the same EU-15 countries plus Norway considered in the previous section, although for a few countries the first two waves are missing.[16] We selected several longitudinally harmonized questions asked in all waves, which capture attitudes toward five sets of issues extensively studied in the literature.[17] Because, in section V below, we compare Europe and the

15. See Norris and Inglehart (2009) for a qualitative discussion.

16. The first wave is missing for Austria, Greece, Luxembourg, Portugal, and Finland. Moreover, the first wave was asked only for West Germany. The second wave is missing for Greece and Luxembourg.

17. See, for instance, Alesina and Giuliano (2014, 2015), Guiso, Sapienza, and Zingales (2015), and Tabellini (2008).

United States, a criterion for selecting questions was also the availability of comparable questions in the General Social Survey for the United States.

The issues are (i) *religiosity,* which includes questions that seek to capture the strength of religious beliefs and principles (including acceptance of euthanasia and suicide) and adherence to religious practices; (ii) *sexual morality,* such as attitudes toward homosexuality, divorce, and abortion; (iii) *gender equality,* concerning the role of women in the workplace and in the family; (iv) *the role of the state,* which includes questions eliciting beliefs about the role of the state vis-à-vis the market, the desirability of redistribution, the respondent's left/right ideology, and whether success in life reflects effort or luck; and (v) *cultural capital,* which includes questions eliciting general social values and attitudes toward others, for example, generalized trust or specific virtues appreciated in children, such as obedience, hard work, and unselfishness. Note that these questions relate to deep cultural beliefs, some of which evolve relatively slowly over time, and which are not particularly sensitive to business cycle fluctuations.[18] They seek to capture fundamental cultural traits and values that may be considered as prerequisites for sharing common political institutions and identities. The full set of questions is listed in table A.2 in the online appendix.[19]

We purposely consider a broad set of cultural traits above and beyond economic issues. We are not discussing here the formation of, say, a free trade area, but a full political union. In order to survive, a "nation" needs a certain amount of commonality of fundamental views above and beyond mere economic philosophies.[20] In any event, in the online appendix we show robustness to the selection of cultural traits considered by solely limiting the subsets of cultural traits to the role of the state and cultural capital.

We also consider a set of individual socioeconomic covariates—such as age, education, and occupation—that are likely determinants of cultural traits (these are listed in table A.3 of the online appendix). They are all coded as binary variables. For computational simplicity, we only consider a random subsample of 250 respondents per country and for each wave

18. See Giavazzi, Petrov, and Schiantarelli (2014) on this point, and see Alesina and Giuliano (2015) for a broader discussion of the evolution of cultural values in relation to institutional changes.

19. As in any multicountry survey, it is possible that the same question asked in a different language may lead to some measurement error because the questions may not be interpreted identically in every country. Below and in the appendix, we discuss issues of measurement error that relate also to this point.

20. See Brunnermeier, James, and Landau (2016) for a discussion of these economic differences in the EU.

(each survey has about 1,500 respondents on average); but the results are robust to including 500 respondents per country-wave. The computational issues will become evident in the construction of the pairwise individual distance measures described in the following subsection.

II.A. Cultural Difference

Here we only consider the questions and countries that were included in all four waves.[21] Because we have 250 individuals for each country-wave, our sample consists of 2,750 individuals per wave.[22] Each individual corresponds to a vector in the N-dimensional space of cultural attitudes and of socioeconomic characteristics. Let Y_{is} denote the entire $N \times 1$ vector of cultural dimensions for individual i in wave s, with elements y_{is}, and X_{is} be the vector of K socioeconomic features, with elements x_{is}. X_{is} and Y_{is} summarize the answers to the questions. We can construct a measure of *cultural distance* between individuals i and j in wave s based on the Gaussian kernel as $d_{ij}^Y(s) = 1 - e^{-\theta ||Y_{is} - Y_{js}||^2}$, where θ is the kernel width and $||Y_{is} - Y_{js}|| = [\Sigma_y (y_{is} - y_{js})^2]^{1/2}$ is the Euclidean distance. Socioeconomic distance $d_{ij}^X(s)$ between individuals is similarly defined.[23] We can compute pairwise distances $(d_{ij}^Y(s), d_{ij}^X(s))$ for each pair of individuals per wave, giving $3,779,875 = (2,750 \times 2,749)/2$ total (i, j) pairs for each (Y, X) and each s. It is then clear why we impose a balanced number of individuals (250) for each country, as much of our analysis will evolve around generating distributions of pairwise individual distances $d_{ij}(s)$.

A natural conjecture is that, as socioeconomic distance $d_{ij}^X(s)$ between two individuals increases, so does cultural distance $d_{ij}^Y(s)$. To remove the effect of socioeconomic distance, we can compute the *conditional cultural distance* between any two individuals, by conditioning each element of vector Y_{is} on vector X_{is} (by taking the residuals of a set of regressions of

21. They are Belgium, Denmark, France, Germany, Ireland, Italy, the Netherlands, Norway, Spain, Sweden, and the United Kingdom, and the included questions are those without an asterisk in appendix table A.2.

22. Note that different individuals are sampled in each wave and we do not have a panel of survey participants.

23. The parameter θ of the Gaussian kernel is $\theta = 1/2\sigma^2$, where σ controls the width of the neighborhoods over which individuals are compared. For small σ, θ is large, implying that two individuals that are minimally different in their answers are deemed very far apart already. For large σ, θ is small, implying that distance away from a point increases at a slower rate. Note that this σ parameter is not the same as the variance of the answer to the questions in the population (which is normalized to 1 in all answers and dimensions here). σ is a parameter regulating the definition of distance in the answer space. We calibrate σ, that is, the kernel bandwidth, to the number of dimensions following Hainmueller and Hazlett (2014).

each component y_{is} on the entire vector X_{is}, then computing the distance between these residuals for any two individuals).

We can then nonparametrically estimate the distribution of cultural distances between all individuals in our sample at different points in time. In particular, we can estimate the distribution of cultural distances between citizens of the same and of different countries in waves $s = 1, 4$. Comparing these two waves tells us how the distribution of cultural distances has evolved during the last 30 years.
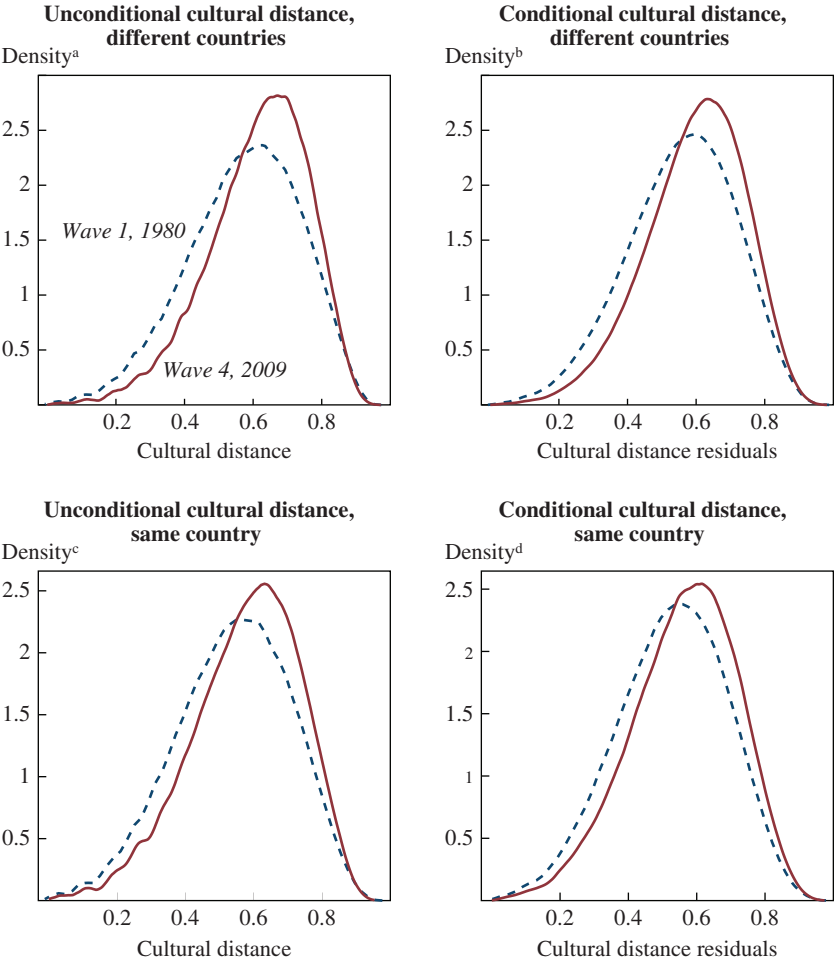
These distributions are given in figure 6. The densities are estimated using the Epanechnikov kernel function. The dotted line refers to wave 1 (about 1980), and the solid line refers to wave 4 (about 2009). The left-side panels refer to unconditional distances, and the right-side panels refer to conditional distances. The bottom two panels refer to within-country cultural distances (that is, using distances generated by (i, j) belonging to the same country), and the top two panels refer to distances among individuals of different countries. The more recent ($s = 4$) distribution is shifted to the right, both unconditionally and conditionally, and by approximately the same amount within and between countries. On average, Europeans have become more dissimilar, both within and between countries.

This result, in part, may depend on the distance metric used. The Gaussian kernel function is a quadratic function and gives more weight to the dimensions across which the individuals appear most dissimilar. Estimating the same distribution of distances using the cosine distance, $d_{ij}^Y(s) = Y_{is} \times Y_{js} / \|Y_{is}\| \times \|Y_{js}\|$, which does not place as much weight on large differences across specific cultural dimensions, gives two almost-overlapping distributions in waves 1 and 4, both unconditionally and conditionally, and both within and between countries.[24] Thus, we can conclude that during the last 30 years, there is virtually no evidence of cultural convergence, either within or between countries. If anything, we see cultural divergence.

Although figure 6 illustrates the overall distribution of cultural distance for all countries in our sample, we can also consider each country in isolation, focusing for simplicity on *average* cultural distance, rather than on the entire distribution of distances. This is done in table A.4 in the online appendix. For each country, we report the change in average cultural distance between waves 1 and 4, within each country, and between the citizens of a country and European citizens from all other countries, unconditionally and conditionally, on socioeconomic covariates. The last

24. These results are available upon request.

Figure 6. Cultural Distance between Countries, 1980 and 2009

Unconditional cultural distance, different countries

Density[a]

Wave 1, 1980

Wave 4, 2009

Cultural distance

Conditional cultural distance, different countries

Density[b]

Cultural distance residuals

Unconditional cultural distance, same country

Density[c]

Cultural distance

Conditional cultural distance, same country

Density[d]

Cultural distance residuals

Sources: European Values Surveys, waves 1 and 4; authors' calculations.
a. Kernel is Epanechnikov, with a bandwidth of 0.0072.
b. Kernel is Epanechnikov, with a bandwidth of 0.0069.
c. Kernel is Epanechnikov, with a bandwidth of 0.0117.
d. Kernel is Epanechnikov, with a bandwidth of 0.0112.

row of table A.4 reports the change in average distance, within and between all countries in the sample. All countries became more different from the others; also, within countries, cultural distance increased over time by about the same amount. In wave 1, average cultural distance within and across countries is about 0.55 with our standardized measures. Thus, on average cultural distance between two random individuals increased by about 10 percent both between and within countries between 1980 and 2009 (the average change is slightly larger across than within countries). The change is also highly statistically significant for all countries. The increase is particularly pronounced for Italy and Ireland, but there is no pattern concerning core versus periphery, or inside versus outside the EMU. Finally, note that wave 4 dates to 2008–09, before the sovereign debt crisis that plunged Southern Europe into a deep recession. In fact, some divergence could already be observed in comparing wave 1 with wave 3 (sampled in 1999–2000).

II.B. Specific Cultural Traits

We now consider changes in specific cultural traits and include all 16 countries and all questions. For each of the five broad issue categories—religiosity, sexual morality, gender equality, the role of the state, and cultural capital—we extract the first principal component of the specific survey answers referring to that issue in the overall sample, which pools together answers on all questions for all countries and all waves. The specific questions within each broad issue are generally highly correlated with the respective first principal components, as shown in table A.5 in the online appendix, except for the question on altruism, which we therefore omit from this part of the analysis. We focus only on country means.

Figure A.4 in the online appendix depicts the EU average (the solid line) and each country average (the dots) of each of these first principal components. The figures refer to unconditional responses, but our results are very similar when repeating the exercise on first principal components constructed by conditioning on socioeconomic covariates. Some change clearly took place in almost all cultural dimensions: Religiosity decreased on average, sexual morality and gender equality became less "traditional," and attitudes turned in favor of state intervention. Moreover, for all these dimensions except the role of the state, the dispersion between country averages appears to have increased over time or remained constant. This is generally visible from the figures, and is confirmed by the analysis of standard deviations across countries (limiting the sample of countries to only those that are sampled in waves 1 through 4).

Finally, we find that in four out of five cases, the divergence is due to several Northern European countries accentuating their differences relative to the EU average in the more recent waves, and likewise to several Southern European countries (notably Greece, Italy, and Portugal) moving in the opposite direction relative to the EU average. In other words, and in the terminology of Ronald Inglehart (1997), while Northern Europe has been becoming more "modern" at a faster pace than the EU average, Southern Europe (with the exception of Spain) has been following the general trend, but is increasingly lagging behind. These results are displayed in figures A.5 through A.9 in the online appendix.

II.C. Discussion

The evidence discussed above suggests that European citizens have not become more similar to one another during the last 30 years. The lack of cultural convergence also cannot be attributed to persistence in cultural traits. Individual traits have changed: All of Europe has become more secular, less traditional, and more tolerant, and also more inclined to accept a larger role for the state in risk sharing and redistribution. Moreover, the lack of cultural convergence cannot be blamed on an increase in inequality.

III. Institutional Divergence

A priori, one would expect to see institutional convergence in Europe. Harmonization of policies and institutions was an explicit goal of the process of European integration in several areas, such as product and financial market regulation. Even where EU member states retained unconstrained sovereignty, Europe often provided benchmarks and incentives for harmonization and to diffuse best practices, particularly with the so-called Lisbon Strategy.[25] Conversely, deeper integration may have also set in motion countervailing forces pushing toward institutional divergence. As trade barriers fall, countries are led to specialize in different tradable goods sectors. Moreover, the single currency led to a real exchange rate appreciation in Southern versus Northern Europe. This, in turn, shifted resources toward the nontradable sectors in Southern Europe, while the opposite happened in some Northern European countries. These opposite

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25. Learning from other European countries also became more salient in the policy debates, and this too may have led to institutional convergence, as suggested by Buera, Monge-Naranjo, and Primiceri (2011).

changes in the structure of production may have altered government incentives and policies, leading to institutional divergence.[26]

We consider a wide range of institutional outcomes in four specific policy areas. The first is the *quality of government and public administration.* Here we extract the first principal component from three sets of variables, which aggregate information about the quality and timeliness of the information provided by public administrations, the extent to which the executive can be held accountable to voters, the effectiveness and quality of the bureaucracy, and the absence of corruption in public administration and in the political system.[27] Relatedly, a *governance indicator* is constructed as the principal component from a number of World Bank Worldwide Governance Indicators, similar to those measured by the first index for the quality of government.

The second policy area is the *quality of legal institutions.* This variable aggregates a variety of indicators based on perceptions about the quality of the legal system, such as the protection of property rights, judicial independence, impartiality of courts, the rule of law, and civil liberties. The primary sources are institutional classifications compiled by the Fraser Institute, the World Bank, the Heritage Foundation, PRS Group, and Freedom House.

The third area is *education.* Here we use the first principal component of Programme for International Student Assessment (PISA) test scores for mathematics, science, and reading comprehension.
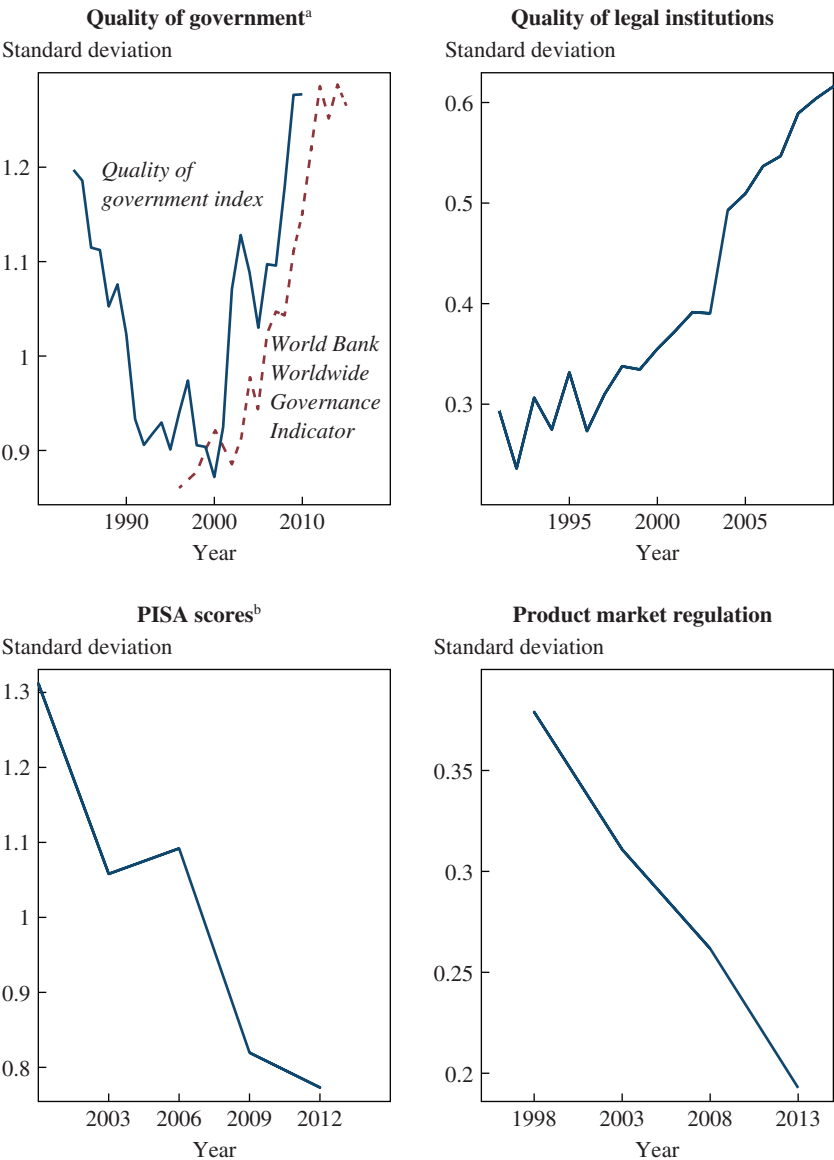
The fourth area is *regulatory environment.* Here we use the product market regulation variable in the Organization for Economic Cooperation and Development's (OECD's) database, a summary indicator of the regulatory environment in a broad range of areas, including state control and involvement, barriers to entrepreneurship, and barriers to trade and investment. A full list of the variables for each of these areas, with the corresponding sources and periods of availability, is given in table A.6 of the online appendix.

We start by asking whether we observe convergence or divergence in these institutional outcomes between countries by examining sigma convergence plots. Figure 7 plots the standard deviations across countries for

26. Levchenko (2007) and Nunn (2007) study institutions as a source of comparative advantage, while Tabellini (2008) shows how culture too can be a source of comparative advantage. These papers treat institutions (or culture) as exogenous. Do and Levchenko (2009) study a theoretical model where a reduction in trade costs can lead to institutional deterioration.

27. Some of the underlying components of the original variables are coded on the basis of hard information, and others are based on surveys and report perceptions about the quality of government or the absence of corruption. The correlation coefficients between the extracted first principal component and the three underlying variables is always very high, ranging from .8 to .9.

Figure 7. Sigma Convergence between Countries, 1984–2015

Quality of government[a]

Standard deviation

Quality of government index

World Bank Worldwide Governance Indicator

Quality of legal institutions

Standard deviation

PISA scores[b]

Standard deviation

Product market regulation

Standard deviation

Sources: International Country Risk Guide; Koske and others (2015); Kunčič (2014); OECD (2004, 2007, 2010, 2014); OECD and UNESCO (2003); Varieties of Democracy (V-Dem) project, version 5; Williams (2015); World Bank Worldwide Governance Indicators.

a. Germany and Luxembourg are omitted due to a lack of data.

b. The United Kingdom is omitted in 2003 due to a lack of data.

each of the four broad indicators over time.[28] The quality of public administration converged between countries in the 1980s and 1990s, but since 2000 it has diverged sharply, and by 2010 dispersion was above its initial point. The same pattern emerges from the governance indicators, which are only available starting in the late 1990s. The quality of legal institutions is also only available starting in 1990. Here, too, we observe divergence, particularly since 2000.[29] PISA scores converged, although the data are available only every three years between 2000 and 2012. Product market regulation converged (data are available every five years, starting in 1998), which was an explicit EU policy goal. Conditioning on per capita income does not change the picture much.[30]

As with culture, the divergence in quality of government and legal institutions is largely driven by Southern Europe (mainly Italy, Greece, and Portugal) deteriorating relative to the European average, and some of the Nordic European countries improving relative to the average. In the two areas where there has been convergence, education and regulation, the process seems uniform, with most countries converging, from above or from below the European average. Figures A.10 through A.13 in the online appendix highlight these patterns.

III.A. Discussion

The observed convergence in product market regulation was a deliberate policy goal. The observed convergence in PISA scores is less obvious. The divergence in the quality of institutions is surprising. A conjecture is that trade integration and the single currency affected European countries' structures of production and allocations of resources. EU member states that enjoyed an institutional comparative advantage accentuated their specialization in sectors where these advantages were relevant for productivity.

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28. In the quality of government panel, Germany and Luxembourg are omitted because data are available for only some years. In the PISA scores panel, the year 2003 is missing for the United Kingdom.

29. These results are consistent with, and complement, those of Papaioannou (2016).

30. Specifically, we regressed each variable on the log of real per capita GDP from the Penn World Tables, and where necessary we extracted the first principal component from the residuals of each variable. The first period of convergence in the quality of government is much dampened, but the divergence since 2000 remains pronounced. For the quality of legal institutions and for the PISA scores, conditioning on per capita income does not change the results illustrated above. Convergence in product market regulation is not evident anymore, however.

Those with a comparative disadvantage moved in the opposite direction. The single currency reinforced this tendency, because it led to exchange rate appreciation in Southern Europe, pushing more resources in the nontradable sectors (where institutions are less important determinants of aggregate productivity). These changes, in turn, could have altered political incentives in opposite directions in these two groups of countries.[31]

IV. Cultural Heterogeneity within the European Union

The previous sections showed that Europeans have not become more similar in their cultural traits. Does this mean that Europeans cannot form a political union? The answer to this question depends on the level of heterogeneity, and not just on whether it is decreasing or increasing over time. In this section, we compare the level of heterogeneity within and between countries. Consider an individual country in Europe, say, France. This country is a well-functioning democracy and manages to accommodate a certain cultural heterogeneity among the French. How much larger is heterogeneity between citizens of different EU countries, compared with what we observe within each country? If Europe as a whole is not much more heterogeneous compared with each country in isolation, then what prevents further political integration in the EU is not cultural differences per se. Throughout this section, we use all the cultural variables described in table A.1 in the online appendix, focusing on wave 4 only.

IV.A. Cultural Distance between Europeans

Figure 8 shows the distribution of cultural distance between pairs (i, j) of individuals sampled within the same country (dotted line) and in any pair of different countries (solid line). The left panel highlights that there is a slightly lower average and median distance within a country than between countries, but the differences are quantitatively small. The right panel shows the same result using the residuals of the regression of cultural distances on socioeconomic distances. There is only a slightly larger uniformity between countries.

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31. Work by Calligaris and others (2016) highlights that a similar phenomenon may have occurred even within countries. In Italy, for instance, the effect of the common currency increased the difference between modern sectors and firms that took advantage of European integration and others, which fell further behind. The difference is quantitatively striking. See also Gopinath and others (2015).
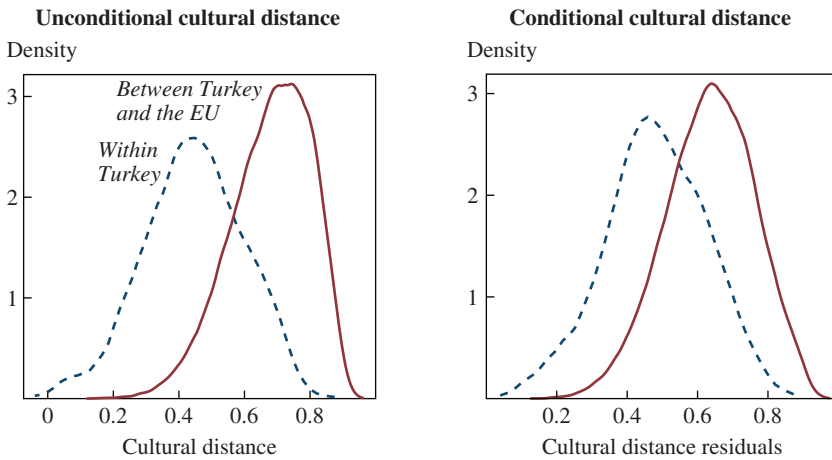
Figure 8. Cultural Distance within and between Countries, 2009[a]
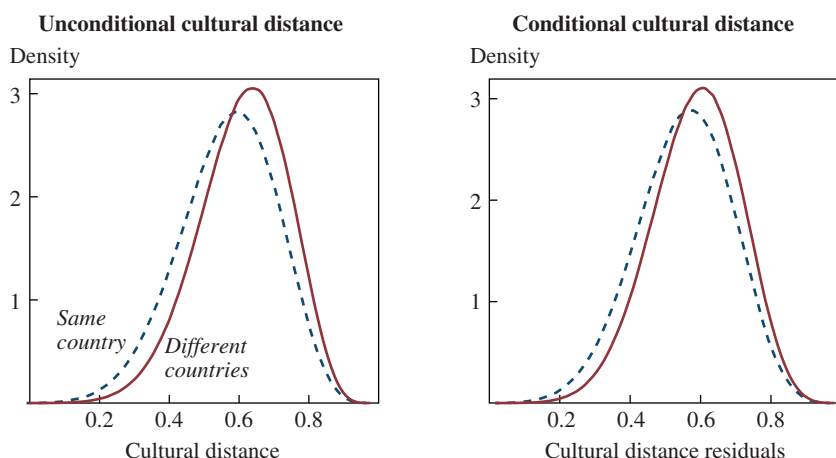
Sources: European Values Survey, wave 4; authors' calculations.
a. Analysis includes the full set of cultural variables.

These results are consistent, although in a different context, with those of Klaus Desmet, Ignacio Ortuño-Ortín, and Romain Wacziarg (forthcoming), who find that for ethnic groups in the 76 countries that they study, "within-group variation in culture trumps between-group variation." They suggest that even relatively small differences between countries' cultural attitudes may become important precisely because they are associated with a feeling of belonging to separate entities (ethnic groups in their case, countries in ours).

Could these results be driven by measurement error, as pairwise distances are the result of aggregation over many noisy answers at the individual level? If within-country cultural distance is observed with noise, the observed within-country variance would be inflated. In the appendix at the end of this paper, we formalize this assessment. We show that, in order to produce a within-country variance that is misleadingly larger than the cross-country variance of the country means, the variance of the individual measurement errors must be more than 9 times larger (about an order of magnitude) than the true cross-country variance in the country means. In essence, saying that this result is driven by measurement error is equivalent to implying that the individual EVSs are essentially uninformative (roughly, a 1/10 signal-to-noise ratio), which seems implausible.

Figure 9. Cultural Distance for Turkey and Europe, 2009[a]

Sources: European Values Survey, wave 4; authors' calculations.
a. Analysis includes the full set of cultural variables.

To check that this methodology can capture differences between countries, we repeat this exercise focusing on Turkey, a possible candidate EU member state, but one with a religious, economic, and historical background that is substantially different from those of many EU countries. In figure 9, the left panel displays the distribution of cultural distances between Turkey and the EU (solid line) and within Turkey (dotted line). In the right panel, we show the same for the distribution of cultural residuals.[32] This graph looks starkly different from figure 8, and here we clearly observe much more heterogeneity between Turkish citizens and EU respondents than within Turkey. Taking into account socioeconomic characteristics does not reduce the between-country distance by much.

IV.B. Cultural, Socioeconomic, and Geographic Distance

If culturally different regions are also at opposite geographic borders of the political area, political integration is more difficult. Similar considerations

32. Because of data availability, the individual observations used for Turkey are much less than for the other countries, but still we get a reasonable amount of pairs of Turkish with non-Turkish individuals. In total, there are more than 7,000 pairs of individuals in which one is Turkish.

Figure 10. Differences in Socioeconomic and Cultural Dimensions, 2009[a]

Cultural distance
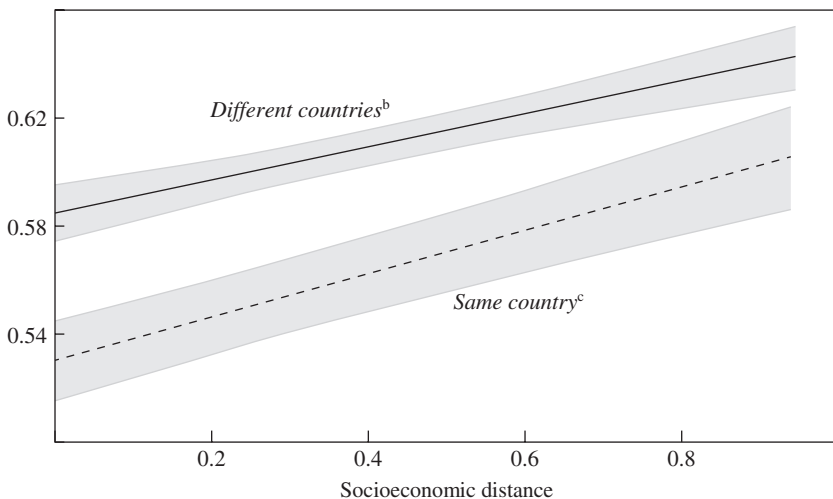
Sources: European Values Survey, wave 4; authors' calculations.

a. Analysis includes the full set of socioeconomic variables. Confidence intervals (the shaded areas) are adjusted for two-way clustering at the country of residence of each individual.

b. The regression line is described by the equation $y = 0.076x + 0.52$.

c. The regression line is described by the equation $y = 0.058x + 0.58$.

apply to socioeconomic distance. To address these questions, we estimate the following linear regression:

$$(1) \qquad\qquad d_{ij}^{Y} = \alpha + \beta d_{ij}^{X} + u_{ij},$$

where d_{ij}^{Y} indicates cultural distance between individuals i and j (in wave 4), d_{ij}^{X} their socioeconomic distance, u_{ij} is an unobserved error term, and i and j can belong to the same or to different countries, depending on the sample specification. Below, we also estimate equation 1; but on the right-hand side, we replace d_{ij}^{X} with geographic distance, d_{ij}^{G}, based on the NUTS3 region of residence of the respondents.[33]

SOCIOECONOMIC DISTANCE Figure 10 plots the regression line, with d_{ij}^{X} referring to socioeconomic distance, for individuals in the same country (the dashed line) and in different countries (the solid line).[34] Cultural distance

33. Geographic distances are computed using the haversine formula.

34. Confidence intervals are adjusted for two-way clustering at the country of residence of each individual.

is positively related to socioeconomic distance, and the slope coefficient β is about the same within and across countries. Although d_{ij}^Y and d_{ij}^X are roughly of the same size, the magnitude of the estimated intercept α is about 10 times larger than the slope coefficient β. The intercept α of this regression gives us the average cultural distance for two individuals of the same socioeconomic status, $d_{i,j}^X = 0$ (belonging to the same or to different countries, depending on the sample). Two individuals who are socioeconomically identical that come from the same country differ, on average, by 0.52 units in their cultural traits, whereas two socioeconomically identical individuals from two different countries differ by approximately 0.58 units on average. This confirms two properties of the data. First, socioeconomic distance explains only a small portion of cultural distance. Second, different countries do differ in cultural traits, but this difference is small compared with the average within-country distance.

Estimating the same regression line for citizens of different pairs of countries, or for the same country, we can estimate average bilateral distances between countries or within each country. This is what we show in table 1, which reports the estimated values of the intercept α for all countries in our sample and for the EU as a whole (we omit standard errors, but the estimates are all highly significant). The diagonal elements restrict the sample to individuals i and j belonging to the same country. The off-diagonal elements are estimated for i in the row country and j in the column country. Thus, the first row in the table displays the average distance between two Austrians with the same socioeconomic features, then between an Austrian and a Belgian with the same features, and so on. Average distances between countries vary between 0.52 and 0.64. The average distances of individuals in the same country (on the diagonal) vary between 0.5 and 0.6, and are not much smaller than the off-diagonal elements. In addition, looking at the diagonal entries, we do not see some countries that are much more homogeneous than others (the Scandinavian countries tend to be more homogeneous, but the patterns are not very precise).[35]

GEOGRAPHIC DISTANCE Next, we estimate the same regression line from equation 1, but replace d_{ij}^X with geographic distance d_{ij}^G (again, for individuals belonging to the same or to different countries, and with two-way clustered standard errors). Figure 11 displays the estimated regression lines. Again, the slope is positive and significant (and of about the same size as for the

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35. We also compared the standard deviations of the within- and cross-country distributions of bilateral distances, and they are approximately of the same order of magnitude, suggesting that the dispersion in cultural distances is similar within and across countries.

Table 1. Average Cultural Distance between Individuals of Identical Socioeconomic Status, 2009[a]

	AT	BE	DE	DK	ES	FI	FR	GB	GR	IE	IT	LU	NL	NO	PT	SE	All EU
AT	0.54																0.58
BE	0.59	0.57															0.59
DE	0.55	0.59	0.54														0.57
DK	0.60	0.60	0.60	0.47													0.56
ES	0.58	0.58	0.55	0.55	0.52												0.58
FI	0.57	0.59	0.57	0.55	0.55	0.53											0.56
FR	0.60	0.59	0.60	0.57	0.57	0.57	0.57										0.58
GB	0.59	0.60	0.59	0.57	0.61	0.59	0.59	0.56									0.59
GR	0.54	0.60	0.56	0.61	0.60	0.58	0.60	0.60	0.48								0.58
IE	0.60	0.62	6.00	0.61	0.63	0.58	0.61	0.60	0.58	0.60							0.61
IT	0.59	0.61	0.60	0.62	0.65	0.61	0.61	0.59	0.54	0.60	0.53						0.61
LU	0.61	0.61	0.62	0.61	0.61	0.60	0.60	0.60	0.61	0.62	0.61	0.61					0.61
NL	0.58	0.59	0.57	0.53	0.57	0.56	0.59	0.56	0.60	0.60	0.61	0.60	0.50				0.56
NO	0.58	0.57	0.56	0.54	0.53	0.53	0.55	0.58	0.59	0.60	0.62	0.60	0.55	0.51			0.55
PT	0.56	0.56	0.54	0.60	0.59	0.56	0.57	0.56	0.52	0.57	0.54	0.59	0.57	0.57	0.49		0.57
SE	0.61	0.61	0.59	0.52	0.55	0.56	0.57	0.59	0.65	0.63	0.66	0.62	0.56	0.54	0.60	0.52	0.57

Sources: European Values Survey, wave 4; authors' calculations.
a. For the country name abbreviations, see the notes to figure 2.

Figure 11. Differences in Geographic and Cultural Dimensions, 2009[a]
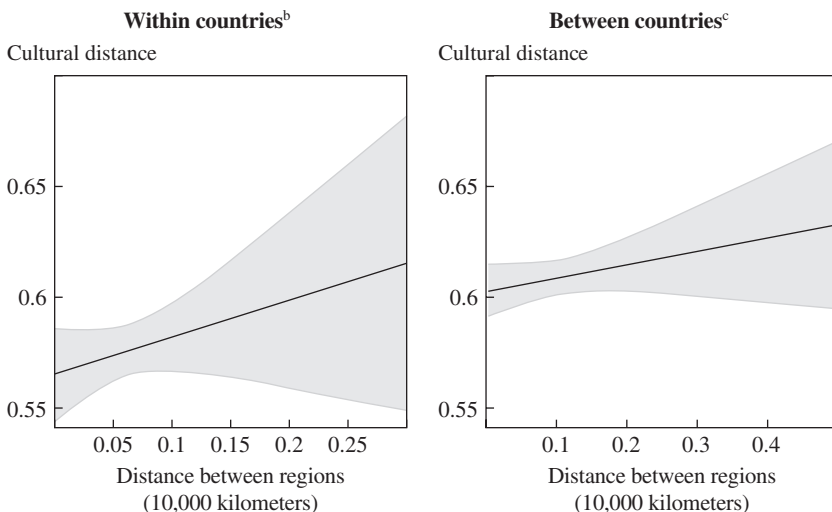
Sources: European Values Survey, wave 4; authors' calculations.
a. Analysis includes the full set of socioeconomic variables. Confidence intervals (the shaded areas) are adjusted for two-way clustering at the country of residence of each individual.
b. The regression line is described by the equation $y = 0.165x + 0.566$.
c. The regression line is described by the equation $y = 0.058x + 0.603$.

between-countries regression), but its value is negligible compared with the intercept (that is, compared with average distance among individuals living in the same region)—note that the order of magnitude of d_{ij}^Y and d_{ij}^G is about the same. Two individuals from regions in different countries that are very far apart geographically differ by not more than 0.02 cultural distance unit. Thus geographic distance, like socioeconomic distance, is positively correlated with cultural distance, but it does not explain much of the observed cultural heterogeneity (the R^2s of the regressions are small).[36]

IV.C. The Cultural Center of Europe

Knowing the region of residence of each respondent, we can compute the cultural distance of each region from the average cultural traits in Europe as a whole. In other words, we can locate the cultural core of Europe and its cultural periphery. Here we use wave 4 only, and we sample 500 individuals per country.

36. Fazio and Lavecchia (2013) also show that generalized trust is spatially correlated, also for regions belonging to different countries.

Figure 12. Cultural Distance from the Cultural Center of Europe, 2009

0.41 to 0.56
0.57 to 0.62
0.63 to 0.67
0.68 to 0.84
No data
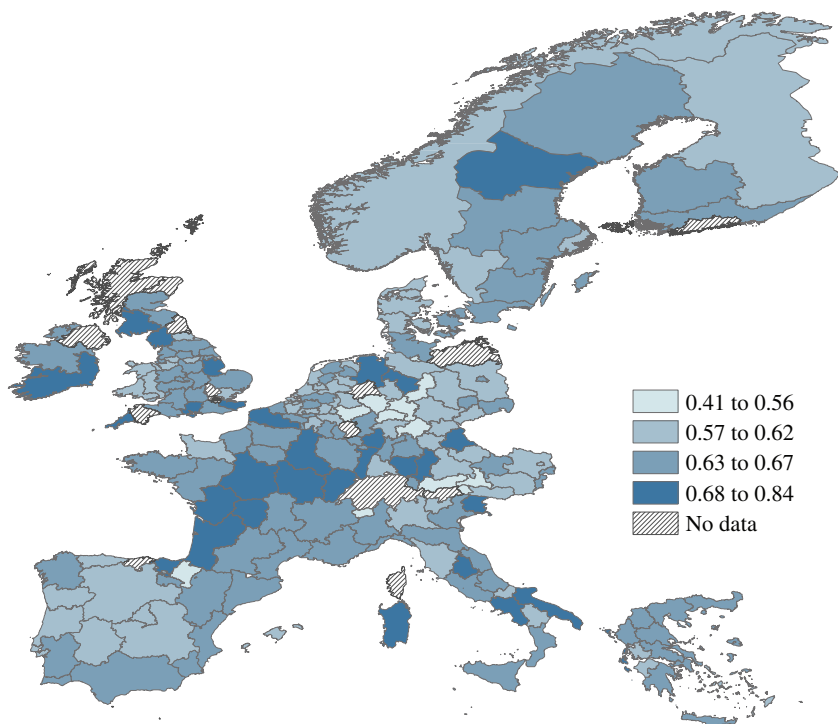
Sources: European Values Survey, wave 4; authors' calculations.

Consider the $N \times 1$ vector Y_i of cultural attitudes for individual i defined in section II. We use the notion of the geometric center, or centroid, of a set of points. The centroid of a set of vectors is their vector mean, $\overline{Y}$. The vector mean is computed as the solution to the following problem:

$$\overline{Y} = \arg\min_{Z} \sum_{i} \|Z - Y_i\|^2,$$

where $\| \; \|$ is the Euclidean distance. The vector $\overline{Y}$ can be thought of as the "cultural center" of Europe. We can compute the distance of any individual i from the vector $\overline{Y}$ in the same way as described in section II—as $d_i^Y = 1 - e^{-\theta \|Y_i - \overline{Y}\|^2}$. Because we know the region of residence of each respondent i, we can compute the average cultural distance of each region from the centroid $\overline{Y}$. We illustrate our findings in figure 12. Lighter colors denote smaller cultural distances from the cultural center. The countries closest to

Table 2. Cultural Distance and Fear of the European Union[a]

	Fear of the European Union			
	(1)	*(2)*	*(3)*	*(4)*
Cultural distance from EU centroid	0.0992**	0.0844**	0.0794**	0.0711**
	(0.039)	(0.036)	(0.035)	(0.034)
Controls	No	Yes	Yes	Yes
Fixed effects	No	No	Country	Region
No. of observations	6,810	6,810	6,810	6,810
R^2	0.002	0.096	0.156	0.209

Sources: European Values Survey, wave 4; authors' calculations.

a. Standard errors are clustered by region. Statistical significance is indicated at the **5 percent level.

the centroid are Germany and Austria. But Belgium, the Netherlands, and some regions of Spain and Portugal, are also relatively close. Much more distant are France, Italy (particularly Southern Italy), Greece, and Ireland. The sharp distance of France from the centroid (and from Germany) is consistent with Brunnermeier, James, and Landau's (2016) argument. Figure 12 also shows much regional variation within countries. For instance, Northern Italy is much closer to the centroid than Southern Italy. There is much heterogeneity in the United Kingdom as well, which is consistent with the vast regional variation in the 2016 vote on Brexit.

Are those individuals who are closer to the cultural center of Europe more in favor of European integration? To address this issue, we exploit a question in the EVS that asks whether the respondent is afraid of possibly adverse consequences of European integration in a number of policy areas.[37] We extract the first principal components of all these fears and regress them on cultural distance from the centroid of Europe in the full sample of our individuals, controlling for socioeconomic covariates. The results are displayed in table 2. Standard errors are clustered by region. To facilitate the interpretation, the dependent variable (fear of European integration) is normalized to lie between 0 and 1. Distance from the cultural centroid is always highly significant (also when controlling for individual socioeconomic covariates and regional or country fixed effects) and with the expected sign: Being more afraid of European integration is positively correlated with distance from the cultural centroid. Nevertheless, the magnitude of the estimated coefficient is not large. The estimated value of

37. The fears associated with the building of the EU listed in the questions are loss of social security, loss of national identity, our country paying more to the EU, a loss of power in the world, and the loss of jobs.

0.0711 in column 4 implies that reducing cultural distance from its average value of about 0.62 to its minimum of about 0.26 would reduce fear of European integration by about 6 percent of its average value—recall that fear of integration has been normalized to lie between 0 and 1. Thus, not only are Europeans very similar to each other, but cultural heterogeneity also does not seem to be so important for attitudes in favor or against integration. This is a further indication that cultural heterogeneity per se does not seem to be the main stumbling block preventing further integration.

IV.D. Discussion

Within-country heterogeneity in cultural differences swamps cross-country heterogeneity. Cultural heterogeneity is also related to geographic and socioeconomic dimensions, but most of it is unexplained. The European countries we consider are well-functioning democracies, despite the large internal variance in cultural traits we highlight. These findings thus suggest that the extent of cultural differences across European citizens living in different countries should not be an obstacle to further European political integration. This inference is further reinforced by the finding that cultural distance, although correlated with attitudes against European integration, only explains a small fraction of these attitudes.

V. Comparing the United States and the European Union

In this section, we compare the degree of heterogeneity of views within the European Union to that within the United States.

V.A. Data

For the United States, we use the General Social Survey (GSS). In line with Winston Churchill's conception of the "United States of Europe," one could roughly equate U.S. states with EU member states, but the available data from the GSS are not sufficiently rich, and small states have too few respondents. Therefore, we consider only nine large states for which we have enough observations: California, Florida, Illinois, Michigan, New York, North Carolina, Ohio, Pennsylvania, and Texas.[38] As an alternative, we also aggregated all states into five macro regions, and all our results were very similar.

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38. The nine states we selected reach 60 observations in most of the waves. In a few cases, they do not (the lower bound is Illinois in wave 2, which has 39 surveyed individuals who replied to all the questions).

A second problem is that the questions asked in the GSS are not identical to (and are fewer than) those in the EVS. In the online appendix, we describe exactly how we did the matching between the GSS and EVS. The GSS questions we use are listed in table A.7 in the online appendix and are a subset of the questions used for Europe. These questions cover the same five sets of issues included in the analysis of Europe, although in some cases fewer questions are included under some topics. In the static analysis of within-state versus between-state heterogeneity, and where we compare the United States with the European Union, a total of 15 questions are available.[39] An asterisk denotes the 6 questions that were not available in wave 1, and that thus are not used in the analysis of cultural convergence.[40] Finally, table A.3 in the online appendix lists the socioeconomic covariates we use in the analysis of GSS data.

V.B. Economic and Cultural Convergence in the United States

Let us begin with economic convergence. Barro and Sala-i-Martin (1992) study a long-term panel on personal income that goes back to 1840. They show that some beta convergence across U.S. states took place. As Peter Ganong and Daniel Shoag (2012) note, in 1940 average per capita income was 4.37 times larger in Connecticut than in Mississippi. This ratio declined to 2.28 in 1960, and to 1.76 in 1980. During the same period, the authors also show evidence of sigma convergence, except for some temporary shocks (for example, the Civil War). During the last 30 years, the convergence process has slowed down. The slope of the convergence relationship has fallen by more than 50 percent if one compares the subperiods 1940–60 and 1990–2010 (Ganong and Shoag 2012). The Connecticut–Mississippi income ratio in 2012 was 1.77, the same as in 1980.[41] From the work of many scholars (for example, Piketty and Saez 2003; Piketty 2014) we also know that income inequality in the United States has increased significantly in the last few decades (contrary to our findings for the EU countries reviewed above).

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39. In the GSS, questions about approval of abortion, approval of homosexuality, feeling of control over one's own life, and belief in God are asked in subsamples of individuals for whom other questions are not available. We thus exclude them from the analysis.

40. The GSS is conducted every other year. To match the EVS waves, we thus grouped GSS data as follows: The surveys of 1984 and 1986 correspond to wave 1; those of 1990, 1991, and 1993 to wave 2; those of 1998 and 2000 to wave 3; and those of 2006, 2008, and 2010 to wave 4.

41. Ganong and Shoag (2012) argue that labor mobility played a central role in income convergence. During the period of strongest convergence, until 1980, population flowed from poor to rich states, and initial income could well predict changes in population. At present, this pattern has largely disappeared.

As in Europe, we find that between 1980 and 2010, cultural diversity increased both across and within U.S. states, both in absolute terms and conditioning on socioeconomic status. These results are shown in figure A.14 and table A.8 in the online appendix. Distance did not increase in all cultural dimensions. Dispersion increased in attitudes toward the role of the state, sexual morality, and gender equality. Individuals seem to have become more similar in their religious beliefs and cultural capital.[42]

Notice that even if our results for economic and cultural convergence are similar for the European Union and the United States, the underlying mechanisms need not be the same. In the United States, the increase in cultural dispersion is consistent with the increase in political polarization among voters and political parties (McCarty, Poole, and Rosenthal 2016), which, in turn, may be related to the increase in income inequality. In the EU, the explanations may be related to specialization and institutional divergence. Further research on this point is warranted.

V.C. Cultural Distance within and across U.S. States

We now compute cultural distance within and across U.S. states and compare these with the EU, using the latest waves of the GSS and EVS. For the United States, we now use all the available questions. When directly comparing the European Union with the United States, we use the subset of questions in the EVS corresponding to those available in the GSS. The top-left panel of figure 13, which is the analog of figure 8, shows the distribution of distance between pairs of individuals in the United States within and across states. The top-right panel reproduces the same picture for the distance in the residuals of culture on a set of socioeconomic controls identical to the ones used for Europe. These two panels do not show any difference in the distribution within and across states. Thus, unlike in Europe, there is no more heterogeneity between states compared with that within states. As shown below, however, this is because there is more heterogeneity within U.S. states than within individual EU member states. The between-state differences are about the same in Europe and the United States.

The middle and bottom panels of figure 13 compare the distribution of cultural distances in the United States and Europe. The middle left panel

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42. These results are available upon request. Also in table A.8 of the online appendix we show the same exercise performed in table A.4. Average distance between individuals in different countries increased between wave 1 and wave 4 in a statistically significant way, both conditionally and unconditionally on socioeconomic covariates, by about 10 percent, approximately the same magnitude as for Europe.

Figure 13. Cultural Distance within and between the United States
and the European Union, 2009[a]
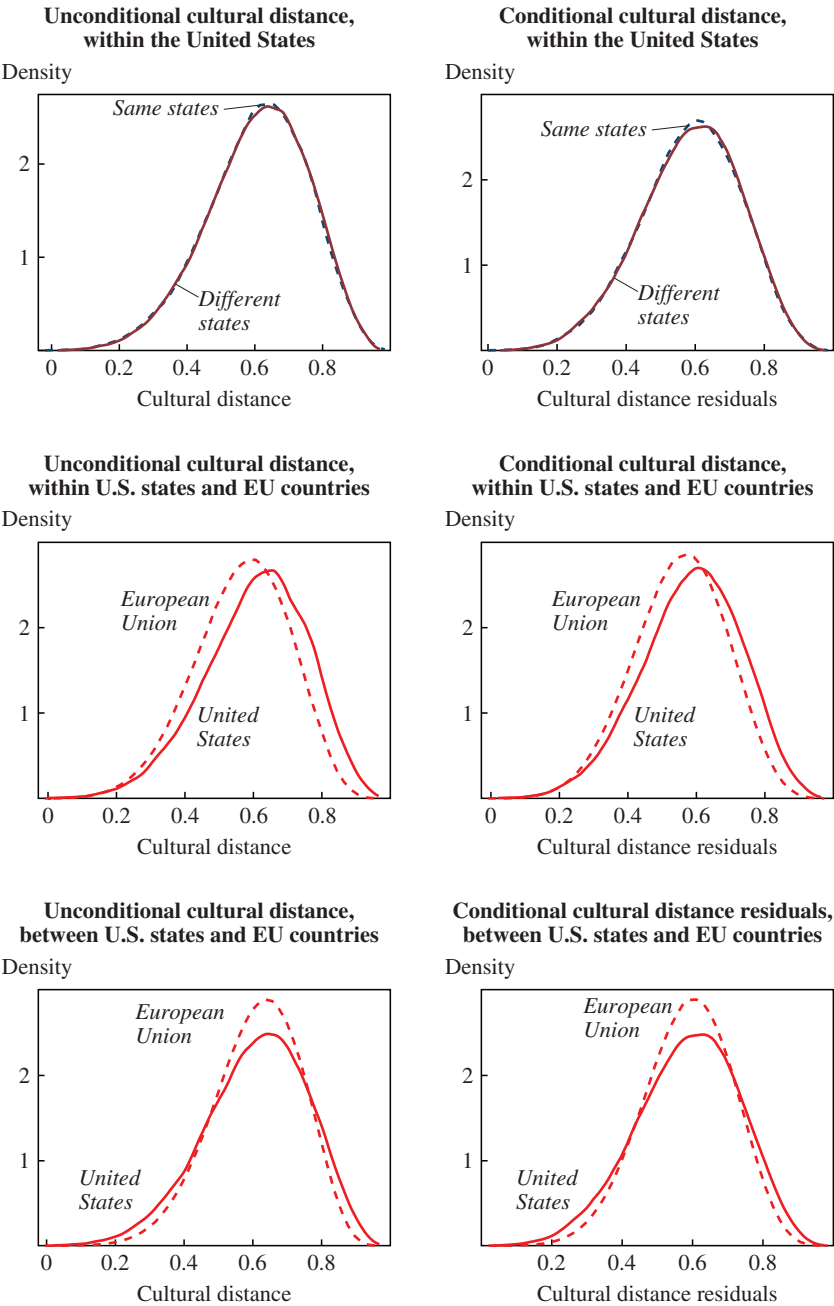
Sources: General Social Survey, 2006, 2008, and 2010; European Values Survey, wave 4; authors' calculations.
a. Analysis includes an extended set of cultural variables.

depicts the distribution of unconditional cultural distance between individuals living in the same U.S. state (solid line) and the same European country (the dotted line). The middle right panel does the same for the distributions of distances in the residuals (that is, conditioning on socioeconomic covariates). The bottom panels refer to the distribution of cultural distances for individuals living in different U.S. states and European countries (the solid and dotted lines, respectively). There is more diversity within a U.S. state than within a EU country—the U.S. distribution of cultural distance is shifted to the right compared with the European distribution. However, we do not observe more diversity across U.S. states than across EU countries (the average distance between U.S. states is about the same as between EU countries). Europe as a whole is not less culturally heterogeneous than the United States.

V.D. Cultural, Socioeconomic, and Geographic Distance: The United States versus Europe

SOCIOECONOMIC DISTANCE As was done for Europe, we regress cultural distance d_{ij}^Y on socioeconomic distance d_{ij}^X, following equation 1. Figure A.15 in the online appendix depicts the regression lines for individuals living in the same U.S. state and in two different ones. The two regression lines almost overlap, in accordance with the finding in the previous subsection that the distribution of cultural distance is the same within and between states. As in Europe (figure 10), the slope is positive, but small relative to the intercept (recall, however, that in Europe we found small but significant differences in the intercepts). Cultural distance is related to socioeconomic distance (within and across states), but most of the cultural distance between individuals is unexplained by their observed socioeconomic status.

As is done in table 1 for Europe, we have estimated this same regression for individuals belonging to different pairs of U.S. states. The intercepts are shown in table A.9 in the online appendix, which reports the average cultural distance between pairs of individuals of identical socioeconomic level, coming one from the row state and the other from the column state. First, the average distance between individuals of the same socioeconomic level does not vary much across pairs of states (from a minimum of 0.54 to a maximum of 0.63 across different states, a similar order of magnitude as between EU countries). Second, individuals in New York and California are on average more similar to each other than when compared with individuals in other states. This highlights the cultural similarity between two states on the opposite coasts.

GEOGRAPHIC DISTANCE In Europe, geographic distance, d_{ij}^G, contributes only slightly to explaining cultural distance, d_{ij}^Y. But this is not the case in the United States. We find no correlation between geographic distance and cultural distance within the United States, as shown in figure A.16 in the online appendix. In the United States, geography does not explain cultural distance, in contrast to Europe. The reason may be greater mobility of people within the United States than within Europe. As noted with reference to table A.9 in the online appendix, this may also be due to greater similarity between the two U.S. coasts than between each coast and the central states. This geographic pattern may facilitate political integration compared with Europe, where we see a North/South divide in economics, institutional quality, and, to a smaller extent, in culture.

V.E. Discussion

A comparison between the European Union and the United States suggests that the fundamental cultural differences among Americans are not bigger than those among Europeans. Along this dimension, if Americans can share a well-functioning union of states under one federal system, so could Europeans. Needless to say, the United States has had 250 years of nation building and 150 years have gone by since the Civil War. Europe has had a much shorter common history, and only 70 years have gone by since the last inter-European war. Americans share a common language, and geographic mobility in the United States has been much higher than within Europe, or even within individual European countries. Mobility helped create a melting pot and thus a common identity, but apparently did not dampen cultural heterogeneity.

VI. Concluding Remarks

Europe is at a crossroads. As emphasized by the European Commission (2017), EU citizens are becoming impatient with their institutions, and major decisions need to be made. The European Commission believes that the European project either needs to be scaled down to the Single Market and a free trade agreement, or pushed toward deeper integration. Muddling through the current difficulties might be the easier solution in the short run, but it risks aggravating the EU's long-run prospects and further alienating European citizens who perceive the current situation as unsatisfactory.

But does Europe have the required fundamentals to become a viable political union? If the perceived benefits of integration are high, and cultural

heterogeneity is relatively small and plays only a minor role, what prevents the EU from taking further steps toward a political union? We think the answer is the heritage of nationalism. Europeans retain strong national identities, amplified by different languages, and the memories of their past violent conflicts are still too strong and recent to overcome mutual distrust (Guiso, Sapienza, and Zingales 2009). Nationalist sentiments are on the rise, and this was true even before the financial crisis, which probably reinforced this tendency.

Although there is much variation among countries, between 1980 and 2009 most Europeans became prouder of their national identities; on average, the percentage of respondents who are proud of their nationality increased from 37 percent in the early 1980s to almost 50 percent in 2008–09, as shown in table A.10 in the online appendix. Nationalism probably increased further after the financial crisis, in line with past episodes.[43]

If Europe wants to proceed further along the road of political integration, an important challenge is to reinforce a common European identity and to reduce mutual distrust between different nationals. According to Eurobarometer surveys, Europeans seem ready to accept a transfer of sovereignty to the center in the provision of some global public goods, such as security, border control, and environmental protection. But a political union should also be resilient to economic shocks like the recent financial crisis, and this presupposes agreement on a possibly minimalist set of principles of risk sharing and solidarity. This in turn requires sufficiently strong feelings of mutual identification and of belonging to a recognized and legitimate political community. This prerequisite for political integration is not out of reach. Despite the rise of nationalism, European identity has not weakened. According to Eurobarometer surveys reported by Jacques Nancy (2016), 51 percent of respondents say they felt both national and European in 2016, against 39 percent who felt only national. These numbers are not very different from those in the distant past. Thus, despite recent difficulties, the European project is still popular, although struggling. Restoring economic growth and avoiding prolonged stagnation would certainly contribute to further improvement in its popularity.

In the long run, mutual distrust among Europeans can be reduced by expanding European educational initiatives. In the history of nation building,

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43. Funke, Schularick, and Trebesch (2016) show that support for extreme right-wing parties generally increases after financial crises.

public education has always played a major role (Alesina, Giuliano, and Reich 2017). The Erasmus Programme of student exchange works well, but the evidence suggests that it did not have a large impact on shaping European identities, probably because its self-selected participants are already very pro-Europe (Sigalas 2010; Wilson 2011; Mitchell 2014). If one agrees that further political integration would be a good idea, then this program could be expanded to reach more young people in high school or in technical institutions, and not just primarily university students. Moreover, school programs could be designed to include a more extensive curriculum covering European institutions and citizenship.

The feasibility of European political integration also depends on how it is achieved. The institutional foundations of the transfer of sovereignty have important implications for citizens' national versus European identification. Intergovernmental decisionmaking in the European Council inevitably increases perceived international conflicts and breeds mistrust, because national political delegation forces politicians to show to their respective constituencies that they have "won" and brought home a good deal. Instead, having a European policymaking institution in charge that is accountable to all European citizens, either directly or indirectly through the European Parliament, would be more likely to encourage compromise. It could also accelerate the formation of European identities and the emergence of a European (as opposed to national) public forum, where European policy issues would be discussed with a European perspective. But transferring political power from the European Council to European institutions requires the consent of national governments, which may be jealous of their own prerogatives and may not accept the emergence of powerful European political actors. Exploring these institutional aspects of how to achieve further European integration is an important challenge for future analysis and policy discussion.

APPENDIX

Measurement Error

Let y_{ic} be the observed cultural measure in country c for individual (or pair of individuals) i. Let the observed y_{ic} be a mismeasured proxy for the true latent cultural measure y_{ic}^*. Particularly, assume the presence of idiosyncratic measurement error ε_{ic} and country-specific mismeasurement v_c. We posit

$$(2) \qquad y_{ic} = y_{ic}^* + \varepsilon_{ic} + v_c,$$

with ε_{ic} independent and identically distributed classic measurement errors orthogonal to v_c, which is also independent and identically distributed with a mean of zero. Let us derive the mean and variance of y_{ic} within country c based on equation 2—so taken relative to individuals i in country c, hence the subscript E_i, V_i used below. We obtain

$$(3) \qquad E_i(y_{ic}) = E_i(y_{ic}^*) + v_c,$$

and

$$(4) \qquad V_i(y_{ic}) = V_i(y_{ic}^*) + V_i(\varepsilon_{ic}).$$

We can further compute the variance of country-specific means across different cs:

$$(5) \qquad V_c(E_i(y_{ic})) = V_c(E_i(y_{ic}^*)) + V_c(v_c).$$

Ad absurdum, let us take the extreme case in which the measurement error is so large to potentially mask a within-country true variance of the latent cultural measure $V_i(y_{ic}^*)$ that is less than or equal to the observed cross-country variance in country means $V_c(E_i(y_{ic}^*))$, or

$$V_c(E_i(y_{ic}^*)) \geq V_i(y_{ic}^*).$$

Then, consider that the measured within-country variance has to satisfy

$$V_i(y_{ic}) = V_i(y_{ic}^*) + V_i(\varepsilon_{ic}) \leq V_c(E_i(y_{ic}^*)) + V_i(\varepsilon_{ic}) = V_c(E_i(y_{ic})) - V_c(v_c) + V_i(\varepsilon_{ic}).$$

Rearranging this inequality yields

$$V_i(y_{ic}) - V_c(E_i(y_{ic})) + V_c(v_c) \leq V_i(\varepsilon_{ic}),$$

which implies that

$$V_i(\varepsilon_{ic}) \gg V_i(y_{ic}) - V_c(E_i(y_{ic})).$$

From our empirical estimates, we know that $V_i(y_{ic}) \approx 10 \times V_c(E_i(y_{ic}))$. Hence, $V_i(\varepsilon_{ic}) \gg 9 \times V_c(E_i(y_{ic}))$. Notice that $V_i(\varepsilon_{ic})/V_c(E_i(y_{ic}))$ can be read as the noise-to-signal ratio of the individual country survey relative to the benchmark of the (arguably better measured) cross-country dispersion of the culture measure $V_c(E_i(y_{ic}))$. Therefore, $V_i(E_i(y_{ic}))/V_c(E_i(y_{ic})) \gg 9$.

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Comments and Discussion

COMMENT BY

MARKUS BRUNNERMEIER
In this paper, Alberto Alesina, Guido Tabellini, and Francesco Trebbi shed new light on the optimal scope for political unions at a time when insights on the present and future of the European Union are deeply needed. Their view is guided by the following trade-off: Economies of scale and the provision of aggregate public goods call for more integration, while heterogeneity in values and culture create a cost for more integration. In this paper, they tackle the latter point empirically, by measuring the convergence or divergence in cultural values among Europeans. In a nutshell, the authors find no evidence of such convergence: Although European countries converged toward similar cultural views, the core converged faster than the periphery. At the same time, they find that the *level* of heterogeneity across Europeans is lower than what is observed within the EU's member countries, and also within the United States. Whether the last finding calls for more or less integration, however, remains a matter of debate. I make the point below that Europeans do not need to agree on all political matters. Some cultural heterogeneity might actually be a strength rather than a weakness. It is important to filter out which dimensions of agreement are important and which ones are not. For example, different views about divorce laws seem easy to deal with; but different views on how monetary policy should be conducted in a currency union would seem to hurt its effectiveness. In short, there is not *a* political union; rather, there are different political unions concerning different aspects of political interaction. Before addressing these issues, however, I start by commenting on the authors' findings.

The authors first document the economic convergence that has occurred in Europe during the last two decades. They show that the catch-up in real GDP per capita occurred mostly during the 1980–99 period ("beta"

214

convergence), whereas the period 2000–09 shows less of a trend—and probably even less so now, given the underperformance of Greece, Italy, Portugal, and Spain following the financial and debt crises. In addition to convergence in the level of GDP, business cycles seem to have become more synchronized. I feel, however, that the authors could have benefited from looking at other trends of economic convergence beyond per capita income—for example, at the convergence and recent divergence of interest rates within the eurozone.

Despite this economic convergence, the authors also show there has been remarkably little convergence of culture. This fact stands, even though most Europeans seem to have become more secular, less traditional, and more tolerant; and though their scores from the Programme for International Student Assessment have converged. Interestingly, the overall divergence in cultural values is the result of the fact that people in the core countries have moved closer and faster to those new values than people on the periphery. Nevertheless, the heterogeneity among European might not be that high, at the end of the day. I argue that it is important to distinguish whether there is heterogeneity in objectives or values or disagreement on how to achieve these values—that is, how the government should be run.

Let me take this opportunity to zoom out and reinterpret the findings. One possible conclusion from their findings is that the European Union should further integrate, because cultural heterogeneity is by no means as large as in other "national" unions. This conclusion follows from the authors' emphasis of the main trade-off "between the benefits of integration in terms of economies of scale and scope, and the cost due to heterogeneity in preferences," and the fact that they find the latter costs to be low.

Another, dimmer interpretation of their findings is that "common culture," as captured by the authors' measures, is not really what determines the optimality or desirability of a political union. People in Mississippi and Massachusetts, who share vastly different values, live under the same flag. For example, in the United States there is huge disagreement about universal health care provision for all citizens, whereas in Europe there is broad agreement for it. Another example of heterogeneous political union is India. India has more than 2,000 ethnic groups, all the major strands of the world's religions, four families of languages, and even communist states. One might argue that it should be easier to form a political union in Europe, as people's values are more aligned. Yet in Europe, where the divergence in values seems smaller, the United Kingdom recently voted to leave the European Union, while serious talks about independence are

nonexistent in Mississippi or Massachusetts. Perhaps this suggests that we are looking at the wrong trade-off.

If not that culture, then what determines the other side of the trade-off for an optimal political union? Federalism suggests that some decisions ought to be made at a supranational level, while for others there is no need for harmonization. For a political union to work, one does not necessarily need a common marriage law, abortion law, or policies to promote gender equality. In the case of widely differing views on such societal issues, there is no intrinsic need for regions to agree on all such ideas. Indeed, one might even find it optimal to have some disagreements, if individuals are free to move within the EU. The subsidiarity principle, moreover, says that even in case of agreement, some things ought to be dealt with at the local level.

However, some values need coordination at a similar level of governance. This is the case for many economic decisions. For example, a common monetary policy is more stable if bankruptcy laws are harmonized. This is because of scale effects, as well as spillovers and externalities. I would have liked to see a stronger emphasis on categorizing various areas where agreement is essential and where it is not. Surely, cultural differences also matter there—but these are different cultural traits than some captured by the metrics the authors propose. One might even argue that the actual plurality of Europe is exactly what makes Europe so special.

Moreover, it could be that Europeans hold similar views on what should be the right policy to pursue for society, but might disagree on how exactly these policies should be implemented. For example, Europeans arguably all agree that economic stability is an important objective, but might vastly differ about how they think this objective ought to be achieved.

Differences in economic thinking are of first-order importance in preventing a closer political union, even if all citizens have shared values and objectives. These differences—if not openly debated—can lead to misunderstanding and mistrust. This might explain why deeper integration is not being achieved so far.

The differences in economic philosophies can be most easily seen by contrasting France and Germany. As outlined in *The Euro and the Battle of Ideas*—my recent book with Harold James and Jean-Pierre Landau—the euro crisis reveals a divergence in conceptualization between the two major drivers of European integration. There are at least four main areas where France and Germany seem to hold distinct views. To sharpen the contrast, I present them in an abrupt dichotomy—in a black/white fashion. First, French economic philosophy favors interventionistic discretion over rules. Second,

it favors solidarity over liability. France favors risk sharing, while the German liability principle argues that the entity in charge of making the decision should also be liable. Third, French economists typically attribute any financial difficulty to liquidity problems, which should be addressed with government financing, while Germans typically argue that financial difficulties are fundamental solvency problems and any intervention simply throws good money after bad. Fourth, in recessions, French economists favor demand management that makes use of Keynesian stimulus programs, while Germans emphasize political economy reasoning. They argue that structural reforms are difficult to implement and can only be pushed through in times of crisis.

However, as shown in *The Euro and the Battle of Ideas*, these differences may not be cast in stone, because such ideas are not fixed. For instance, in the 19th century, France was the country of laissez-faire, while the German government had a much more interventionistic approach. But then France and Germany switched sides after World War II. In short, the disagreements in economic philosophies across countries may not be as fundamental as the findings of this paper suggest, yet political frictions prevent them from agreeing on current economic policies.

One solution to increase agreement among Europeans is to foster more cross-border debate among them. Different views and cultures are not bad per se, as long as they are debated; this can sometimes lead to better solutions. Diversity can make systems more resilient to shocks, while total homogeneity limits advantages from cooperation and risk sharing. Heterogeneity also promotes experimentation; the fact that Finland is trying out a universal basic income, for example, is a useful laboratory test for the whole of Europe.

One way to spur debates could be to create joint media outlets. Currently, the only places where differing views are being debated are specialized newspapers like the *Financial Times*, or the VoxEU platform. The beneficial aspects of heterogeneous views can only be gained if these debates take place across populations in different countries at the same time.

We need more media outlets that aim to cover issues from a European perspective—delivered, however, in a way that reaches all citizens. Project Syndicate, which translates its articles directly into different languages and sells them to local newspapers, is an important step in the right direction. Blogs and social media are also helping Europeans to discuss and debate more, although language here remains an important barrier. Live-translation technologies and an EU-wide television channel, perhaps, could provide the next step.

To wrap up, I believe that this interesting paper sheds light on at least one side of the debate: Heterogeneity in values between Europeans does not seem to be at the core of the disagreements regarding the pursuance of a political union, because they vary less than within countries or other political unions such as the United States and India. Yet this mostly suggests to me that such cultural heterogeneity is not at the core of Europe's problems, so we must look somewhere else. Moreover, one could think that heterogeneity in social issues, in fact, is a motive for integration. After all, as long as citizens can freely move among unions, they allow one to choose the society most suited to his or her needs. Viewed differently, heterogeneity can also make an economic and political system more resilient, because diversification increases specialization, risk sharing, and, ultimately, cooperation. Differing views, if they foster constructive debates, could lead to better outcomes and solutions. Misunderstandings, conversely, lead to unproductive disagreements.

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COMMENT BY

ELIAS PAPAIOANNOU   For decades, the European Union has embodied the hope for a bright, peaceful, and prosperous future for its people. However, the EU has recently become a synonym for dysfunctional bureaucracy, symbolizing the inability of the European political system to tackle the serious issues the continent faces. The EU faces a multifaceted existential crisis. The prolonged recession in the South (Greece, Italy, and Portugal), the rise of illiberal parties in former communist countries (Poland and Hungary), and the United Kingdom's decision to leave the EU (Brexit), coupled with the global slowdown in productivity and the refugee crisis, threaten the European architecture. At the same time, distrust of the EU has risen (Papaioannou 2013; Algan and others 2017); populist parties with an explicit anti-EU agenda are gaining momentum; and old rivalries dating back to World War II have reemerged (Fouka and Voth 2016; Guiso, Sapienza, and Zingales 2016). Influential commentators, politicians, and many of its citizens argue that the EU is so economically, institutionally, politically, and culturally heterogeneous that it is doomed to fail—and the

sooner the better, nationalist politicians like Marine Le Pen, Nigel Farage, and Geert Wilders would add.

Europeans, especially in the South, have a tendency to complain; and the EU has become the easy target. Critiques come from all sides of the political spectrum. To Eurosceptics, the EU's institutions—the European Central Bank, the European Parliament, and the European Commission—are anathema because they aim to weaken national identities, repress cultural norms, and abolish countries' sovereignty. A milder vintage of Euroscepticism (traditionally associated with the United Kingdom and the Tories) believes that the EU should not have proceeded to deeper integration, but simply focused on trade, remaining a free trade area. To pro-Europeans, the EU should abolish its incremental approach and proceed aggressively toward deeper economic and political union. The EU's institutions, they argue, should get more power, because Europe needs to develop a common identity. Interestingly both EU-sceptics and many believers in European integration view diversity across member states as an impediment, though theoretically heterogeneity can have nonnegligible positive effects (Alesina and La Ferrara 2005). For example, Alberto Alesina, Johann Harnoss, and Hillel Rapoport (2016) uncover a positive association between birthplace diversity and economic development, especially among skilled immigrants.

RESULTS FROM THE PRECRISIS PERIOD, 1980–2007 Alberto Alesina, Guido Tabellini, and Francesco Trebbi have written a provocative, intuitive, and broad paper that provides a thorough analysis of the EU's economic and cultural dynamics from the 1980s until the onset of the global financial crisis (1980–2007), placing an emphasis on the evolution of cultural heterogeneity. The authors effectively compare results from the EU with the United States, which is often viewed as a successful and not particularly dysfunctional political and economic union. An admirable aspect of the paper is its holistic approach, which allows the reader to see how economic, institutional, and cultural convergence has coevolved.

Conditional convergence. The authors' analysis, as well as previous studies, clearly point out that during the period 1980–2007, the relatively poorer EU countries and regions, mostly in the South (Greece, Portugal, and Spain, but also Ireland), experienced fast output growth and managed to close the income gap with the more advanced nations in the North. Although the speed of convergence slowed down in the late 1990s, very few Europeans in 2007 would not highlight convergence on the periphery as one of the EU's major success. And though one could be critical of the slowdown in catch-up growth, this pattern echoes the patterns of convergence across U.S. states, which was strong for a century (1880–1980) but slowed

down in the 1980s, and especially in the 1990s and 2000s (among many others, see Ganong and Shoag 2016).

But here there is an important caveat, which policymakers and academics realized only after the crisis. Although output growth on the European periphery remained strong after the inception of the euro (1999–2007), this was driven by investment (and labor utilization) and not by improvements in efficiency; growth in total factor productivity in the South was anemic, due to capital and labor misallocation, both across sectors (with the economies moving toward construction and services) and within narrowly defined industries (Gopinath and others forthcoming). The relatively high inflation on the periphery, coupled with the minimal wage growth in Germany, led to widening gaps in competitiveness between core and periphery countries. Bankers, policy institutions, academics, and the public did not pay much attention to the rising current account (competitiveness and efficiency) imbalances as capital was flowing downhill (from Austrian, Dutch, French, and German banks to real estate, construction projects, banks, and government bonds in the South). As a consequence, though the economies on the periphery seemed to be converging, divergence in productivity and competitiveness slowly led to considerable imbalances in the euro area (Micossi 2016).

Output synchronization. Using regional data, Alesina, Tabellini, and Trebbi next examine the evolution of output synchronization during the period 1980–2007. Their before-and-after analysis shows that regional output cycles became more synchronized after 2000, though this effect is mostly present for regions in the North. This is an interesting result, but some caveats are needed. Theoretically, the link between trade and financial integration and output synchronization can go both ways, because it crucially depends on the nature of the underlying shocks and the form of trade or financial integration. Moreover, it is empirically challenging to isolate global (or EU-wide) shocks from country-specific responses (Kalemli-Özcan, Papaioannou, and Peydró 2013).[1] So caution is needed

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1. For example, the canonical real business cycle model (Backus, Kehoe, and Kydland 1992) predicts that financial integration will magnify productivity shocks leading to divergent investment patterns and eventually more asynchronous cycles. In contrast, theories focusing on global banks that study the propagation of financial shocks predict that financial integration will lead to more synchronized cycles (Holmstrom and Tirole 1997; Morgan, Rime, and Strahan 2004). Likewise, if currency unions spur intraindustry trade, then business cycles of trading countries will become more synchronized; however, the opposite holds if countries trade based on comparative advantage in different sectors (Frankel and Rose 1998).

here, because increased integration does not imply increased business cycle synchronization. Alesina, Tabellini, and Trebbi show that increased correlations of regional output cycles apply to both the euro and non-euro areas, suggesting that there may be global trends.

Institutional dynamics. A key objective of the project of European integration has been promoting institutional convergence. This has been achieved mostly via EU-wide legislation (EU directives and EU regulations), but also with official communiqués.[2] Besides the direct legislative efforts to harmonize regulations, the EU has nudged countries to reform anachronistic institutions, most notably in Eastern Europe during its transition period. Alesina, Tabellini, and Trebbi tabulate various cross-country measures of institutional quality (proxying state capacity, civil liberties, bureaucratic quality, court efficiency, economic freedom, and more). Although data availability for the pre-euro period is limited, most institutional indicators point to some convergence in the 1990s, which, however, has been followed by divergence since the introduction of the euro (for additional descriptive evidence, see Papaioannou 2016). Jesús Fernández-Villaverde, Luis Garicano, and Tano Santos (2013) discuss in detail how entry in the eurozone delayed, rather than advanced, much-needed institutional reforms of pensions, the courts, politics, and corporate governance, contributing to the slowdown of productivity and competitiveness (see Papaioannou 2015 for a discussion).

Evolution of culture. A major contribution of the paper by Alesina, Tabellini, and Trebbi is the examination of cultural beliefs, norms, and attitudes since the early 1980s and the comparison with U.S. states. The analysis yields many interesting results that almost surely will spur follow-up research. First, Europeans' attitudes toward gender equality, religiosity, and the state's role moved considerably in the period 1980–2007 across all countries. Second, there has been "cultural divergence" as Northern and Central Europeans' beliefs have changed much more rapidly than the beliefs of citizens in Southern Europe. Third, a simple variance decomposition of beliefs and norms shows that within-country cultural heterogeneity dwarfs cross-country differences. Fourth, a picture similar to the European one emerges when the authors study cultural beliefs across the United States; there is massive within-region (and within-state) heterogeneity that

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2. For example, the Single Market Strategy was quite successful in homogenizing health and environmental standards, while more recently the 27 directives and 2 regulations of the Financial Services Action Plan contributed to the harmonization of the regulatory and legislative frameworks of banks and capital markets.

is quantitatively much larger than differences across states. Although the beliefs of Germans and Greeks differ, on average, these differences are small compared with the massive cultural heterogeneity in Germany and in Greece. A similar pattern emerges in the United States. There are evident cultural differences between the southern states and New England, but what is striking is the degree of within-state and within-region heterogeneity. These findings are important, as many academics and policymakers emphasize what they consider the deleterious cross-country differences in beliefs across EU states (Guiso, Herrera, and Morelli 2016). Alesina, Tabellini, and Trebbi show that one needs to look deeper and realize the vast within-country cultural heterogeneity; perhaps, the challenge for the EU is not so much to attenuate mean differences in beliefs across member states but the vast differences (and rising polarization) of beliefs and norms within EU member states. Pollsters' evidence from recent European and American elections is consistent with the evidence of Alesina, Tabellini, and Trebbi, as the electoral results reveal massive within-country (and even within-state and within-region) heterogeneity and polarization of beliefs. Moreover, Klaus Desmet, Ignacio Ortuño-Ortín, and Romain Wacziarg (forthcoming) uncover similar patterns of vast within-ethnicity and within-religion cultural differences, working with a global sample and focusing on dozens of survey questions reflecting various cultural attitudes and norms.

EVIDENCE FROM THE CRISIS PERIOD, 2008–16 But what about the most recent crisis period? The quick recovery of the countries in the European core after the deep recession of 2008–09, coupled with the prolonged recessions on the periphery, have totally reversed the pattern of convergence in the EU during the period 2008–16. There are sizable differences in output per capita and unemployment across the EU countries, and if anything the gaps between the core and periphery countries have widened.[3] A natural follow-up inquiry is examining how institutions and cultural traits have evolved since the onset of the crisis.

National institutions, 2007–14. Economic divergence has moved in tandem with institutional divergence. My figure 1 tabulates the mean values of the World Bank's control of corruption and rule of law indicators in 2007 (before the crisis) and in 2014 (after the crisis) for three euro area groups of countries: core (Austria, Belgium, Finland, France, Germany, Luxembourg, and

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3. In February 2017, average EU unemployment hovered at about 8 percent (in the euro area, it was 9.5 percent); but unemployment in Greece and Spain was about 20 percent, in Italy and Portugal it was about 11 percent, in Germany it was about 3.9 percent, and in Austria and the Netherlands it was about 5.5 percent.

Figure 1. Control of Corruption and Quality of the Rule of Law across the Eurozone before and after the Crisis
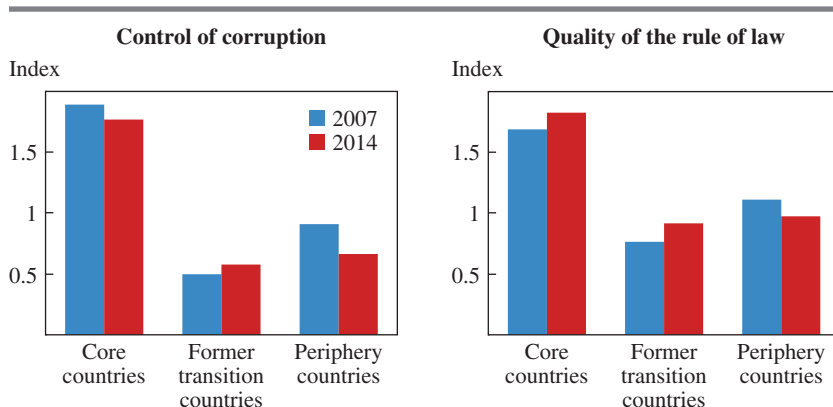

Sources: World Bank, Worldwide Governance Indicators; author's calculations.

the Netherlands); periphery (Cyprus, Greece, Ireland, Italy, Malta, Portugal, and Spain); and former transition (Estonia, Latvia, Lithuania, Slovakia, and Slovenia). There was an evident gap between the core and the other two sets of countries at the onset of the crisis. And during the past nine years, institutional quality in the periphery has deteriorated (according to both indicators) while in the core countries there has not been much movement. These indicators are survey-bases proxies containing perhaps nonnegligible errors. Yet, as shown in my own work (Papaioannou 2016), and the work of Costas Arkolakis, Aristos Doxiadis, and Manolis Galenianos (2017), among others, a similar picture emerges when considering other indicators (from the World Bank's Doing Business project) that measure specific aspects of the institutional environment, such as legal quality, court efficiency, red tape in product markets, and easiness of registering property. Stavroula Karatza and I (2017) tabulate data from the EU Justice Scoreboard that monitor developments in courts across the EU and again find similar patterns. Delays in courts and legal formalism, if anything, have increased in Italy and Greece (and some other countries on the periphery), while there have not been major swings in the North. The North/South wedge has widened.

THE EUROPEAN TRUST CRISIS Europe has also been experiencing a trust crisis in recent years (Papaioannou 2013; Guiso, Sapienza, and Zingales 2016; Algan and others 2017). My figure 2 (taken from Algan and others 2017) plots the distribution of trust in the European Parliament and national parliaments for 183 European regions (at the NUTS2 level) before and

Figure 2. The Distribution of Trust in the European Parliament and National Parliaments before and after the Crisis
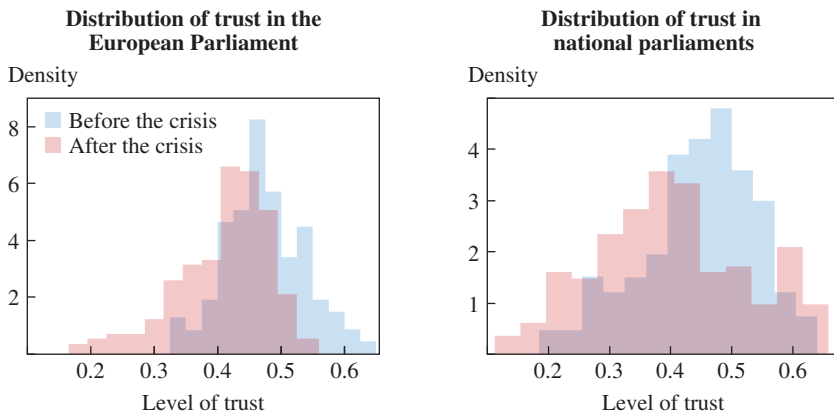
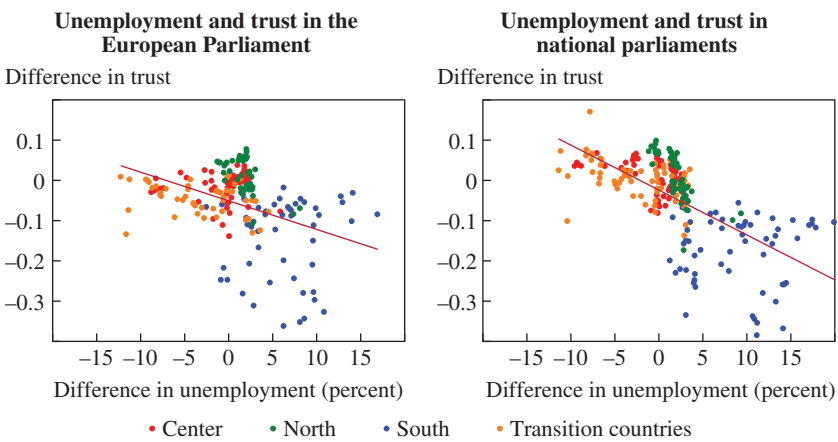Sources: European Social Survey; author's calculations.

after the crisis, using data from the European Social Survey.[4] The histograms reveal the evident fall of trust in both the European Parliament and national parliaments.

Yann Algan and others (2017) show that Europeans' distrust of local political parties and national courts has also risen during the crisis, though, interestingly, trust in the police has slightly increased. But is distrust toward the EU and national institutions linked to the economic crisis? Algan and others (2017) show that it is. My figure 3 reproduces some of their results. Within-region changes (over time) in unemployment during the crisis correlate strongly with increases in distrust of the European Parliament and national parliaments. This effect does not reflect differences between the core, the periphery, and former transition countries, because it is present for all groups of EU member states.

Algan and others (2017) provide additional results linking the intensity of the crisis across EU regions to distrust of national institutions, political extremism, and beliefs and norms on immigration. They also try to push on causation, exploiting quasirandom variation in the severity of the crisis across EU regions based on precrisis patterns of industrial specialization.

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4. NUTS stands for *nomenclature des unités territoriales statistiques*, or nomenclature of territorial units for statistics.

Figure 3. Regional Unemployment and Trust in the European Parliament
and National Parliaments before and after the Crisis

Unemployment and trust in the European Parliament

Difference in trust

Unemployment and trust in national parliaments

Difference in trust

Difference in unemployment (percent)

Difference in unemployment (percent)

• Center   • North   • South   • Transition countries

Sources: European Social Survey; Eurostat; author's calculations.

CONCLUDING THOUGHTS The EU is facing multiple crises. Economic recovery on the periphery is sluggish. Even in the core countries, unemployment remains high in many regions (in spite of declining labor force participation). Institutional quality in many countries is low, and if anything is deteriorating. And the desire for institutional reforms that characterized the Southern European and transition countries in the 1990s has evaporated. Poland and Hungary have governments that are openly illiberal, interfering bluntly with the judiciary and universities, and challenging fundamental European social values. At the same time, the refugee crisis is putting enormous economic and social stress on many countries, raising challenging questions about European and national identity.

Alesina, Tabellini, and Trebbi have written a stimulating paper pointing out that, though there are cultural and institutional differences across EU member states, these are comparable to those in the United States. And though the beliefs, norms, and values of Europeans differ, within-country heterogeneity trumps cross-country differences. This pattern is again similar to that in the United States. Even Europeans' rising discontent with Brussels echoes Americans' dissatisfaction with Washington.

Jean Monnet, one of the EU's intellectual founding fathers, famously argued that Europe would be forged in crisis. The time is up.

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GENERAL DISCUSSION   Luigi Zingales liked the paper very much and thought it dealt with an important area of research. But he was surprised about the choice of values examined by the authors, stating that if there is one thing that Europe does not try to homogenize, it is social laws. Thus, he posited that whether there is more or less homogeneity is not that important. What is important—which he thought the authors should emphasize more—is relative trust. Research Zingales has done with Luigi Guiso and Paola Sapienza attempts to compare trust within the United States versus trust within Europe; they find that, by and large, Americans do not differ very greatly in trust from region to region.

In Europe, however, Zingales saw things as very different. For instance, Jeroen Dijsselbloem, a self-described socialist who is head of the eurozone's finance ministers, came under fire for saying he believes in EU redistribution, but that eurozone countries had wasted their money on drinks and women—clearly referring to the Southern European countries. Not even U.S. presidential candidate Donald Trump did something as thoroughly insulting as that—he may have offended Mexicans and others, but not an internal group in the United States. But in Europe, these types of insults are standard. For instance, Zingales noted, Germans may think Greeks are lazy, but this opinion is proven false by statistics showing that Greeks spend more time working during a week than Germans. Yet the reality, he continued, is that Europeans do not like to redistribute—they find every possible excuse not to do so. Research by Alberto Alesina and Eliana La Ferrara finds that within the United States, the willingness to redistribute is related

to racial diversity.[1] So in states where the population is racially hetero-geneous, the willingness to redistribute tends to be very low.

With the European Economic and Monetary Union, one does not nec-essarily need to feel empathy with another country to trade with it; but if one wants to introduce some form of redistribution, such as what banking unions and fiscal unions can bring about, one cannot do it without a sense of nationhood, Zingales contended. Discussant Markus Brunnermeier pointed out that India was made a country by the British, and before that was not a country. The Indians' fight against the British created a national identity that made them one country, in spite of differences in religion, language, and so on. Europeans, unfortunately, have only fought among themselves, not against a common enemy.

Caroline Hoxby thought that, in discussing nations within Europe, one needs to think about the social welfare function that people are implicitly applying. It may very well be that many Europeans apply a social welfare function that has boundaries at their national border, not European borders. Economists have traditionally had little to say about whether the boundaries of a social welfare function are "correct."

She thought that one of the most telling things is that when one asks Europeans where they are from, they almost never say "Europe" or "I'm a European." They almost always give the name of their nation-state. But if one asks Americans, "Who are you, where do you belong?" people tend to say, "I'm an American." They do not say, "I'm a Virginian." However, back in the 18th century, when Americans were forming a union, people did identify themselves as Virginians, Pennsylvanians, and the like. Thomas Jefferson, John Adams, Benjamin Franklin, and the other founders all iden-tified strongly with their states.

Hoxby suggested that three things may have allowed those state loyal-ties to transform themselves rather quickly into American loyalties. First, early Americans had a common enemy—Britain—so King George III and the War of 1812 may have helped integration. Second, from the beginning, Americans largely shared a common language, which she thought made a huge difference. And third, Americans had a great deal of territory that appeared fairly "vacant" to those of European descent (non–Native Ameri-cans, in other words). In a new territory or state out West, people from North Carolina, New York, and Maine could mix together on ground that

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1. Alberto Alesina and Eliana La Ferrara, "Ethnic Diversity and Economic Perfor-mance," *Journal of Economic Literature* 43, no. 3 (2005): 762–800.

felt neutral. But in Europe, there was no similarly sparsely settled area that could feel neutral.

David Romer thought the authors could have provided additional evidence concerning the conclusion that the main barrier to further European political integration is national identities. He was sympathetic to the authors' position that there is not strong disagreement about public goods; rather, for instance, the French want to think of themselves as French and not as Europeans. Indeed, he suspected that many people in France are angry at being told they are bad people for wanting to think of themselves as French and not European. To find more evidence on the issue of public goods versus national identities, he suggested looking at the French National Front's actual policy proposals and rhetoric. He thought that, although its positions might sometimes be cloaked in the language of public goods, it would be hard to find Marine Le Pen making concrete proposals for France having substantially different public goods, social policy, regulations, or a safety net than the rest of Europe; he thought it would be easy to find broad rhetoric about the importance of preserving France's national identity. He observed, humorously, that the French would say they do not want faceless bureaucrats in Brussels imposing regulations on them—they want faceless bureaucrats in Paris to do that. And they would say they want people in France to be French.

Second, Romer noted that in the conference draft of the paper, the authors asked, "Can something be done to dampen nationalism and increase European identification?" He took issue with this implicit policy conclusion. He thought the authors were in effect taking the side of a group of people who thought of themselves as global citizens, and who had imposed a set of European institutions that have had very harmful consequences over the past decade on people who did not want them. He thought it was far from obvious that the right policy was to double down on those institutions in the face of popular unhappiness with them. We are past the point where Europeans are fighting wars with each other, so it is hard to see big costs to continued national identities. If that is what people want, why not respect that preference?

Benjamin Friedman believed Hoxby was right in saying that economists do not pay much attention to the borders issue, and in particular to where the social welfare function stops—but philosophers do. The classic work on this set of questions is *The Law of Peoples* by John Rawls. Rawls gives a sophisticated argument explaining why it is legitimate for people in the United States, for example, to have a welfare system that stops at the border, so that people in Canada and Mexico, and of course countries

farther away, cannot participate—and he also addresses all sorts of related issues that economists should perhaps think about, but do not.

Then Friedman offered two related comments. The first was an observation, referring to the issue of national identity addressed in the paper, and also to the present discussion of it: The historical pattern of national identities comes more to the fore when societies undergo periods of stagnating incomes. Discussant Elias Papaioannou showed this with respect to rising unemployment, which is closely related to stagnating incomes. There is a very regular pattern, going quite far back, whereby the sense of national identity, and with it pathologies like xenophobia, show up more when incomes stagnate. In France, for example, in the 19th century it was the Boulangists, early in the 20th century it was the Action Française and the Jeunesses Patriotes, and now we have the National Front. So Friedman thought it was not surprising that both the paper and today's discussion deal with the problems that Europe, with its stagnating incomes, is having today surrounding the increasing strength of national identities.

His second comment was that from the perspective of U.S. traditions, it is often difficult for Americans to internalize the degree to which the European Union has been a top-down rather than bottom-up project. The easiest illustration of this difference is to compare the opening words of the U.S. Constitution with those of the failed attempt at a European constitution a few years ago. The Preamble of the U.S. Constitution, of course, starts "We the People of the United States." In contrast, the opening words of the failed European constitution are "His Majesty, the King of the Belgians"—because that document did not emerge from any democratic process but rather from the tradition of European diplomacy, which would grant the new constitution to the continent's assorted peoples from their respective heads of state. This difference may seem amusing, at least to Americans, but it matters. The top-down European tradition allows anti-Europeanist politicians like Le Pen to appropriate the vocabulary of bottom-up democratic movements and thus seize the democratic high ground.

Robert Gordon observed that Hoxby's comment about Europeans not having anything analogous to Nebraska and Oklahoma reminded him that Americans did displace people from Nebraska and Oklahoma—namely, the Native Americans. This made him think of a European who had the same idea. His name was Adolph Hitler, and his idea was *Lebensraum.* But not too many people realize that Hitler had something even bigger in mind—Generalplan Ost, the German plan formulated in 1941 and 1942 that would have removed about 40 million people from what now are Poland, Ukraine, and Belarus and replaced them with German settlers.

Gordon also commented on the part of the paper that compares the United States with Europe. In American macroeconomics, we are very used to the view that the euro was ill-conceived because Europe lacked two preconditions—first, a central government with a large enough fiscal budget to redistribute; and second, sufficient labor mobility, which, of course, is connected with Europe's diverse languages. Gordon also thought there was another, more profound difference: In the United States, the nation came first and, with the exception of the 13 original states, the states came second—they were creations of the nation. Thirty-seven of the 50 states were organized after the U.S. Constitution went into force. But in Europe, it was exactly the opposite: All the nations came first, by hundreds or even thousands of years. This explains much about why the EU institutions in Brussels are often viewed with disdain as unnecessary add-ons to institutions already long functioning in Paris, Berlin, and the other national capitals.

Narayana Kocherlakota thought the paper's discussion of centrifugal forces—a distrust of the center, and of nonlocal officials vis-à-vis decision-making—was on display around the world, including in the United States. Moreover, he thought these forces have grown over time, perhaps in response to the financial crisis, as Papaioannou argued, but perhaps also because of the nature of technological development during the last 30 or 40 years. The differences that one sees in the outcomes of this process are really only about initial conditions. Kocherlakota posited that if one looks at the United States in about 1980 or 1990, a very different kind of historical glue bound Americans together than Europeans. Many other discussants had mentioned sources of this historical glue, and he thought the Civil War should also be mentioned. Before that war, Americans largely thought of themselves as coming from different states.

Today, he noted, one sees the United Kingdom breaking away from the European Union, and Scotland thinking about breaking away from the United Kingdom. There is even talk of California or Texas breaking away from the United States. Brunnermeier made reference to India, where Andhra Pradesh has split into two states. So one sees these centrifugal forces at work everywhere in the world. If one thinks of these centrifugal forces as dangerous, for whatever reason—and he thought Romer raised a good point, in that perhaps they are not dangerous—this really is something we all should be thinking about in terms of our own countries and not just as a European issue; it really is more global.

Andrew Levin brought in one more example—Canada—which he thought echoes what Romer said. Some will remember that back in the 1980s and

1990s, the question of whether Quebec was going to stay part of Canada or secede was very real—there was a referendum in 1995 in which Quebec narrowly rejected independence 50.58 percent to 49.42 percent. And many people thought at the time that there would be another referendum in five years, that it would pass, and that it would be the end of Canada as we knew it, somewhat like Brexit and the European Union.

But instead, according to Levin, what happened—and what may be useful for this paper's authors to consider—was a process whereby Canada made it clear that it wanted Quebec to stay, because Canada was somehow a family. Thus, by recognizing its province-to-province differences, and even strengthening them, Canada enabled Quebec to remain as distinct as it wanted to be yet stay part of the national family. Levin's impression is that the debate about Quebec becoming independent has more or less faded away. There is still the sovereigntist provincial party Parti Québécois, but it has mostly been out of power during the last 20 years. Therefore, along with looking at the United States' heterogeneity in languages, culture, and so forth, perhaps Canada is another good example from which to learn.

Robert Barro wished there had been more discussion about the idea of competition between governments, which could be applied, for example, to tax and spending policies or antitrust and other kinds of regulations. If there is a monopoly government with a big jurisdiction, there is a tendency for it to become too big; in that kind of unit, there is less pressure for efficient policies, and a tendency for the central government to take over too many things. Through this framework, Barro saw positive aspects of Brexit in terms of promoting more competition between the United Kingdom and continental Europe. Certainly, very important costs can be associated with free trade, for example. He was reassured by Romer's point that war in Europe is no longer a relevant consideration, which is where the European Union originated—the view that having a single government jurisdiction would make the probability of war lower. However, he was not sure whether the European Union really does minimize conflict.

Richard Cooper made a political science remark about the collapse of the Soviet Union. During most of the last 60 years, having the Soviet Union as a major adversary provided a strongly unifying force for Europe and America. With the collapse of the Soviet Union, that unifying source went away, both within and between countries. Cooper thought that one could not talk about the last several decades without mentioning this important event.

The paper's authors then responded to points made. First, Francesco Trebbi thanked the discussants for their very thoughtful comments on the paper. He emphasized that the paper's goal is really not to focus on

nationalism—though nationalism is discussed in the conclusion because it is an important issue—but to do an exercise on pruning the potential causes of the current euro crisis. The paper's authors thought that a fundamental cause of this crisis might be cultural primitives being in disagreement among these countries, but Trebbi thought that the paper more or less ruled that out. The authors did not discount the degree of heterogeneity. Essentially, the variances of the distributions of culture are sufficiently wide within countries relative to the rest of Europe that if heterogeneity were the margin, it could not potentially be the explanation.

Nationalism was addressed in the paper because the authors saw that it was evident in the news. Trebbi expressed his belief that, as Friedman explained, it is very much the result of the global financial crisis. Polarization and political fragmentation increase after a financial crisis. But the authors wanted to go to the fundamentals of the EU, which they took to be culture and institutions. The rest, he explained, was about nationalism and what to make of it, and why what we call nationalism transforms small differences among people into large ones. How national identities form and fluctuate is a fascinating and important topic, and the paper's authors wanted to do more research on it. But national identities should not necessarily be thought of in terms of differing cultures. As the paper shows, being some distance apart within the same country is not the same thing as being some cultural distance apart between countries. The authors wanted to make clear that they were not smug European elitists telling French nationalists or Italian separatists that they were foolish. Instead, they show that the degree of homogeneity across the continent is much higher than stereotypical representations of particular countries' citizens might tempt one to think, which would really be a topic for an empirical paper.

Guido Tabellini then commented on Romer's point about dampening nationalism. Tabellini observed that national traditions largely reflect stereotypes and not true differences. They are now preventing Europe from enjoying the benefit of global public goods, and the perception among citizens is that the value of these goods is increasing over time in a shrinking, globalizing world. So nationalism is hurting some aspects of welfare.

Another argument for being concerned about nationalism is that the euro was a very bold step—perhaps too bold—which now calls for a banking union and some elements of a common fiscal policy. This cannot be achieved without more political integration. In other words, the eurozone countries face a discrete choice: Without additional political integration, it is not clear that the euro would be sustainable, but going backward to national currencies now would be very costly.

Tabellini disagreed with Barro's comments on competition between nations; he understood the logical point, but thought that the European Union has been a major force in favor of markets and competition across the continent. Without the EU, he thought competition would be much dampened rather than strengthened.

Although the authors identify nationalism as the main stumbling block, Tabellini also wanted to alleviate some of the pessimism voiced by Gordon and Hoxby. It is true that nationalism is a stumbling block. But according to the spring 2016 *Eurobarometer*, which was conducted after the financial crisis, 51 percent of respondents have a combined sense of national and European citizenship, against 39 percent that define themselves solely by their nationality.[2] So, though nationalism is on the rise, and was on the rise even before the crisis, there is still a germ of European identity, which is stronger in the younger generations.

Tabellini stated that Brunnermeier was right that France is peculiar, but perhaps France is more peculiar than the rest of the EU. The paper's figure 12 shows how distant individuals are from the cultural center of Europe. By this measure, France is much more distant than Spain or Portugal from the continent's cultural center—which, incidentally, happens to be in Germany.

Finally, Tabellini disagreed with the idea that deep cultural traits concerning social roles and religious principles were less important than economic beliefs and traditions in determining the viability of a political union. A political union between France and Turkey is unlikely to be viable precisely because of differences in their principles on religion and family values, not because they are used to different bankruptcy laws.

2. European Commission, "European Citizenship," *Standard Eurobarometer* 85, wave 85.2 (Brussels: TNS Opinion & Social, 2016).