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Cultural Spheres – Creating a dyadic dataset of cultural proximity

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Index

Introduction

International cultural research teaches us that there are different pathways to modernity. These pathways are tightly connected to the evolution of statehood itself and the particular outline of these states' policies (for example Weber 1972). We define culture as well as a shared understanding of reality, as beliefs as to how society – and its institutions – should be structured and organized. Culture obviously matters for an abundance of political and sociological research. But, how do we define differences in cultural configurations? How does research efficiently and accurately operationalize cultural similarity between countries and cultural characteristics of states that ultimately lead to different developmental paths; and how do we account for the fact that cultural configurations of nations – although slowly – are changing over time, being adapted due to inter- and intra-state influences? Questions, not only policy research is facing.

With our data set on 'cultural spheres' we introduce an innovative way of describing these configurations in a relational way. Given that global cultural clusters of countries do not necessarily have rigid, clear-cut boundaries or 'fault lines', we apply valued two-mode social network analysis to define cultural similarities. Following this approach, countries can be tied by sharing a multitude of cultural characteristics. We draw on a variety of variables that describe cultural characteristics like dominant religion(s), dominant language, colonial history, gender relations, civil freedom etc. As a result, we get a fuzzy typology of cultural spheres. This typology consists of yearly valued networks, spanning a time frame of 1789 until 2010. The more of these characteristics two countries share, the more closely connected they are. We assume that configurations of statehood and state policies not only correspond to world regions, but also to cultural spheres that can be characterized empirically by consolidated relations in dynamic subnetworks.

By creating this new typology of cultural spheres we depict culture not as one distinct, time-independent feature, but as a flexible, relational element of states' uniqueness. Our dataset allows the tracing of changes in shared cultural characteristics over time. We argue that culture in itself has not as much explanatory value, as it is used in recent research. Taking a relational approach to culture, we regard culture not as one variable that creates distinct entities, but open the theoretical and empirical discussion for a view on 'culture' in spatio-temporal dynamic, relational terms. We share with Emirbayer the assumption "[…] that cultural formations entail, not individual 'attitudes' or 'values,' much less disembodied 'systems,' but rather bundles of communications, relations, or transactions" (Emirbayer 1997, 300). When we regard the manifestation of culture as a concept driven by the transactions (in the sense of Emirbayer), then we define culture as a complex network that is intersubjectively built and publicly regarded by subjects who give elements in their environment a meaning and a place in a universe filled with possible meanings.

In short, our approach enables researchers to overcome various ways of using proxies to define some sort of cultural categories which just describe distinct entities. Through a relational, additive approach to cultural spheres, we offer a tool that is adaptable to different research questions, especially regarding policy diffusion. This dataset is a first step towards harnessing the 'culture matters' proclamation in a standardized, controllable, relational way.

We define culture as shared practices and experiences that influence not only interactions and interpretations of as well as in a society, but also political actions taken as a result of that interpretation of meaning. We operationalize culture as influencing and being influenced by language, religion, politics, and shared history. We therefore include aspects of society, but also aspects of state regulation as an expression of these societies into our dataset.

Since our data includes a multitude of cultural characteristics, countries can have multiple relations to each other, e.g. when they share in addition to the same level of political liberties the dominant religion group 'Buddhism'. The higher the cultural proximity between two countries, the higher is the number of ties between them in our valued network. This method yields a network of 'cultural spheres' with fuzzy boundaries and relations of varying intensity between countries. Since many of our binary cultural indicators are time-varying, the network is time-varying as well.

We provide two different outlines of the same dataset i.e. a time-variant two-mode network in a way where states are rows and binary cultural indicators are columns. The value of 1 represents the presence of that specific cultural characteristic (available upon request to the authors). A second representation is the projection of this very network on the vertex-set of states. We provide this as a link-list in which countries are connected if they share characteristics. The weight denotes the strength of this connection, i.e. the number of shared characteristics.

Dimensions of Culture

Religion

Religion constitutes one main part of a states' culture. It forms a cohesive basis for values that are reproduced and shared in a state community.

The data is taken from the "Correlates of War – World Religion Data (v1.1)" (Maoz and Henderson 2013) dataset. It provides information regarding the number of adherents by religion, as well as the percent of the state's population adherent to a given religion. We only consider aggregated Religions i.e. Christian, Muslim etc., and thereby ignoring intra-religious differences like Protestant/Catholic or Sunni/Shiite streams. As we are not interested in the differences within religious families, at least at the moment, we rather want to have a simple but meaningful differentiation on the way the world is seen and interpreted, as well as what society and values a group strives for. The dataset covers a time frame of 1945 to 2010 in 5 year intervals.

In order to get yearly coverage we linearly interpolated the data between every known data point of an entity. The dominant religion was calculated for each year, based on the assumption that if at least 33% of the population adheres to a specific religious family one can assume political, social and especially cultural power. Defining dominant religion only by the one religion with the most adherents does not give us the exactness and fuzziness of data we would like to have. Take for example a country like Albania: If we assigned Islam as the dominant religion, as it has the most adherents, we lose information not only on the religious but also cultural fragmentation of Albanian society. This is also important in keeping true to our aim of having fuzzy boundaries between countries that are in one way or another culturally more or less similar. Countries share a characteristic if a large portion of the population (at least a third) are adherents of the same religion. We assume that dominant religions did not change before the beginning of the CoW data. We take the dominant religions first observed per country and write these back to the start of our cultural spheres data set. Exploring the data from Maoz and Henderson (2013), and simplifying it to our definition of dominant religion we noticed that there are hardly any changes over the time-span of 1945 to 2010. That makes us confident to not expect drastic changes in the time before 1945. Changes in dominant religion are very rare. As an example, one could take Ghana, in which the domi-

nant religion before 1974 were Animist religions and Christianism. After that, Christianism has more than a third of the population as adherents and the combined animist religions have less than that. However, before that, the case was different and therefore Ghana has two dominant religions from the years 1789 to 1974: Animism and Christianism.

In our data set, according to our general coding rules, the dominant religion(s) are coded as 1; all others as 0.

Civilizations according to Huntington

Samuel P. Huntington constituted that there are insurmountable differences between nation states and clusters of nation states that are more or less not based on economic or political, but on cultural factors. These civilizations can also be described as cultural entities that are "[…] defined both by common objective elements […] and by the subjective self-identification of people" (Huntington 1993, 24). We include some of those objective elements as distinct variables in our data set, e.g. religion and language. However, sharing a common history is hard to quantify and especially variables of subjective identification with one civilization is hardly measurable. The fact that individuals not only make up those civilizations, but are in one way or the other affected by being socialized and living in the respective civilization is not easily disputable. Huntington claims that the differences between civilizations are the product of centuries of cultural evolution. We follow that path by including the membership of state entities in civilizations defined by Huntington to our Cultural Spheres Dataset as a time invariant variable and therefore being valid for the whole observed time period.

Huntington's raw data from 1993 have been amongst others analysed by Gokmen (2012), who shows that differences in civilization have an impact on conflictual relations before the cold war, but tend to lose explanatory power after that. One explanation for that would be the overshadowing of those effects by the ideological divide in the Cold War. However, as we are only interested in cultural differences and similarities, this supports our use of the civilizations claimed by Huntington; especially using it over our whole timeframe. Gokmen (2012) provides a list of civilization membership which was used to code the membership of a country as 1 and non-membership as 0. Some countries had to be manually coded by us. We did this based on geographic closeness and/or oriented on ideologies/religions/colonial heritage. These countries are:

Countries	Civilization
Fiji, Vanuatu	Western
East Timor	Islamic
Kosovo, Montenegro	Orthodox
South Sudan	African
Laos	Buddhist

Gender Relations

A significant part of a country's culture is not directly visible. It manifests, however, in specific policy areas. Gender Relations – as we operationalize them – is one manifestation. The institutionalization of political rights and the empowerment of women constitute the outcome of power struggles that (still) happen in societies at large. The basic form of social order in tribal, non-state societies was the "tyranny of cousins" (Fukuyama 2012; Gellner 1987).

Most tribal societies worldwide were patrilocal, which means that wives moved to their husbands' place of residence after marriage. Cousin marriages were a common practice in many stateless societies, also because they result in large extended families, or clans, and the size of the clan corresponded with its reputation and power. In a recent study, J. Henrich showed that the emergence of Western individualism strongly corresponds with historical exposure to the Catholic church and its anti-incest marriage policies, directed also against cousin marriages (Henrich 2020). This policy reduced the political power of large, extended families and clans and provided the cultural foundation of legitimacy of modern state institutions. In this regard, political empowerment of women is an ongoing process, starting from gender and age being the most important dimensions of social differentiation in tribal societies, to today's development goals of gender equality and parity. The idea of how women are politically empowered is thus a cultural one, reflecting the grade of patriarchy that is institutionalized in a given society at a given time.

We take two indices created by the Varieties of Democracy (V-Dem) project and combine them to one measure, which we call Gender-Relations. First, we take the "Women's political empowerment index" (Sundström et al. 2015), which combines the following three indices: "women's civil liberty index […], women's civil society participation index […], and women's political participation index […]" (Coppedge et al. 2019a, 276–96). To clarify, this index from V-Dem measures the extent to which women have agency and are able to participate in societal and political decision-making processes. The index itself is measured from 1789-2018 and has a range of 0-1. We then combine this index with another index taken from the V-Dem project, namely the Exclusion by Gender index (Coppedge et al. 2019b). It measures the extent to which women "are denied access to services or participation in governed spaces" (Coppedge et al. 2019a, 265). The index itself is again a composite of several indicators ranging from access to public services for women to access to state jobs for women. The exclusion indicator ranges from 1900-2018 and as well has a range of 0-1, i.e. 1 means total exclusion.

Lastly, we combine these two indices by summing them in the years we have data on both of them. However, the exclusion indicator has been reversed to negative values, representing the different meanings of the indicators. Having one single value per year and country, we estimate quartiles for each year for the whole set of countries. Then we assign the membership to a quartile based on the value the country has taken in the respective year. As we are estimating the quartiles separately for every year and assigning the membership in a quartile separately, we have – in theory – a dynamic measure that is adapting to the overall evolution of Gender Relations globally. Empirically, building quartiles is not possible for most of the years before 1900. In these years the median has the value of 0 which in turn makes it impossible to divide countries into four categories. However, our method still assigns countries with the value '0' to the same binary category. Since we cannot divide countries arbitrarily, although they have the same value in the index, we keep this procedure. It does not distort any of the grouping but on the opposite, it depicts the empirical reality more accurate.

Civil Rights

Similar to Gender Relations, in the case of Civil Rights we argue that civil liberties, as understood and measured by the V-Dem project, are a representation of more than policies and a concept of democracy. Civil liberty in this case "is understood as liberal freedom, where freedom is a property of individuals" (Coppedge et al. 2019a, 263). It means that from this indicator we can deduct the outcome of power strug-

gles concerning the individualism of a society, which is most prevalent in Western societies (Schulz et al. 2019). How much worth is put on the rights of the individual? We combine this indicator with the Core civil society index (Bernhard et al. 2015) which was as well retrieved from V-Dem and provides "a measure of a robust civil society, understood as one that enjoys autonomy from the state and in which citizens freely and actively pursue their political and civic goals, however conceived" (Coppedge et al. 2019a, 275). We define the ways in which society organizes, as culturally rooted, as well as the freedom of how this organization takes place, as a manifestation of power struggles in which – most of the time – the cultural/social majority wins. On the other hand, the freedom of civil society itself affects the ways culture can be and is transmitted. It can be seen as an indicator of forcing cultural homogeneity, which over a long time-frame must have some effect on this very culture. The index itself is a composite of different indicators (see Bernhard et al. 2015).

Both indicators cover a timeframe of 1789 to 2018 and take values from 0-1. We combined these indices by summing them. Having one single value per year and country, we estimated quartiles for each year for the whole set of countries. We then assigned the membership to a quartile based on the value the country has in the respective year. As we are estimating the quartiles separately for every year, and assigning the membership in a quartile separately, we have – in theory – a dynamic measure that is adapting to the overall evolution of Civil Rights globally.

Rule of Law

We take the Rule of law index from V-Dem as another dimension of constructing our Cultural Spheres Dataset. According to V-Dem, this index measures to what extent laws are "transparently, independently, predictably, impartially, and equally enforced […]" (Coppedge et al. 2019a, 269). Furthermore, the index includes measures on the extent of compliance with the law by government officials. We aim at operationalizing the value of what is called "Rechtsstaat" (constitutional state or rule of law). As with other political dimensions in our dataset we see this indicator as a manifestation of power struggles of a society against the state. These power struggles are driven by cultural values concerning obedience, trust in authority and equality of societal groups before this very authority. The index itself is a composite of several indices and ranges from 0-1 while covering a timeframe of 1789 to 2018.

We estimated quartiles for each year for the whole set of countries. Then we assigned the membership to a quartile based on the value the country has in the respective year. As we are estimating the quartiles separately for every year, and assigning the membership in a quartile separately, we have – in theory – a highly dynamic measure that is adapting to the overall evolution of the rule of law globally.

Comment on Data Handling of variables retrieved from the V-Dem Dataset, namely Gender Relations, Civil Rights and Rule of Law

The V-Dem dataset (Coppedge et al. 2019b) has an impressive coverage of states and time points. Nevertheless, missing values are present and needed to be dealt with. Missing data are more problematic for a network analysis than for other methods. Because of the relational nature of network data, missing information can have a multiplicative effect. Incompleteness therefore not only affects the network topology but also the metrics calculated. We solved this problem by going through multiple processes of interpolating data, and fill-

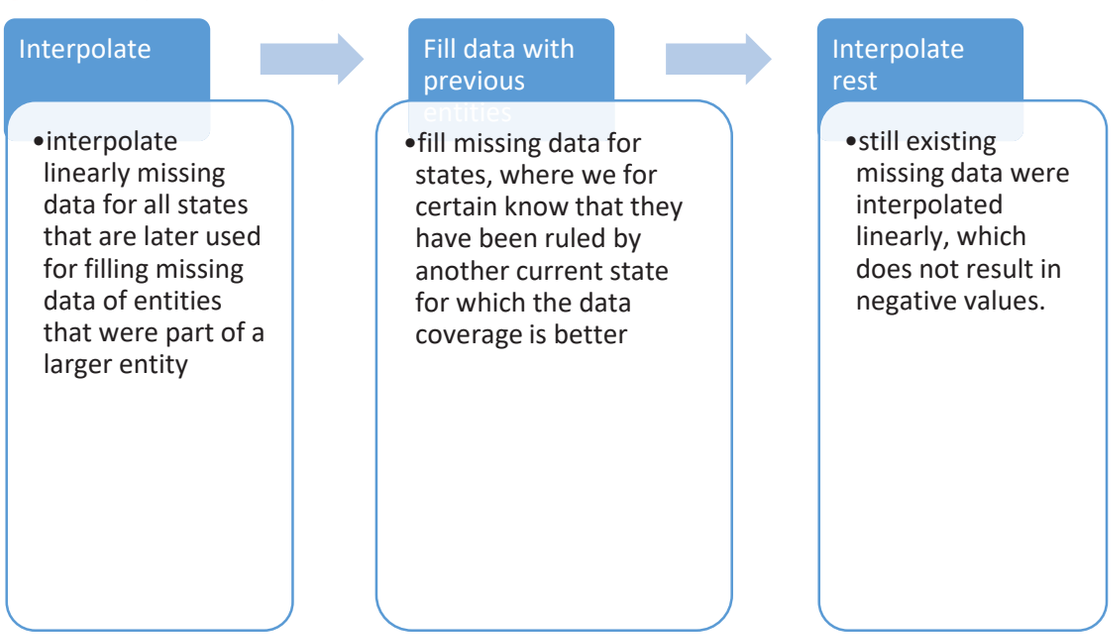
ing missing historical data for current political entities with the data from their predecessors. Since we deal with political rights, it is reasonable to assume that general political freedoms have been valid for the whole territory of an empire consisting of what are now known as different states.

We identified 15 states that have had the political power over a now distinct political entity. We assume their values for political freedom to also be valid for the entities that emerged out of those larger ones. For example, we filled missing data for Slovakia, from 1918 until there are explicit data (1938) with data assigned to the Czech Republic, at that time Czechoslovakia. Before 1918 the now known Slovakia was part of the Austrian and later Austro-Hungarian Empire. Therefore, we take data from Austria from 1789 to 1918 and fill in the missing values of Slovakia. In other cases, especially when regarding former colonies, the task was not as easy.

Take for example Nigeria, which became independent as late as 1960. Nevertheless, V-Dem does show data from 1914 onwards. We used that to our advantage and interpolated the data linearly back to 1789. Empirically the interpolation shows that, although values get very close to 0 (the lowest possible value in most variables retrieved), it never actually gets negative. We know that interpolating linearly, especially with these political rights indices, seems unintuitive, but bear in mind that we will later form quantiles out of those. The fuzziness we create by interpolating should be smoothed by the summary into four distinct characteristics per variable, i.e. the strength of the political rights as a 4 step ordinal variable.

Please consider the figure 1 which shows a flow-chart of our interpolation process for V-Dem Data.

Figure 1. Interpolation Technique for V-Dem Data



With the Exclusion by Gender index (Coppedge et al. 2019b) we encountered the problem that some cases had no data points at all. This made an interpolation impossible for these cases. We decided to fill missing values at the beginning, the middle, and the end (1900, 1959, 2018) of the timeframe to perform a linear interpolation also on those cases. These data were based on the data provided in the Women's political empowerment index which correlates highly with the exclusion index (-0.8). We looked at the whole data frame and extracted all entries with exactly that index value in the women's empowerment index and

calculated the mean out of all data that was provided in the exclusion variable. This we used as the best approximation to fill missing values and interpolate based on those values.

Government Ideology

Directly measuring what we call culture is difficult to do. By including the Government Ideology (Tannenberg et al. 2019) into our Cultural Spheres Dataset we take a measure that gives us information on the set of beliefs a national government codified and is striving for. We define culture as a shared understanding of reality. This can culminate in beliefs as to how society – and its institutions – should be structured and organized. The longer the government ideology prevails, the more it is a result of power struggles in which the majority of society in some way or the other legitimizes the state's ideology. Turning this around, the longer the state's ideology prevails the more impact it can have on specific cultural beliefs and values of the majority of society. V-Dem provides us with a series of binary variables representing whether a state government follows an ideology or not. This makes it possible for states to follow more than one ideology as they are not mutually exclusive. The USA in 1900, for example, is coded as being 'Nationalist' and 'Restorative or conservative'; while Chile in 1965 is 'Religious' and 'Socialist or communist'.

We take the raw data from the V-Dem project, covering a time span of 1900 to 2018. The following Ideologies are provided: Nationalist, Socialist or communist, Restorative or conservative, Separatist or autonomist, Religious. Coders for V-Dem were asked how they would characterize the government ideology. If they characterized it as one, it was coded as 1, if not as 0. Data itself then has been validated by summarizing a cross-coder mean of all answers, i.e. if out of three coders only one believed the government ideology to be Religious it is, in the raw data, coded as 0.333. We define a membership in one of the ideologies as valid when at least two thirds of coders for the V-Dem project agree on the characterization of the state ideology. Thus the original value has to be larger or equal to 0.666.

Missing data has been filled first by the method explained above, we filled missing data for now distinct political entities in those years in which they were part of another political entity in which the data is covered. For all those cases for which this was not possible, we filled in the missing data with the last known value. By doing this, we probably overestimate rapid political change. However, we assume data for V-Dem in this variable which covers "only" a time-frame from 1900 onwards to be precise on political change especially when regarding the ideology of a state government, which, for observing this, needs to be in place and has at least as much power as to adhere to this specific ideology, to be mostly covered by V-Dem itself.

Language

Claire Kramsch states that: "

- » language expresses cultural reality;
- » language embodies cultural reality;
- » language symbolises cultural reality." (Risager 2008, 13–14)

Regarding our aim of creating a network representing shared cultural variables i.e. cultural proximity, language is one of the key variables to consider.

To classify a country's dominant language we used the Ethnologue database as done by Windzio (2018). We used the Level II classification which has 33 distinct categories of

languages, however the linguistic similarity within those categories is very high, compared to differences of every single language spoken in a state. "To give an example: the dominant language in Brazil is Portuguese, which is an Indo-European language (level I) and belongs together with 45 other languages to the "Italic" sub-branch at level II." (Windzio 2018, 24). We therefore have – after coding – membership of countries in 31 different families of language. To strengthen the computational weight of having a what we call hegemonic language as the dominant one, we furthermore coded whether the dominant language in a country is English, Spanish, or Arabic. By introducing the hegemonic languages we give greater regard to specifically hegemonic languages that might be carrying cultural orientation on to a specific hegemonic cultural model. We assume the dominant language to change very slowly. Thus it is in our final dataset not a time-variant variable but a stable one over all observed years.

Since there was no data available for some smaller states that emerged very late, we filled the missing data for the following entities with the values of the entities in the parentheses: Macedonia (Greece), South-Sudan (Sudan), and Kosovo (Albania). We are aware that these are cases that specifically depict a secession of an ethnically very dense and different entity out of a bigger one. Therefore filling missing data like this is arguably not an apt way of dealing with it. It is however, the best option for a first approach of dealing with this particular problem.

Colonial Relationships

Sharing a common colonial history is considered to be a major driver of similarities in trade (for example Ro'i and Sénégas 2012), migration (for example Windzio 2018), development aid (for example Shields and Menashy 2019) etc. Furthermore, we suspect that major groups in states orientate politically, socially and/or culturally on the former colonial power, that could very well manifest itself as an outright rejection. Sharing a common past, i.e. being colonized by the same state, displays the possibility of common cultural features either by being formed in the colonization period or by a shared (understanding of the) past.

We take the CEPII GeoDist dataset and create binary variables for several colonial powers depicting whether a country was colonized by this state. "Colonization is here a fairly general term that we use to describe a relationship between two countries, independently of their level of development, in which one has governed the other over a long period of time and contributed to the current state of its institutions" (Mayer T. and Zignago 2011, 12).

For this version we compute that as a time-invariant variable. Furthermore, we take the information from CEPII that distinguishes between being colonized and being shortly colonized. To make an example we can look at Zambia, which was colonized by the UK and compare that to Afghanistan which was only shortly colonized by the UK. In this example Zambia and Afghanistan have no common cultural history because the exposure to the colonizer was of a very different length. We have a total of 21 different colonizers and 16 short colonizers.

Since there was no data available for some smaller states that emerged very late, we filled the missing data for the following entities with the values of the entities in the parentheses: Macedonia (Greece), South-Sudan (Sudan), and Kosovo (Albania).

Constructing the network

The variables presented above have one thing in common: We specifically coded them as dichotomous variables, i.e. they either have the value 1 or 0. In all cases, 1 depicts some characteristic like Islam being the dominant religion or being colonized by Germany. A value of 0 would mean that this country does not have that characteristic. We end up with a matrix for every single observed year respectively. These matrices show the countries in the rows and the cultural characteristics in the column coded, as described above, as 0 or 1. This is essentially a two-mode network depicting the membership of countries in a number of different cultural categories. From these bipartite networks we projected the one-mode networks with the assumption that if two states share the same characteristic, they have one tie with one another. While doing so, we compute a weighted network by simply adding up the number of similar connections.

We show here a very simplified example of the process. Figure 2 shows a two-mode network drawn from the data for six countries in the year 2000. The triangles depict cultural characteristics and states are connected to those if they share them.

Figure 2. Example two-mode network; drawn from a real data subset

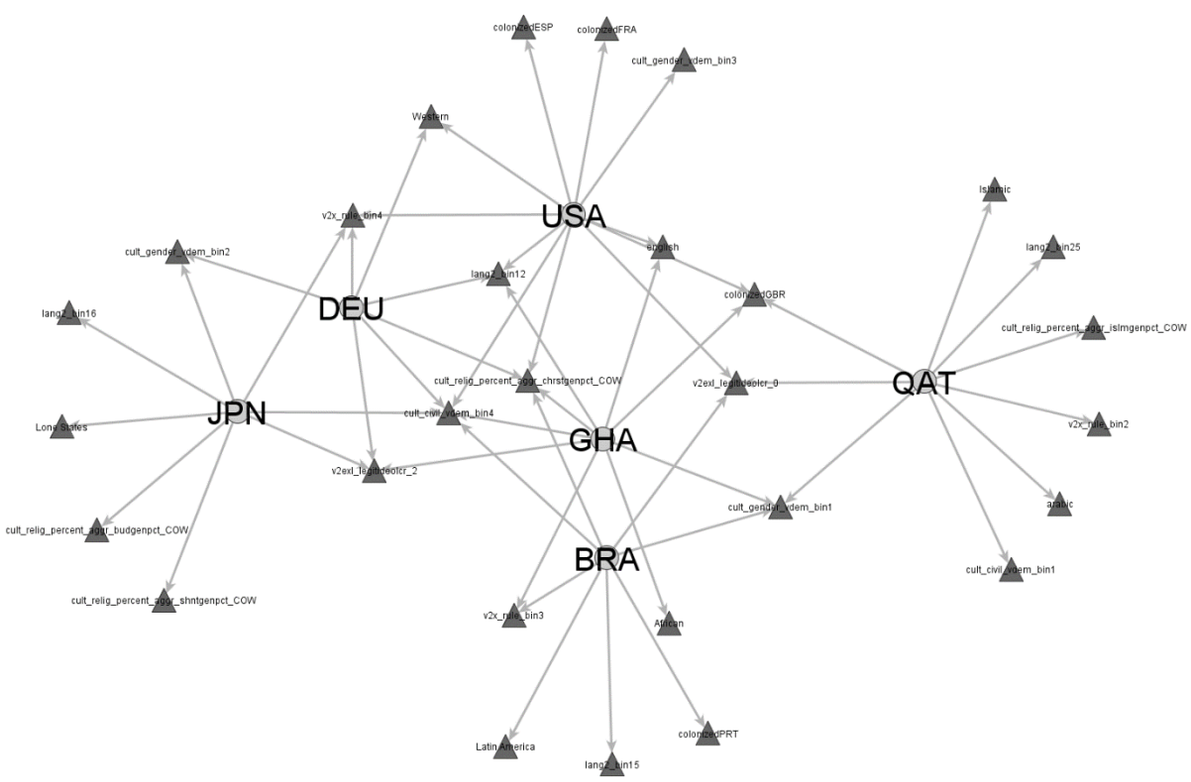
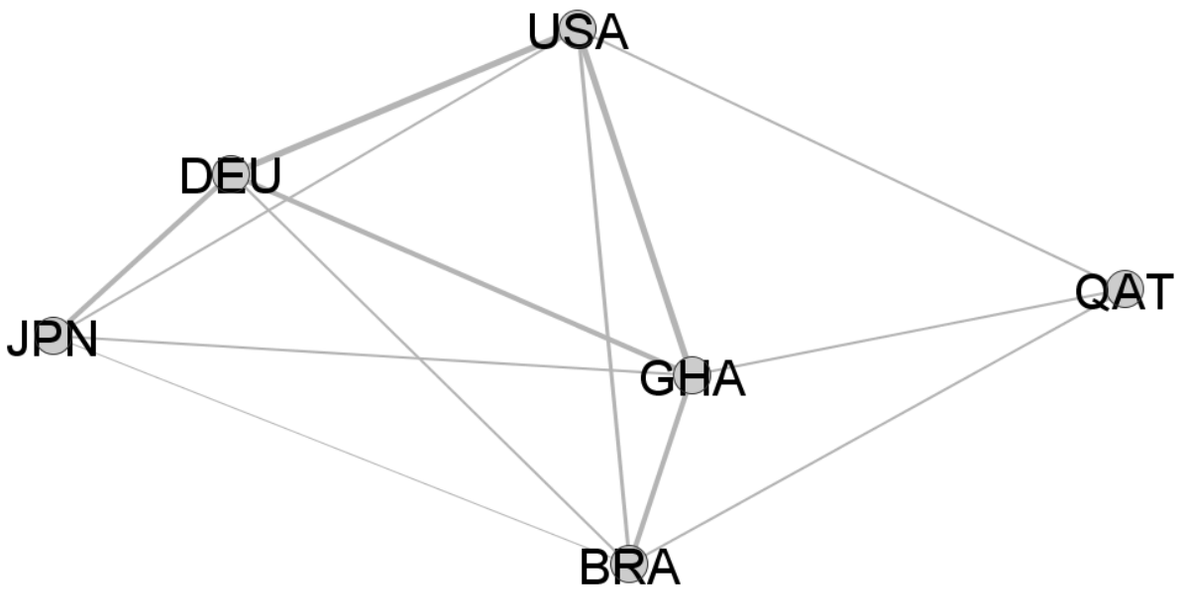


Figure 3 shows the respective one-mode network projected from exactly the same data. The width of the edges depicts the strength of relationship, i.e. the number of characteristics the two states share. For example the link USA – Qatar has a strength of 2, and the link Japan – Brazil has the strength 1. In comparison the USA and Germany are connected via a strength of 5, while Qatar and Germany share no characteristics and there is no tie between them. Coming back to the first figure we can see that USA and Qatar share two cultural characteristics while Japan – Brazil and USA – Germany share 1 and 5 respectively.

Figure 3. One-Mode projection of data subset shown in figure 2



Keep in mind that this is just a small example. For our Cultural Spheres Dataset we used a total of 113 characteristics stemming from 9 different indicators. This dataset covers 167 distinct states. We provide the following data:

Time-Varying Two-Mode Adjacency Matrix

Data available upon request and on WeSIS. See Appendix for full list.

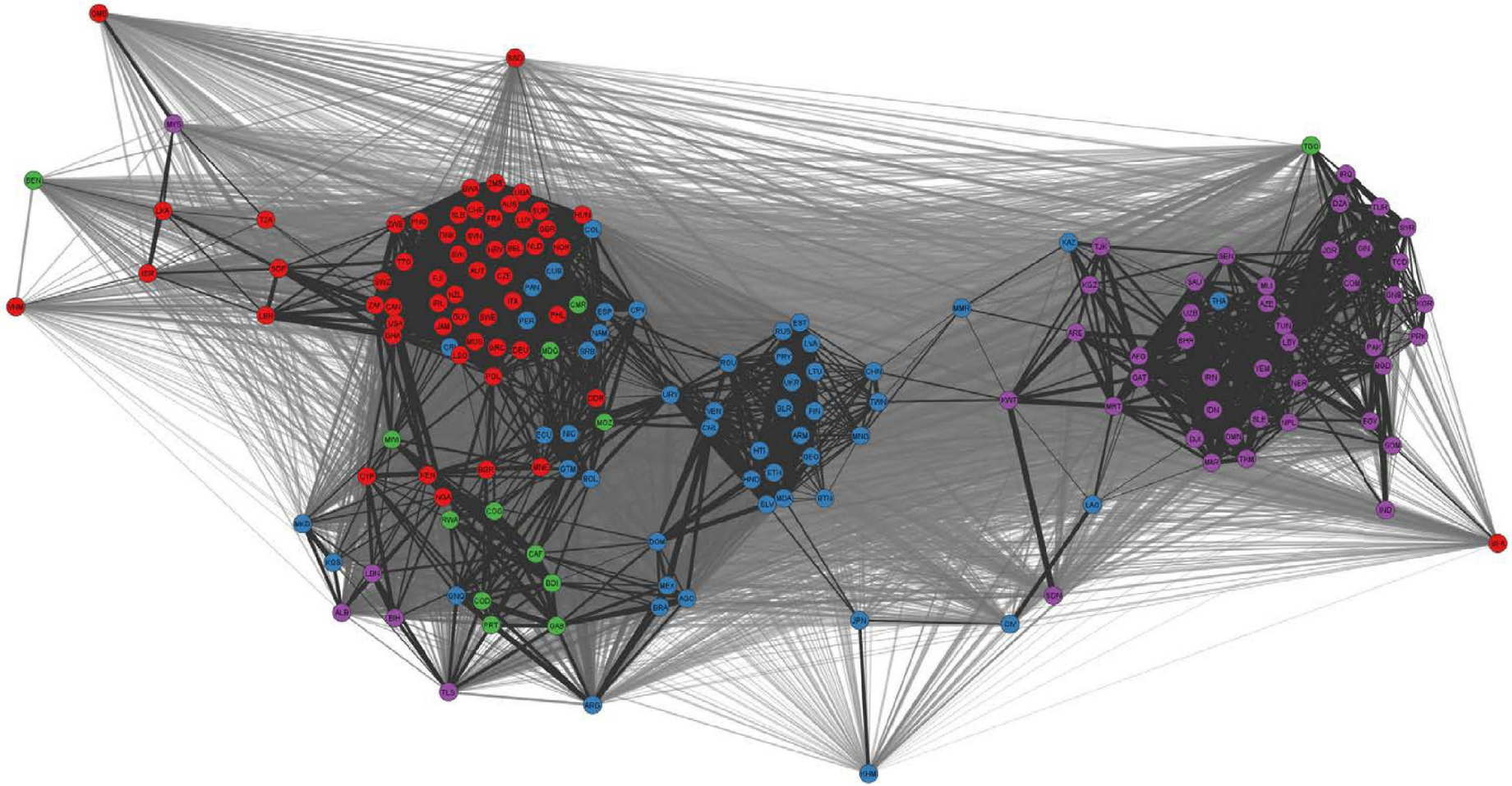
Time-Varying Linklist

Variable	Description
cow_code_sender	Correlates of War code of ego
country_name_sender	Country name of ego
cow_code_receiver	Correlates of War code alter
country_name_receiver	Correlates of War code alter
year	Year of observation; ranges from 1789 – 2010
technical_variable_name	Variable Short name of Indicator: cult_spheres
value	Weight of the link between ego – alter, i.e. the number of cultural characteristics these two share in a given year
unit	Number of shared cultural characteristics
scale	Metric
source	Own calculations
publication_date	Date of publication 15.11.2020
category	Culture
label	Cultural Spheres
data_quality	Very good
data_quality_confidence	Very high
ego_id	ISO 3 Character code of ego
alter_id	ISO 3 Character code of alter

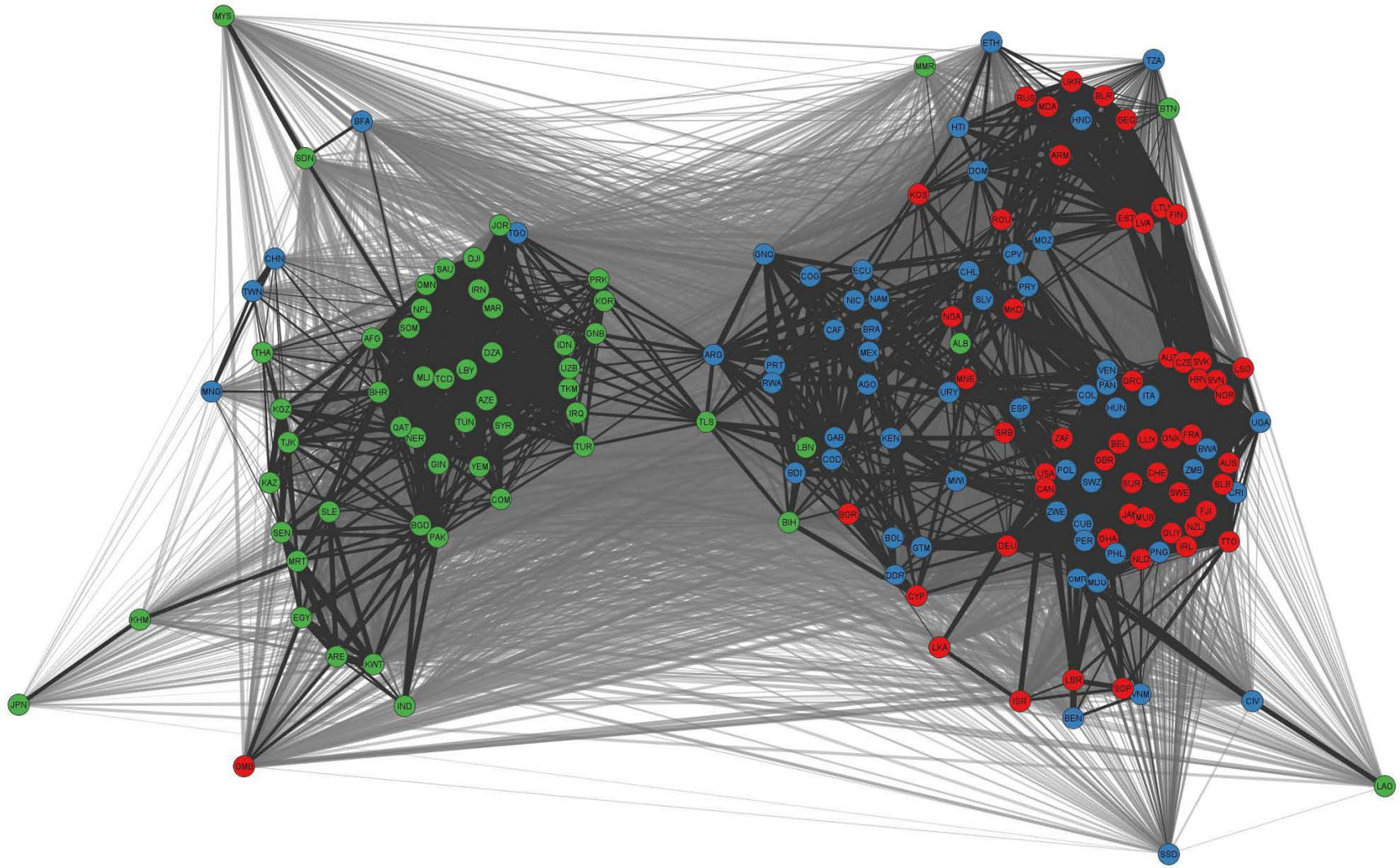
Showcases of Networks of Cultural Spheres

In the following we show cross-sections out of our complete dataset. For untangling the hairball graphs the data yields, we use a quadrilateral Simmelian backbone layout. The method is based on a spanning subgraph that is sparse but connected and consists of strong ties holding together communities. Strong ties are identified using structural measures of embeddedness (Nocaj, Ortmann, and Brandes 2015). The vertex colors show membership in clusters that have been calculated based on modularity with the Louvain Clustering Algorithm. All visualizations have been made with Visone.

Cultural Spheres Network 1789

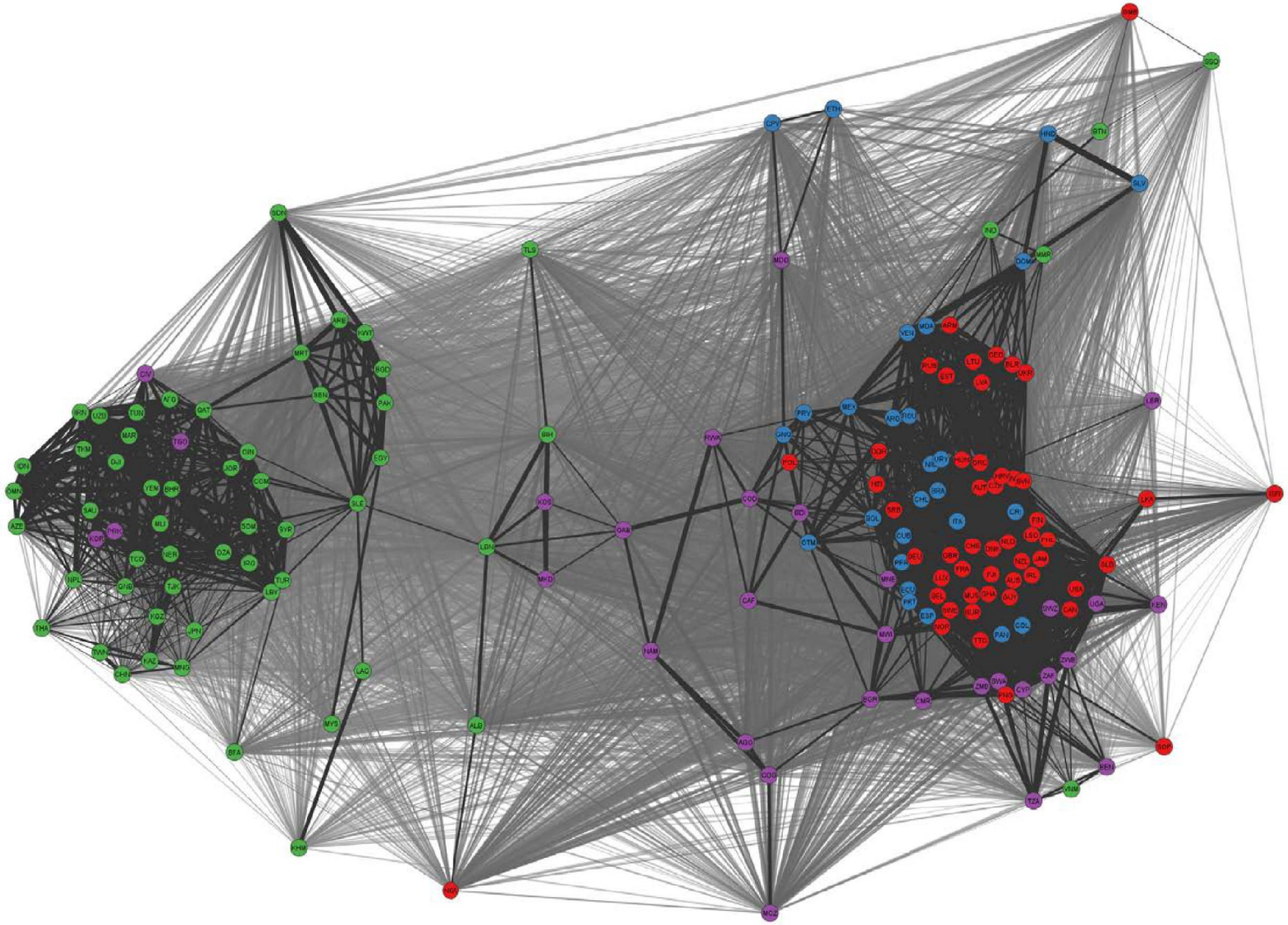


Cultural Spheres Network 1800

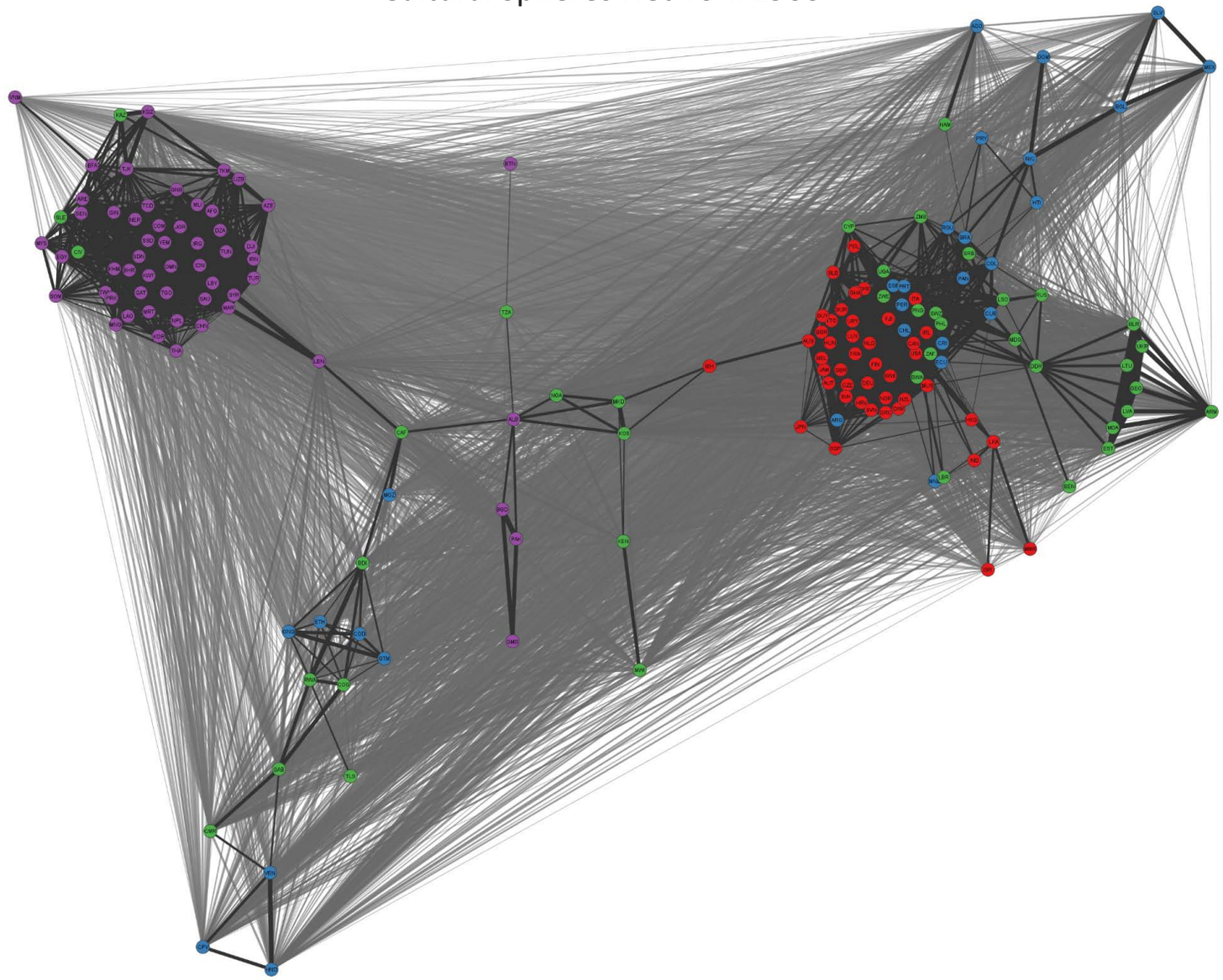


Global Dynamics of Social Policy
CRC 1342

Cultural Spheres Network 1850



Cultural Spheres Network 1900



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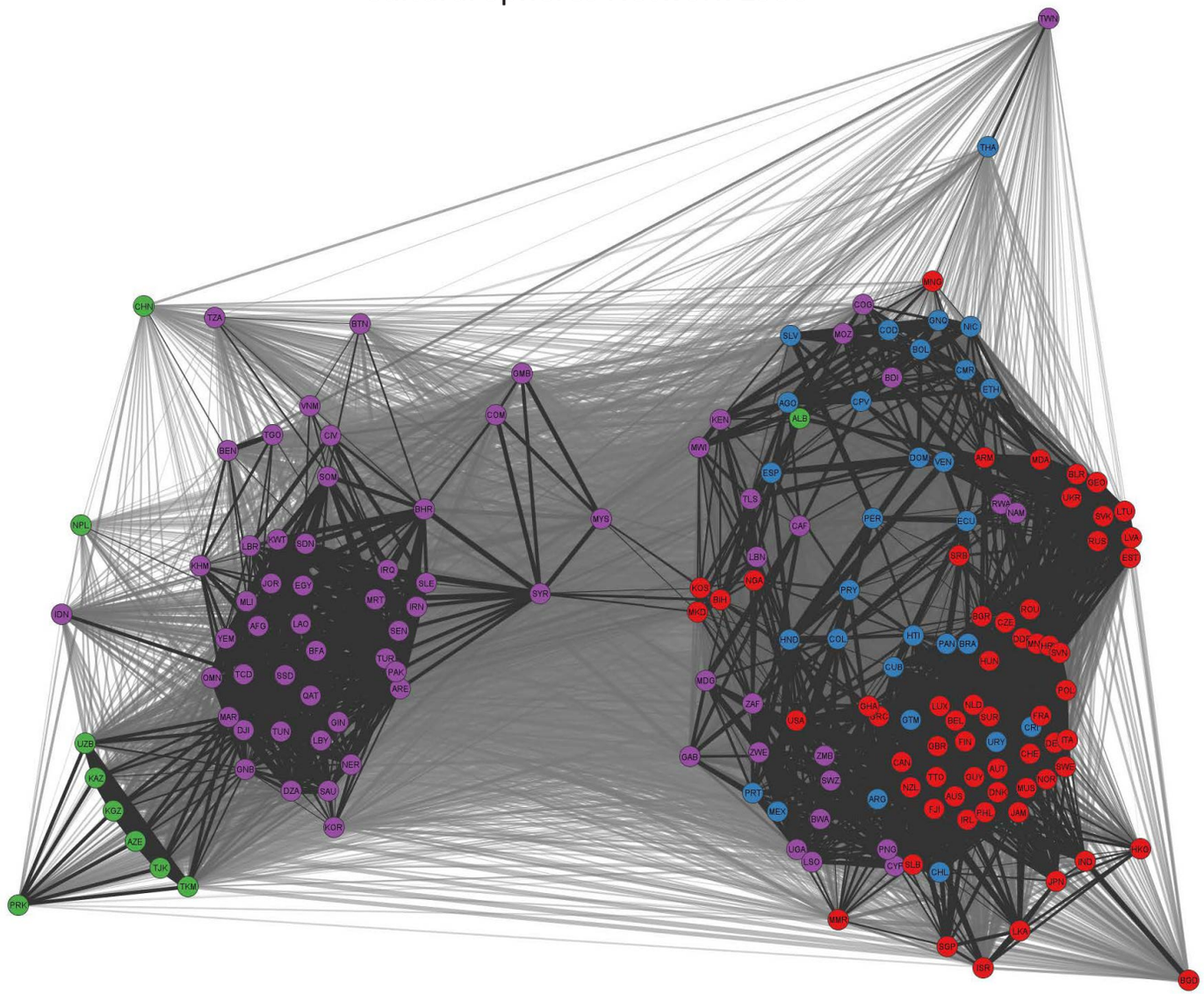
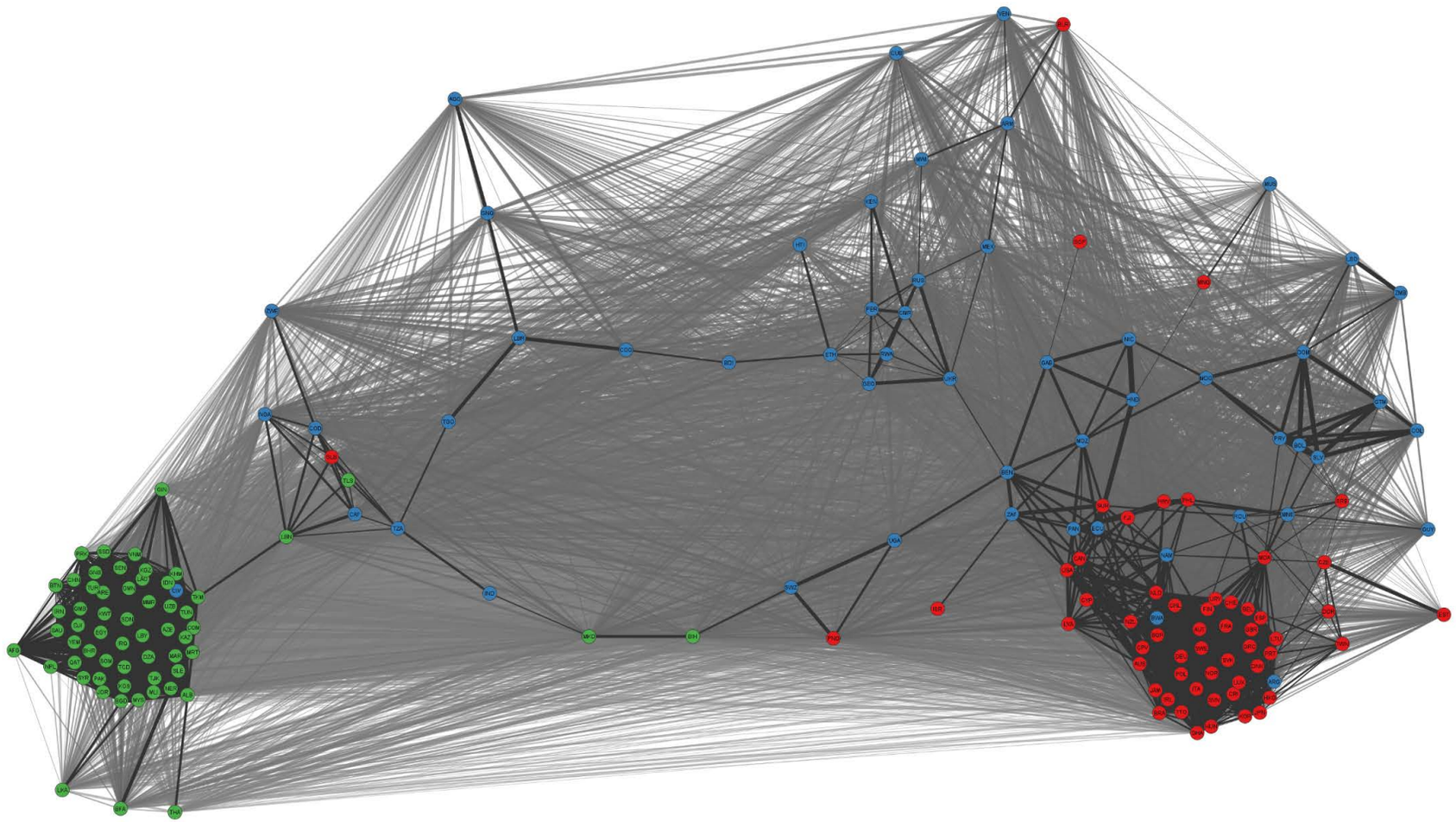
CRC 1342

Cultural Spheres Network 1950

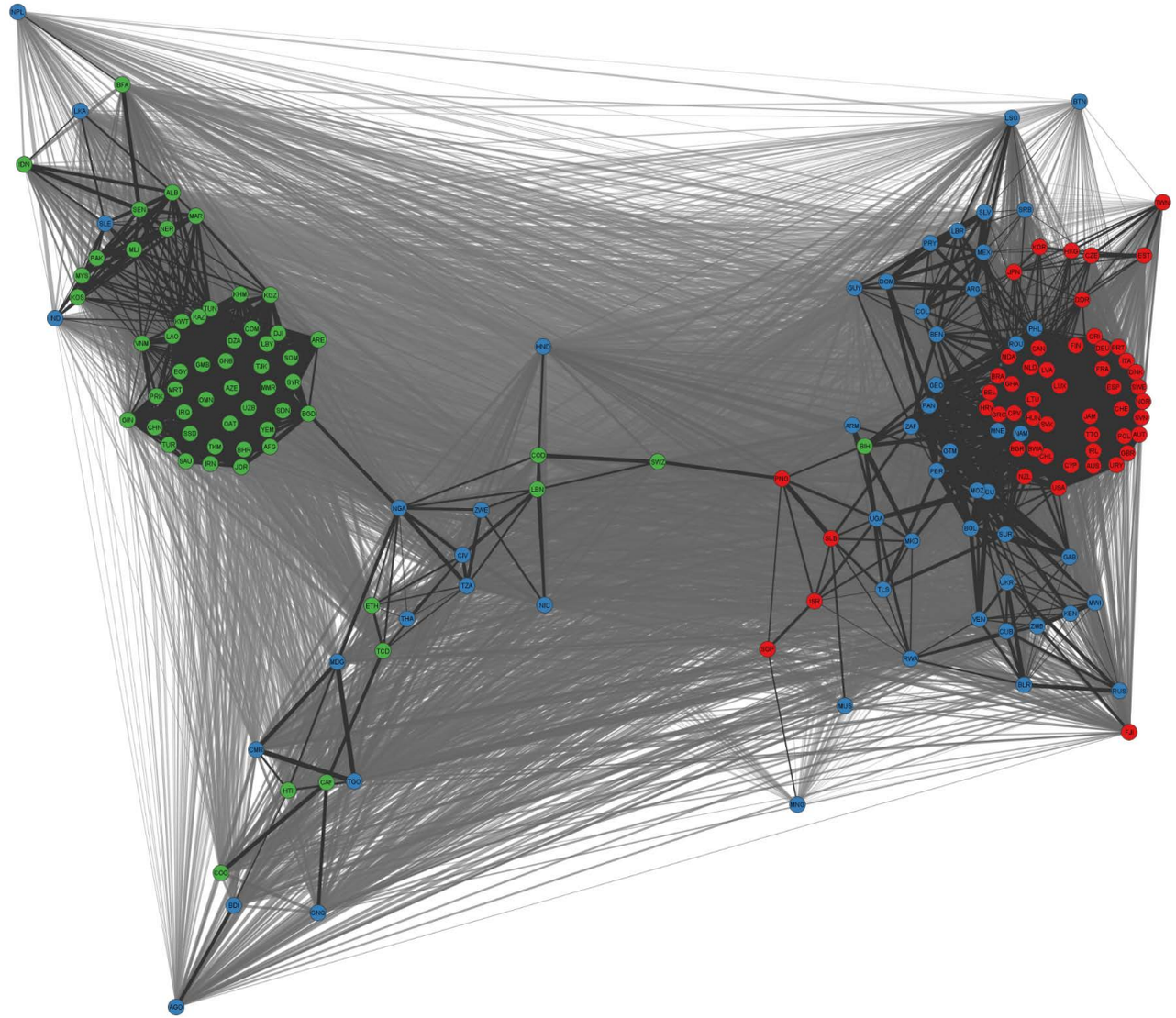


Cultural Spheres Network 2000



Global Dynamics of Social Policy
CRC 1342

Cultural Spheres Network 2015



Appendix

Variable	Label	Value Label	Source
cow_code	Correlates of War Contrycode		
iso3	ISO 3 Character code		
year	Year of observation; ranges from 1789 – 2010		
cult_relig_dom_anmgenpct	Animist Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_bahgenpct	Baha'i Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_budgenpct	Buddhist Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_chrstgenpct	Christian Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_confgenpct	Confucian Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_hindgenpct	Hindu Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_islmgenpct	Islamic Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_jaingenpct	Jain Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_judgenpct	Jewish Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_nonreligpct	Non Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_othrgenpct	Other Religions	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_shntgenpct	Shinto Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_sikhgenpct	Sikh Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_syncgenpct	Syncretic Religions	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_taogenpct	Taoist Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_relig_dom_zorogenpct	Zoroastrian Religion	1 = more than 33% of total population adherent	World Religion Project (WRP)
cult_gender_vdem_bin1	Gender-Relation Quantile 1	1 = membership in that quartile, i.e. original value is in the first 25% of all sorted values	Varieties of Democracy (V-Dem) V9
cult_gender_vdem_bin2	Gender-Relation Quantile 2	1 = membership in that quartile, i.e. original value is between the first 25% and the Median of all sorted values	Varieties of Democracy (V-Dem) V9
cult_gender_vdem_bin3	Gender-Relation Quantile 3	1 = membership in that quartile, i.e. original value is between the Median and the 75% of all sorted values	Varieties of Democracy (V-Dem) V9

Variable	Label	Value Label	Source
cult_gender_vdem_bin4	Gender-Relation Quantile 4	1 = membership in that quartile, i.e. original value is larger than 75% of all sorted values	Varieties of Democracy (V-Dem) V9
cult_civil_vdem_bin1	Civil Liberties Quantile 1	1 = membership in that quartile, i.e. original value is in the first 25% of all sorted values	Varieties of Democracy (V-Dem) V9
cult_civil_vdem_bin2	Civil Liberties Quantile 2	1 = membership in that quartile, i.e. original value is between the first 25% and the Median of all sorted values	Varieties of Democracy (V-Dem) V9
cult_civil_vdem_bin3	Civil Liberties Quantile 3	1 = membership in that quartile, i.e. original value is between the Median and the 75% of all sorted values	Varieties of Democracy (V-Dem) V9
cult_civil_vdem_bin4	Civil Liberties Quantile 4	1 = membership in that quartile, i.e. original value is larger than 75% of all sorted values	Varieties of Democracy (V-Dem) V9
cult_rule_interpol_bin1	Rule of Law Quantile 1	1 = membership in that quartile, i.e. original value is in the first 25% of all sorted values	Varieties of Democracy (V-Dem) V9
cult_rule_interpol_bin2	Rule of Law Quantile 2	1 = membership in that quartile, i.e. original value is between the first 25% and the Median of all sorted values	Varieties of Democracy (V-Dem) V9
cult_rule_interpol_bin3	Rule of Law Quantile 3	1 = membership in that quartile, i.e. original value is between the Median and the 75% of all sorted values	Varieties of Democracy (V-Dem) V9
cult_rule_interpol_bin4	Rule of Law Quantile 4	1 = membership in that quartile, i.e. original value is larger than 75% of all sorted values	Varieties of Democracy (V-Dem) V9
cult_legitideolcr_0	Government Ideology - Nationalism	1 = at least 65% of characterise this government ideology	Varieties of Democracy (V-Dem) V9
cult_legitideolcr_1	Government Ideology - Socialist or communist	1 = at least 65% of characterise this government ideology	Varieties of Democracy (V-Dem) V9
cult_legitideolcr_2	Government Ideology - Restorative or conservative	1 = at least 65% of characterise this government ideology	Varieties of Democracy (V-Dem) V9
cult_legitideolcr_3	Government Ideology - Separatist or autonomist	1 = at least 65% of characterise this government ideology	Varieties of Democracy (V-Dem) V9
cult_legitideolcr_4	Government Ideology - Religious	1 = at least 65% of characterise this government ideology	Varieties of Democracy (V-Dem) V9
cult_lang2_bin1	Albanian Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin2	Armenian Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin3	Atlantic-Congo Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin4	Balto-Slavic Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_¬lang2_bin5	Chadic Language Group	1 = predominant language belongs to this language family	Ethnologue

Variable	Label	Value Label	Source
cult_lang2_bin6	Chinese Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin7	Cushitic Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin8	English based Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin9	Finnic Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin10	French based Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin11	Georgian Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin12	Germanic Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin13	Greek Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin14	Indo-Iranian Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin15	Italic Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin16	Japonic Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin17	Kam-Tai Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin18	Kongo-based Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin19	Koreanic Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin20	Malayo-Polynesian Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin21	Mande Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin22	Mon-Khmer Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin23	Mongolic Eastern Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin24	Ngbandi based Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin25	Semitic Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin26	Tibeto-Burman Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin27	Tupi-Guarani Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin28	Turkic Eastern Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin29	Turkic Southern Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin30	Turkic Western Language Group	1 = predominant language belongs to this language family	Ethnologue
cult_lang2_bin31	Uralic Language Group	1 = predominant language belongs to this language family	Ethnologue

Variable	Label	Value Label	Source
cult_lang_english	English as predominant language	1 = language is this particular hegemonic language	own coding
cult_lang_spanish	Spanish as predominant language	1 = language is this particular hegemonic language	own coding
cult_lang_arabic	Arabic as predominant language	1 = language is this particular hegemonic language	own coding
cult_african	African Civilization	1 = state belongs to this civilization	Gokmen (2012)
cult_buddhist	Buddhist Civilization	1 = state belongs to this civilization	Gokmen (2012)
cult_hindu	Hindu Civilization	1 = state belongs to this civilization	Gokmen (2012)
cult_islamic	Islamic Civilization	1 = state belongs to this civilization	Gokmen (2012)
cult_latin.america	Latin Amrican Civilization	1 = state belongs to this civilization	Gokmen (2012)
cult_lone.states	No "bigger" Civilization	1 = state belongs to this civilization	Gokmen (2012)
cult_orthodox	Orthodox Civilization	1 = state belongs to this civilization	Gokmen (2012)
cult_sinic	Sinic Civilization	1 = state belongs to this civilization	Gokmen (2012)
cult_western	Western Civilization	1 = state belongs to this civilization	Gokmen (2012)
cult_colonizedAUS	Colonized by Australia	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedAUT	Colonized by Austria	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedBEL	Colonized by Belgium	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedCHN	Colonized by China	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedDEU	Colonized by Germany	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedEGY	Colonized by Egypt	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedESP	Colonized by Spain	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedFRA	Colonized by France	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedGBR	Colonized by the United Kingdom	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedGRC	Colonized by Greece	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedHTI	Colonized by Haiti	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedHUN	Colonized by Hungary	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedITA	Colonized by Italy	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedJPN	Colonized by Japan	1 = state was colonized by this state	CEPII GeoDist

Variable	Label	Value Label	Source
cult_colonizedNLD	Colonized by the Netherlands	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedPRT	Colonized by Portugal	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedRUS	Colonized by Russia	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedSWE	Colonized by Sweden	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedTUR	Colonized by Turkey (Ottoman Empire)	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedUSA	Colonized by United States of America	1 = state was colonized by this state	CEPII GeoDist
cult_colonizedZAF	Colonized by South Africa	1 = state was colonized by this state	CEPII GeoDist
cult_short_colonizedBRA	Shortly Colonized by Brazil	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedCOL	Shortly Colonized by Colombia	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedDEU	Shortly Colonized by Germany	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedDNK	Shortly Colonized by Denmark	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedESP	Shortly Colonized by Spain	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedFRA	Shortly Colonized by France	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedGBR	Shortly Colonized by the United Kingdom	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedHUN	Shortly Colonized by Hungary	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedIND	Shortly Colonized by India	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedITA	Shortly Colonized by Italy	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedNLD	Shortly Colonized by the Netherlands	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedPOL	Shortly Colonized by Poland	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedRUS	Shortly Colonized by Russia	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedSWE	Shortly Colonized by Sweden	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedTUR	Shortly Colonized by Turkey (Ottoman Empire)	1 = state was shortly colonized by this state	CEPII GeoDist
cult_short_colonizedUSA	Shortly Colonized by the United States of America	1 = state was shortly colonized by this state	CEPII GeoDist

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