Appendix—Christian Welzel, "Why the Future is Democratic," *Journal of Democracy* 32 (April 2021): 132–44.

WHY THE FUTURE IS DEMOCRATIC

Online Appendix (OA)

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1 Measuring Emancipative Values

The following SPSS command syntax creates the emancipative-values index using the country-pooled individual-level data from World Values Surveys *(www.worldvaluessurvey.org)* rounds one (1981–83) to seven (2017–20). See Christian Haerpfer et al., eds., *World Values Surveys Time Series Dataset* (Madrid: JDS Systems, 2021).

```
GET
  FILE='/Users/christianwelzel 1/Dropbox/Chris_Lap/DATA/WVS 1 to 7/Version_280720/EVS_WVS_TimeSe
ries_1981_2020_v1_1.sav'.

***Sub-Index 1 (3 items): AUTONOMY***
recode A029 (0=0) (1=1) into indep.
recode indep (sysmiss=-99).
mis val indep (-99).
var lab indep "independ as kid qual".

recode A034 (0=0) (1=1) into imagin.
recode imagin (sysmiss=-99).
mis val imagin (-99).
var lab imagin "imagin as kid qual".

recode A042 (0=1) (1=0) into nonobed.
recode nonobed (sysmiss=-99).
mis val nonobed (-99).
var lab nonobed "obedience not kid qual".

***The following procedure creates the autonomy sub-index index in such a way that whenever all three of its
components are available, it is the average of these three, whereas when one component is missing, it is a linear
transformation of the available two components. The formula for the linear transformation (constant and
component coefficients) is obtained from regressing the three-component average on the two components in
question. Since there are three possibilities of which combination of two components is available, this procedure
has to be performed separately for each combination. All this is done to avoid losing observations when just one
of the three components is missing.***

mis val indep imagin nonobed ().
if (indep ne -99) and (imagin ne -99) and (nonobed ne -99) autonomy=(indep+imagin+nonobed)/3.
if (indep ne -99) and (imagin ne -99) and (nonobed=-99) autonomy=.183+.395*indep+.359*imagin.
if (indep ne -99) and (imagin=-99) and (nonobed ne -99) autonomy=.042+.362*indep+.353*nonobed.
if (indep=-99) and (imagin ne -99) and (nonobed ne -99) autonomy=.104+.376*imagin+.401*nonobed.

recode autonomy (sysmiss=-99).
mis val indep imagin nonobed autonomy (-99).
var lab autonomy "autonomy subindex".


***Sub-Index 2 (3 items): EQUALITY***

recode C001 (1=0) (2=1) (3=.5) into womjob.
recode womjob (sysmiss=-99).
mis val womjob (-99).
var lab womjob "gend equal: job".

recode D059 (1=0) (2=.33) (3=.66) (4=1) into wompol.
recode wompol (sysmiss=-99).
mis val wompol (-99).
```

```
var lab wompol "gend equal: politics".

recode D060 (1=0) (2=.33) (3=.66) (4=1) into womedu.
recode womedu (sysmiss=-99).
mis val womedu (-99).
var lab womedu "gend equal: education".


***The following procedure creates the equality sub-index index in such a way that whenever all three of its components are available, it is the average of these three, whereas when one component is missing, it is a linear transformation of the available two components. The formula for the linear transformation (constant and component coefficients) is obtained from regressing the three-component average on the two available components. Since there are three possibilities of which combination of two components is available, this procedure has to be performed separately for each combination. This is done to avoid losing observations when just one of the three components is missing.***

mis val wompol womedu womjob ().
if (wompol ne -99) and (womedu ne -99) and (womjob ne -99) equality=(wompol+womedu+womjob)/3.
if (wompol = -99) and (womedu ne -99) and (womjob ne -99) equality=.048+.454*womedu+.409*womjob.
if (wompol ne -99) and (womedu = -99) and (womjob ne -99) equality=.141+.446*wompol+.376*womjob.
if (wompol ne -99) and (womedu ne -99) and (womjob = -99) equality=.034+.492*wompol+.430*womedu.
recode equality (sysmiss=-99).
var lab equality "equality sub-index".
mis val wompol womedu womjob equality (-99).


***Sub-Index 3 (3 items): CHOICE***

compute homolib=(F118-1)/(10-1).
recode homolib (sysmiss=-99).
mis val homolib (-99).
var lab homolib "homosex acceptable".

compute abortlib=(F120-1)/(10-1).
recode abortlib (sysmiss=-99).
mis val abortlib (-99).
var lab abortlib "abortion acceptable".

compute divorlib=(F121-1)/(10-1).
recode divorlib (sysmiss=-99).
mis val divorlib (-99).
var lab divorlib "divorce acceptable".

***The following procedure creates the choice sub-index index in such a way that whenever all three of its components are available, it is the average of these three, whereas when one component is missing, it is a linear transformation of the available two components. The formula for the linear transformation (constant and component coefficients) is obtained from regressing the three-component average on the two available components. Since there are three possibilities of which combination of two components is available, this procedure has to be performed separately for each combination. This is done to avoid losing observations when just one of the three components is missing.***

mis val homolib abortlib divorlib ().
if (homolib ne -99) and (abortlib ne -99) and (divorlib ne -99) choice=(homolib+abortlib+divorlib)/3.
if (homolib = -99) and (abortlib ne -99) and (divorlib ne -99) choice=.007+.452*abortlib+.446*divorlib.
if (homolib ne -99) and (abortlib = -99) and (divorlib ne -99) choice=.010+.417*homolib+.493*divorlib.
if (homolib ne -99) and (abortlib ne -99) and (divorlib = -99) choice=.069+.420*homolib+.505*abortlib.
recode choice (sysmiss=-99).
var lab choice "choice sub-index".
mis val homolib abortlib divorlib choice (-99).
```

```
***Sub-Index 4 (3 items): VOICE***

if ((E003=2 and E004=4) or (E003=4 and E004=2)) voice1=1.
if ((E003=2 and E004 ne 4) or (E003=4 and E004 ne 2)) voice1=.66.
if ((E003 ne 2 and E004=4) or (E003 ne 4 and E004=2)) voice1=.33.
if ((E003 ne 2) and (E003 ne 4) and (E004 ne 2) and (E004 ne 4)) voice1=0.
recode voice1 (sysmiss=-99).
mis val voice1 (-99).
var lab voice1 "voice 1".

if (E001=3) voice2=1.
if (E002=3) voice2=.5.
if ((E001 ne 3) and (E002 ne 3)) voice2=0.
recode voice2 (sysmiss=-99).
mis val voice2 (-99).
var lab voice2 "voice 2".


***The following procedure creates auxiliary versions of voice indices for the situation that both voice1 and voice2 or only one of them is available***.

compute voi2_00=(voice1+voice2)/2.
recode voi2_00 (sysmiss=-99).
mis val voi2_00 (-99).

compute voi1_01=voice1.
recode voi1_01 (sysmiss=-99).
mis val voi1_01 (-99).

compute voi1_02=voice2.
recode voi1_02 (sysmiss=-99).
mis val voi1_02 (-99).

mis val voi2_00 voi1_01 voi1_02 ().

***The following procedure creates the final index of voice in such a way that whenever voice1 and voice2 are available, the index is the average of the two. When, however, (as in wave one) the voice2 index is not available, the final voice index is a linear transformation of the voice1 index only. The formula for the linear transformation is obtained by regressing the combined voice1 and voice2 index on the voice1 index.***

if (voi2_00 ne -99) voice=voi2_00.
if (voi2_00=-99) and (voi1_01 ne -99) voice=.654*voi1_01+.132.
if (voi2_00=-99) and (voi1_02 ne -99) voice=.609*voi1_02+.145.
mis val voi2_00 voi1_01 voi1_02 (-99).
recode voice (sysmiss=-99).
mis val voice (-99).
var lab voice "voice sub-index".


***Overall Emancipative-Values Index (long version): EVI***.

***The following procedure creates the long version of the overall index of emancipative values in such a way that whenever all four of its components are available, it is the average of these four, whereas when one component is missing, it is a linear transformation of the available three components. The formula for the linear transformation (constant and component coefficients) is obtained from regressing the four-component average on the three available components. Since there are four possibilities of which combination of three components is available, this procedure has to be performed for each of these possibilities separately. This is done to avoid losing observations when just one of the four components is missing.***
```

```
mis val autonomy equality choice voice ().
if (autonomy ne -99) and (equality ne -99) and (choice ne -99) and (voice ne -99) EVI=(autonomy+equality+choice+voice)/4.
if (autonomy ne -99) and (equality = -99) and (choice ne -99) and (voice ne -99) EVI=.099+.263*autonomy+.327*choice+.286*voice.
if (autonomy = -99) and (equality ne -99) and (choice ne -99) and (voice ne -99) EVI=.080+.267*equality+.303*choice+.263*voice.
if (autonomy ne -99) and (equality ne -99) and (choice = -99) and (voice ne -99) EVI=.001+.292*autonomy+.332*equality+.291*voice.
if (autonomy ne -99) and (equality ne -99) and (choice ne -99) and (voice = -99) EVI=.051+.261*autonomy+.290*equality+.293*choice.

recode EVI (sysmiss=-99).
var lab EVI "emanc vals".
mis val autonomy equality choice voice EVI (-99).
```

2 Backward Estimations of Emancipative Values

It is an established insight that people reach a stable setpoint in their value orientations their formative socialization around the age of 25 years. Thus value change advances through generational replacement, and as such current cohort differences in value orientations show the footprints of past value change. This allows for the transposal of cohort differences in emancipative values from a recent national survey into a time series of annual measures by projecting the average emancipative values of people from the same birth year into the year in which these people were a particular age (see Damian J. Ruck et al., "The Cultural Foundations of Modern Democracies," *Nature Human Behaviour* 4 [March 2020]: 265–69).

Here, I choose the age of 35 as the projection year. For instance, Swedes surveyed in 2010 and born in 1960 were 35 years old in 1995. Accordingly, I project the average emancipative-values score of Swedes born in 1960 into the year 1995 and treat this as the Swedish population's mean emphasis of emancipative values in 1995. Performing this projection separately for all birth cohorts in each country covered once by the World Values Surveys provides estimated emancipative-value scores for 108 countries and a time series of eighty years from 1935 till 2015, for a total of 5,042 country-year observations with thirty or more observations (full temporal coverage is not available for all countries). I choose the age of 35 as the projection base because it is close to the modal and median age in most surveyed populations. Moreover, it is certain that by that age people have finalized their formative phase of socialization and, hence, have reached the setpoint in their value orientations.

This base projection, however, ignores that values not only change via generational replacement but also follow a time trend by which each cohort continues to become a bit more emancipatory as time passes. Consequently, my backward projections overestimate the populations' emancipative values in the past, and this inflationary tendency is stronger the further back in time the projection goes. To correct for this, I employ a trend deflation that subtracts a score of 0.002 for each year that the projection goes into the past. I chose this value as it is the average annual increase in emancipative values calculated from countries with repeated observations.

Yet even the trend-adjusted backward projection is flawed because it assumes that the trend has been uniform across all countries. This is demonstrably false: Countries on a very low base level of emancipative values today (particularly the Middle-East and South-Asian countries) obviously cannot have experienced a strong emancipatory trend. Vice versa, countries for which the World Values Surveys document the most pronounced emancipatory trend (those are the Scandinavian countries) have the highest base levels in emancipative values today. Accordingly, the strength of the emancipatory trend varies in proportion to the present-day base level of these values. To account for this, I weight the trend deflation in proportion to the present-day base level by equating an emancipative-values score of 0.60 (that is the Western average) with one and all other scores in proportion to one. Then I multiply the trend deflation with this weight. Since this backward projection applies a stronger trend deflation to more progressive countries, the projection simulates a reality in which countries have been more similarly conservative in the past. This is highly plausible because issues determining the emancipatory agenda of today, such as same-sex marriage, were not accepted even in the most

progressive countries thirty or forty years ago. Besides, I have experimented with changing the parameters of the backward projection by varying both the target age of the projection and the magnitude of the trend deflation. The current version, however, performs best in terms of nomological validity. Specifically, for those 446 country-years for which really observed emancipative values exist, the backward estimations correlate with the true observations at $R = 0.95$, which documents a striking degree of precision.

Here follows the SPSS-command syntax to create the backward estimates:

```
GET
  FILE='/Users/christianwelzel 1/Dropbox/Chris_Lap/DATA/WVS 1 to
7/Version_280720/EVS_WVS_TimeSeries_1981_2020_v1_1.sav'.

compute EVIn=EVI/.60.


compute birthyear=X002.

compute age=X003.


compute year35 = (birthyear + 35).
compute agepass35 = age - 35.
compute trenddisc35_002 = agepass35 * .002.
compute EVI35_002a = EVI - trenddisc35_002 * EVIn.

compute ctryear35 = ctrnum * 10000 + year35.

SORT CASES BY ctryear35.
AGGREGATE
  /OUTFILE='/Users/christianwelzel 1/Dropbox/Chris_Lap/DATA/Datasets/EVIbackward35.sav'
  /PRESORTED
  /BREAK=ctryear35
  /EVI35_002a=Mean(EVI35_002a)
  /N_BREAK35=N.
Exec.

GET
  FILE='/Users/christianwelzel 1/Dropbox/Chris_Lap/DATA/Datasets/EVIbackward35.sav'.
Exec.

Compute ctryear=ctryear35.

recode N_BREAK35 (sysmiss=0).
```

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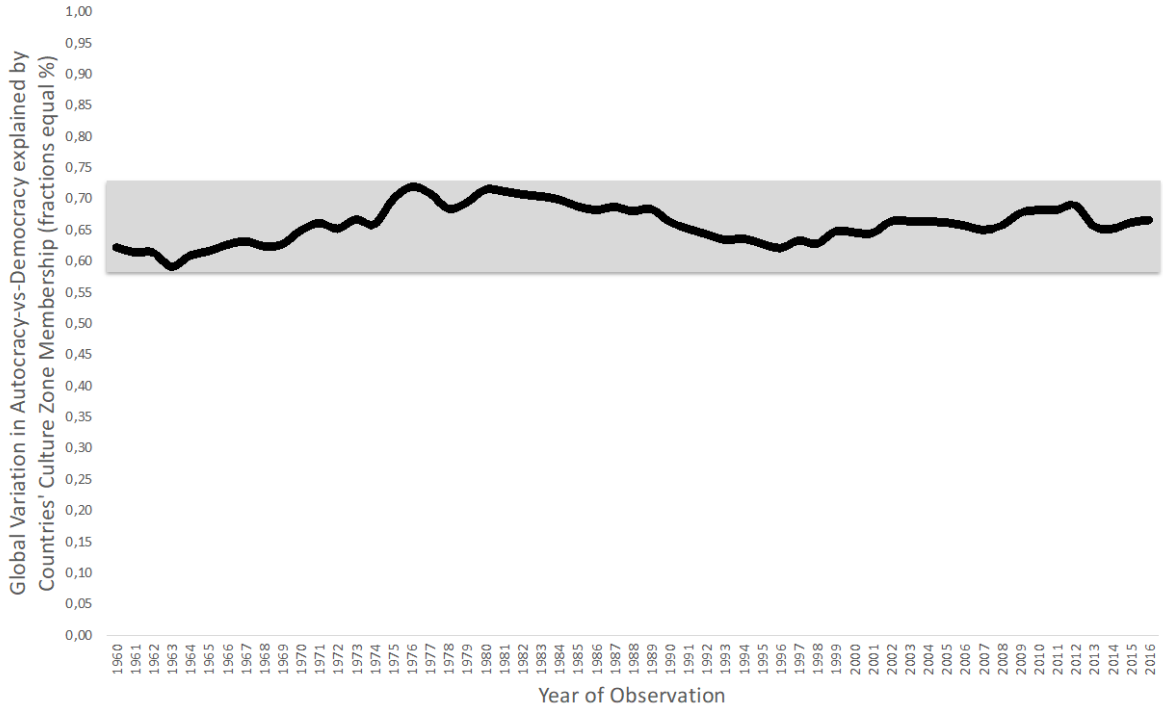
3 Regime-Culture Coevolution

OA-Figure 1 demonstrates that a country's membership in the Western or non-Western culture zone accounts for a significant 60 to 75 percent of the global variation in autocracy-versus-democracy. This culture-bound regime variation is a temporal constant in any given year since 1960, despite all the trending patterns in global regime dynamics.

OA-Figure 1. Temporal Constancy in the Global Variation in Autocracy-versus-Democracy Due to Countries' Culture-Zone Membership



Note: Data are from the Varieties of Democracy (V-Dem) project (www.v-dem.net) and cover 175 countries. See S. Lindberg, M. Coppedge and J. Gerring et al. (eds.). 2018. V-Dem Democracy Dataset (release version 2018). V-Dem Institute Gothenburg University, Sweden. Countries are attributed to culture zones due to Welzel's (2013) historically grounded culture zone scheme (see Figure 6 and https://www.cambridge.org/cl/files/8613/8054/8416/FreedomRising_OA.pdf). Introduced by Brunkert et al. (2018, cited in endnote 27), autocracy-vs-democracy is the product of V-Dem's electoral, participatory and liberal democracy component measures. To calculate culture zone averages in autocracy-vs-democracy, countries are weighted proportional to the size of their national population.

Source: Figure 1 of Christian Welzel, "Democratic Horizons: What Value Change Reveals About the Future of Democracy," *Democratization* 28 (forthcoming), https://doi.org/10.1080/13510347.2021.1883001. By permission of the author.

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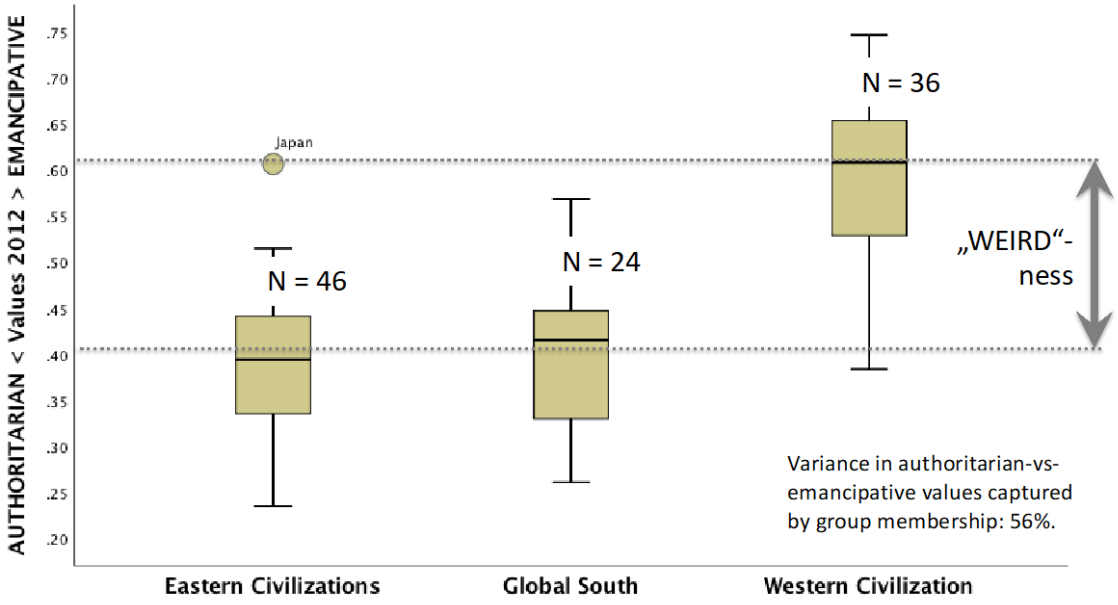
OA-Figure 2 documents that countries of Western culture zones stick out from those of the East and the Global South by their emphasis on emancipative values, with a dense country distribution around all three culture-zone categories' mean scores in their peoples' emancipative values.

OA-Figure 2. The Western/Non-Western Divide over Authoritarian-versus-Emancipative Values



Note: Vertical axis displays Welzel's (2013) emancipative values index, with scores estimated for 2012 from current cohort differences, as explained in Section 2 of the Online Appendix. Estimations are based on data from the World Values Surveys (www.worldvaluessurvey.org) (Haerpfer, Inglehart, Moreno and Welzel et al., cited in endnote 8). "WEIRD"ness refers to Henrich's (2020) notion of "**W**estern-**E**ducated-**I**ndustrialized-**R**ich-**D**emocratic" (in short: WEIRD) societies. See J. Henrich .2020. The WEIRDest People in the World. New York: Allen Lance. Due to Welzel's (2013) culture zone scheme, "Eastern Civilizations" include nations of the "Islamic East" (Middle East and Northern Africa), the "Orthodox East" (post-Soviet space), "Indic East" (South Asia) and "Sinic East" (East Asia). The "Global South" captures the nations of Latin America and Sub-Saharan Africa. "Western Civilization" covers the nations of the "Reformed West" (Protestant Europe), the "New West" (North America, Australia and New Zealand), the "Old West" (Catholic Mediterranean Europe) and the "Returned West" (ex-communist EU member states). See also Figure 6.

Source: Figure 2 of Welzel, "Democratic Horizons." By permission of the author.

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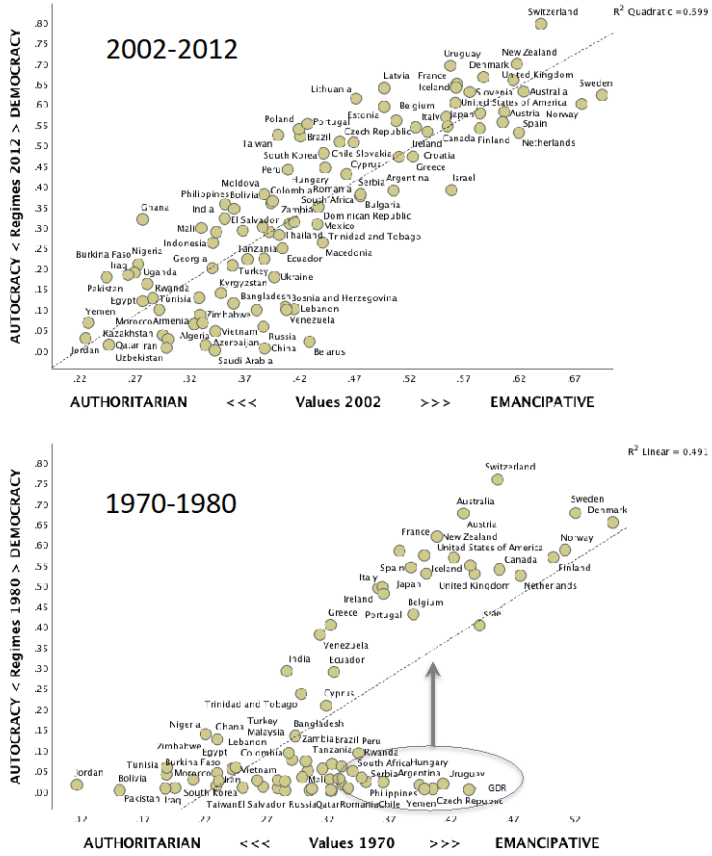
In the top chart of OA-Figure 3, we see that in 2012 countries have been democratic largely in proportion to their populations' emancipative values in 2002. As the bottom chart shows, in 1980 countries have also been democratic roughly in proportion to their populations' emancipative values, although there was a group of incongruent countries (including Argentina, Chile, Czechoslovakia, East Germany, Hungary, Poland, the Philippines, South Africa, and Uruguay) in which institutions were too autocratic relative to their populations' rather advanced emancipative values in 1970. Several years later, all these became prominent cases of transitions from autocracy to democracy. This evidence suggests that regimes change in response to their once-accrued misfit to the surrounding culture.

OA-Figure 3. The Case for Regime-Culture Congruence

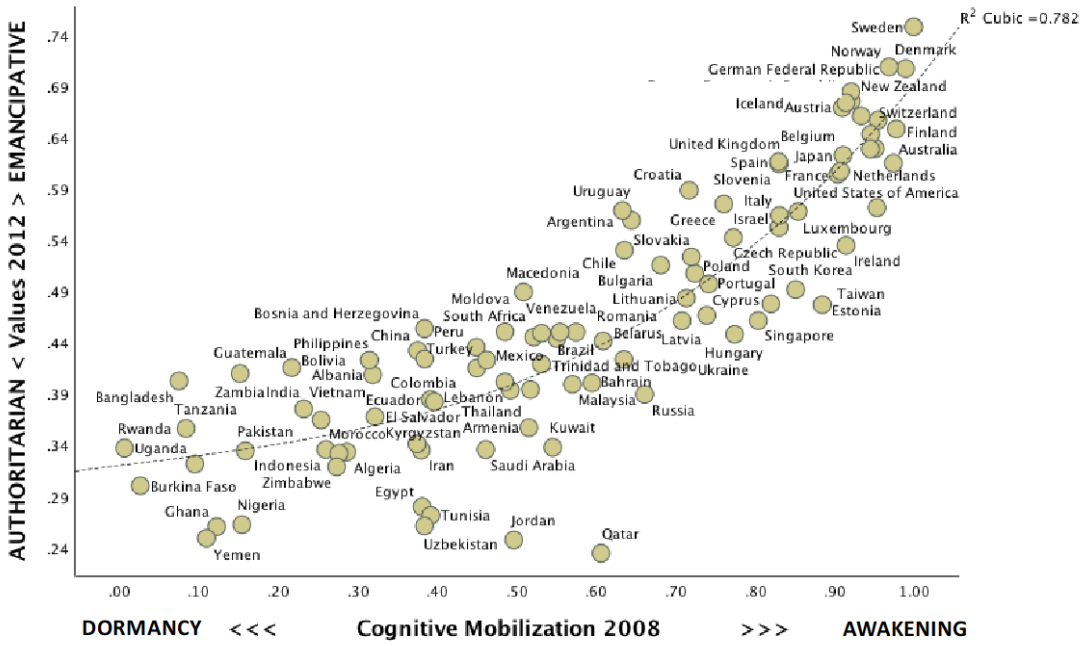


Note: Horizontal axes display Welzel's (2013) emancipative values index, with scores estimated for 2002 and 1970 from current cohort differences, as explained in Section 2 of the Online Appendix. Estimations are based on data from the World Values Surveys (www.worldvaluessurvey.org) (Haerpfer, Inglehart, Moreno and Welzel et al., cited in endnote 8). The measure of the vertical axes is explained in the footer of Figure 1.

Source: Figure 3 of Welzel, "Democratic Horizons." By permission of the author.

OA-Figure 4 suggests that emancipative values grow exponentially in response to the mass-scale advancement of education, science, technology, and information, although some rent-dependent economies (such as Qatar and Jordan) are outliers from this general tendency.

OA-Figure 4. Emancipative Values as a Response to Cognitive Mobilization



Note: Horizontal axis is the World Bank's knowledge index (divided by 100), which combines in a single index information on a population's average educational achievement, informational connectedness and per capita scientific output (e.g., patents per inhabitants). The vertical axis is Welzel's (2013) emancipative values index, with scores estimated for 2012 from current cohort differences, as explained in Section 3 of the Online Appendix. Estimations are based on data from the World Values Survey (www.worldvaluessurvey.org), (Haerpfer, Inglehart, Moreno and Welzel et al., cited in endnote 8).

Source: Figure 4 of Welzel, "Democratic Horizons." By permission of the author.

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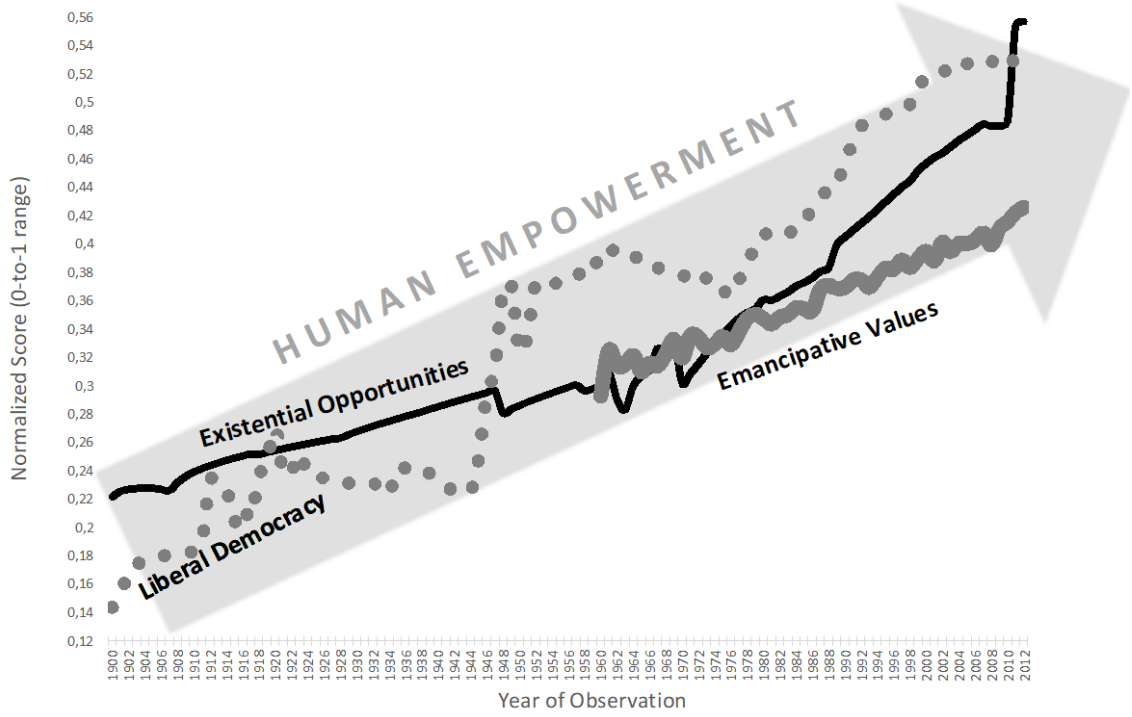
Existential opportunities, emancipative values, and liberal democracy are the three key ingredients of a broad human-empowerment trend that liberates people from material, mental, and legal constraints on their lives. As per global averages, these three ingredients have been rising in baffling unison over the past decades. This is evident from OA-Figure 5.

OA-Figure 5. The Global Rise of the Three Ingredients of Human Empowerment



Note: Existential opportunities combine per capita incomes, mean years of schooling, inverse fertility and inverse income inequality (GINI) into a single index, using a time-pooled cross-sectional factor analysis and standardizing the resulting country-by-year *z*-scores into a 0-to-1 scale. For times before the World Development Indicator Series starts (i.e., before 1960), the index shows predicetd scores using Vanhanen's index of power resources as the regressor. Emancipative values represent backward estimations of Welzel's (2013) index, as explained in Section 3 of the Online Appendix. Introduced by Brunkert et al. (citation in endnote 27), liberal democracy measures autocracy-vs-democracy by a multiplicative combination, of V-Dem's liberal, electoral and participatory democracy components. To calculate global averages for the three indices, national data are weighted in proportion to the respective country's population size. To adjust scores on liberal democracy such that its base level is comparable to the other two indices, the cubic root of the original scores is displayed.

Source: Figure 6 of Welzel, "Democratic Horizons." By permission of the author.

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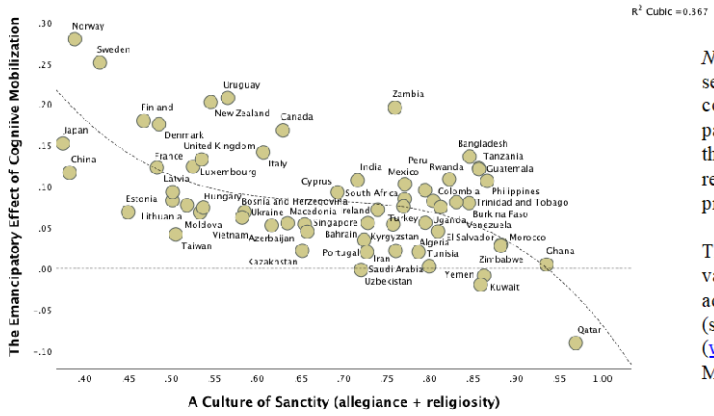
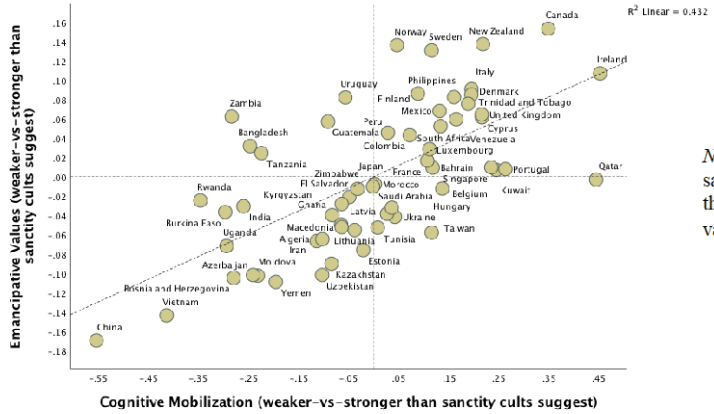
OA-Figure 6 illustrates that elite-fabricated sanctity cults slow down the translation of cognitive mobilization into emancipative values (top chart), but that, despite this deceleration, emancipative values continue to rise under the imprint of cognitive mobilization (bottom chart).

OA-Figure 6. Sanctity Cults as a Decelerator of Modernity's Emancipatory Effect



Note: Horizontal axis is the inverse of Welzel's (2013) secular values index (short version), thus measuring the combination of national pride, an urge to make one's parents proud, willingness to fight for one's country in the case of war, respect for authority and strength of religious belief as well as frequency of religious practice.

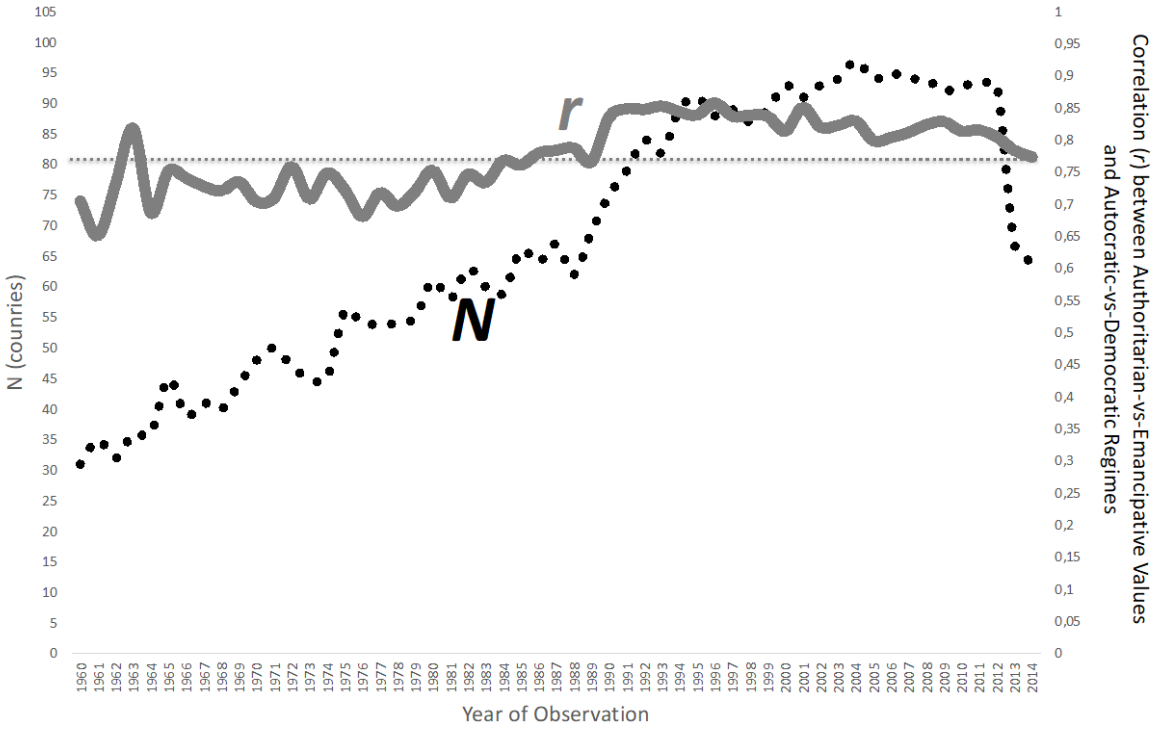
The vertical axis displays the residuals in emancipative values in 2012 unexplained by a country's advancement in cognitive mobilization (see Figure 4). Data are from the World Values Surveys (www.worldvaluessurvey.org) (Haerpfer, Inglehart, Moreno and Welzel et al., cited in endnote 8).



Note: Variables on the two axes are residuals of the same variables in Figure 4, obtained after controlling the effect of cognitive mobilization on emancipative values for sanctity in the diagram above.

Source: Figure 7 of Welzel, "Democratic Horizons." By permission of the author.

OA-Figure 7. Temporal Constancy of Autocratic-versus-Democratic Regimes' Link to Authoritarian-versus-Emancipative Values

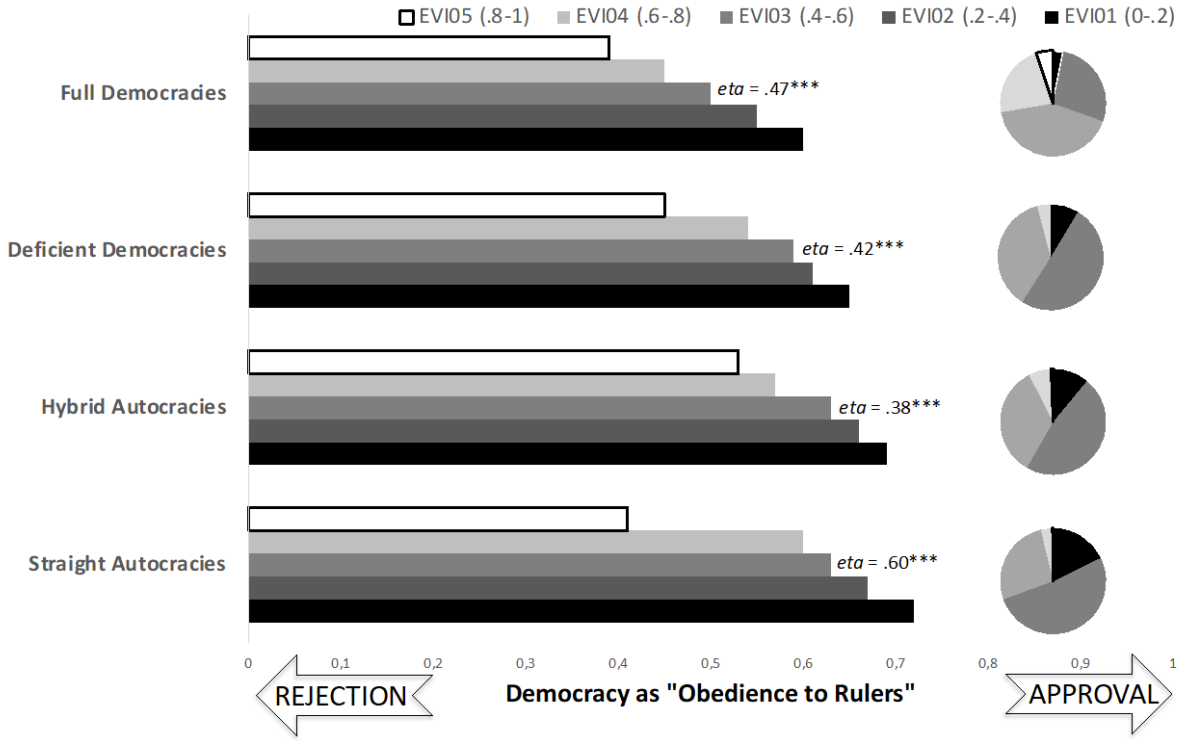


Note: See footer of Figure 5 for data sources and measurement details.

Source: Figure 8 of Welzel, "Democratic Horizons." By permission of the author.

Despite the trending patterns in global-regime dynamics since 1960, the yearly correlation of autocracy-versus-democracy with authoritarian-versus-emancipative values is large and temporally constant. This means that throughout both global democratic down- and upswings, countries in which emancipative values are most firmly encultured are the most democratic. Consequently, during democratic upswings, emancipatory-minded populations are more likely to follow the trend and make shifts toward democracy. During democratic downswings, by contrast, emancipatory-minded populations are more likely to resist the prevailing trend and avoid shifts away from democracy.

OA-Figure 8. Misunderstandings of Democracy as "Obedience to Rulers" by Emancipative Values and Regime Type



Note: Data are from the World Values Survey (www.worldvaluessurvey.org), rounds 6 (2010-14) and 7 (2017-20). See Haerpfer, Inglehart, Moreno and Welzel et al. (2020). "Straight Autocracies": countries scoring 0-.25 on autocracy-vs-democracy. "Mixed Autocracies": countries scoring .25-.50 on autocracy-vs-democracy. "Deficient Democracies": countries scoring .50-.75 on autocracy-vs-democracy. "Full Democracies": countries scoring .75-1 on autocracy-vs-democracy. "Autocracy-vs-Democracy" uses Brunkert, et al.'s (2019) measure of "comprehensive democracy" based on V-Dem, as explained in the footer of Figure 1. For the countries covered in each regime category, see Online Appendix.

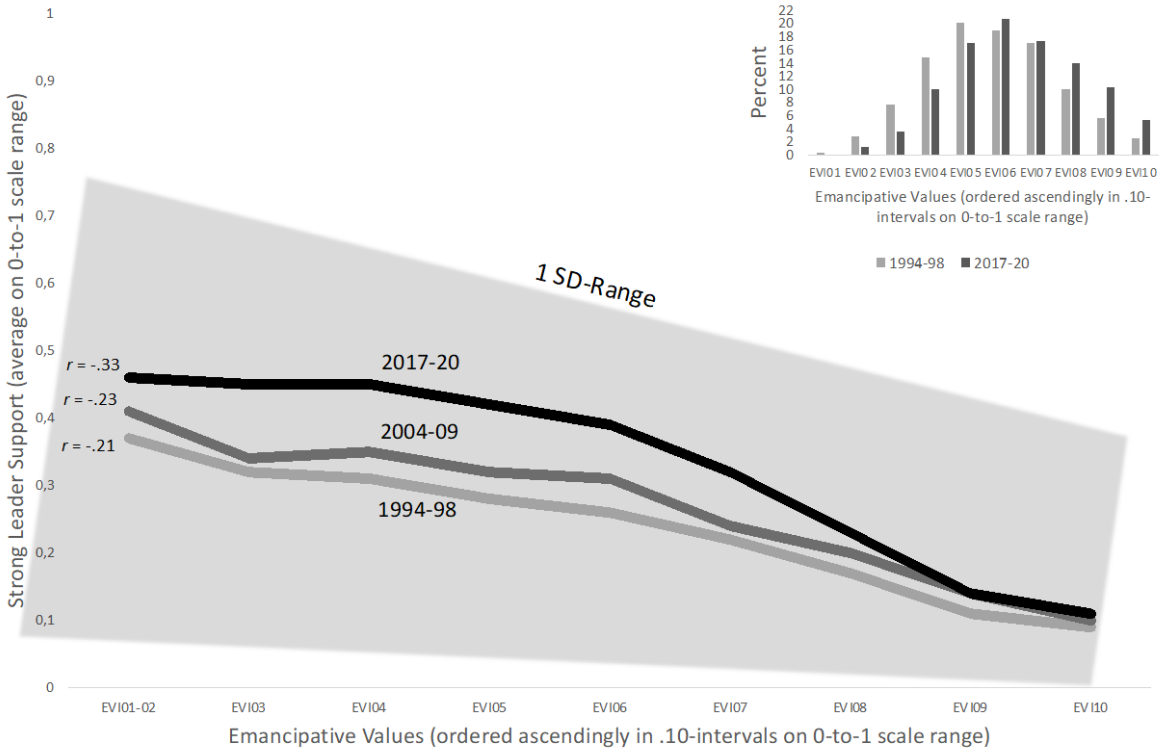
Source: Figure 9 of Welzel, "Democratic Horizons." By permission of the author.

The proportion of people who endorse emancipative values fairly or very strongly (light gray and white pie pieces) grows along the spectrum from straight to hybrid autocracies and then from deficient to full democracies, which is part of the reason why regimes differ over the autocracy-versus-democracy dimension. But regardless of regime type, those with stronger emancipative values are less susceptible to misunderstandings of democracy as "obedience to rulers."

Appendix—Christian Welzel, "Why the Future is Democratic," *Journal of Democracy* 32 (April 2021): 132–44.

For a core set of mature Western democracies, OA-Figure 9 shows that strongman rule has become mildly more popular over time. This trend, however, is less evident and even insignificant among people with strong emancipative values. As a consequence, authoritarian-versus-emancipative values divide people more than before in terms of their support for strongman rule.

OA-Figure 9. Strong-Leader Support over Time and by Emancipative Values



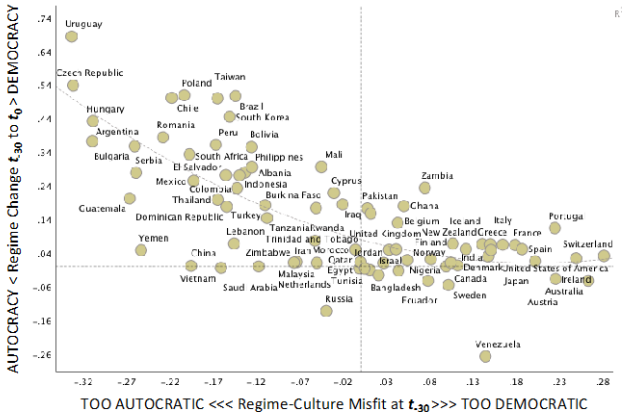
Note: Data are from the World Values Survey (www.worldvaluessurvey.org): Haerpfer, Inglehart, Moreno and Welzel et al. (2020). Fractions are equivalent to percentages of national samples agreeing strongly or fairly with the statement that it is a good idea to have "*strong leaders who do not have to bother with parliaments and elections*." National samples are weighted in proportion to the respective country's population size and cover a constant set of mature Western democracies participating in rounds 3 (1994-98), 5 (2005-09) and 7 (2017-19) of the World Values Survey, including: Australia, Finland, Germany, New Zealand, Norway, Spain, Sweden, Switzerland, the UK and the US.

Source: Figure 10 of Welzel, "Democratic Horizons." By permission of the author.

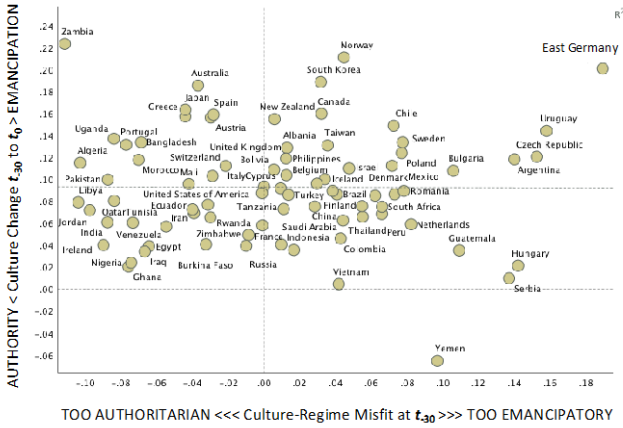
Appendix—Christian Welzel, "Why the Future is Democratic," *Journal of Democracy* 32 (April 2021): 132–44.

The top chart in OA-Figure 10 shows that regimes change within the timespan of a generation in response to their misfit to the surrounding culture. At the same time, the bottom chart demonstrates that culture of a given population does *not*, however, change in response to its misfit to the given regime. Hence, cultural change drives regime change more than the other way round.

OA-Figure 10. Regime-Culture Coevolution I: Misfits Drive Regime Change but Not Culture Change



Notes: **Horizontal axis** measures the regime-culture misfit at time t_{-30} by regressing liberal democracy at time t_{-30} on backward estimated emancipative values at time t_{-30} and plotting the residuals. Negative residuals suggest that the regime has been too autocratic relative to the population's emancipative values thirty years back in time. Positive residuals suggest that the regime has been too democratic relative to the population's emancipative values thirty years back in time. **Vertical axis** measures change in liberal democracy from time t_{-30} till time t_0. In this diagram, t_{-30} is 1980 and time t_0 is 2010. Yet, the pattern exemplified here is generalizable to other thirty-year intervals: Regimes change as a function of their once accrued misfit to the surrounding culture. The backward Estimation of emancipative values is explained in the Online Appendix.



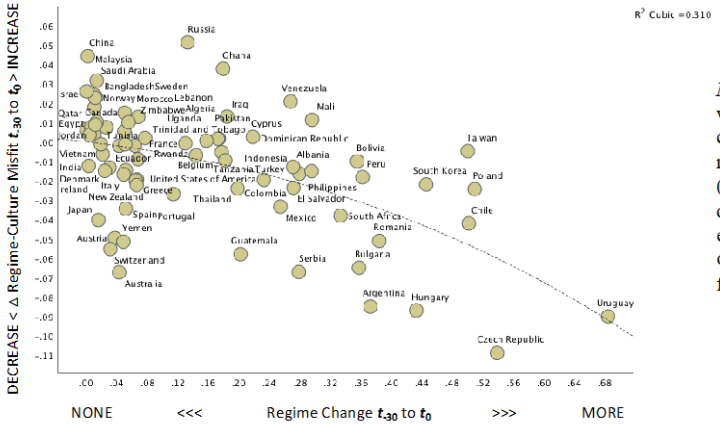
Notes: **Horizontal axis** measures the culture-regime misfit at time t_{-30} by regressing backward estimated emancipative values at time t_{-30} on liberal democracy at time t_{-30} and plotting the residuals. Negative residuals suggest that culture has been too authoritarian relative to the regime's democraticness (or lack thereof) thirty years back in time. Positive residuals suggest that the culture has been too emancipatory relative to the regime's democraticness (or lack thereof) thirty years back in time.
Vertical axis measures change in estimated emancipative values from time t_{-30} till time t_0. In this diagram, t_{-30} is 1980 and time t_0 is 2010. Yet, the pattern exemplified here is generalizable to other thirty-year intervals: Values do NOT change as a function of their once accrued misfit to regime institutions.

Source: Figure 11 of Welzel, "Democratic Horizons." By permission of the author.

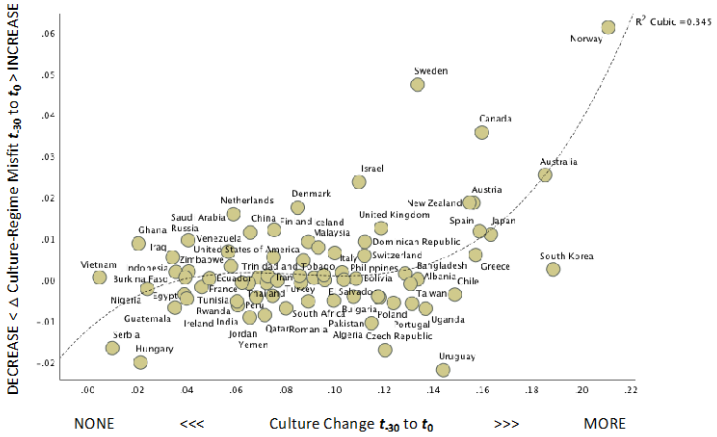
Appendix—Christian Welzel, "Why the Future is Democratic," *Journal of Democracy* 32 (April 2021): 132–44.

The top chart in OA-Figure 11 shows that regime changes over the timespan of a generation reduce previously accrued regime-culture misfits. Culture change over a similar timespan, by contrast, magnifies regime-culture misfits. Hence, regime-culture coevolution is an intricate interplay between misfit-increasing and misfit-decreasing dynamics.

OA-Figure 11. Regime-Culture Coevolution II: Regime Change Corrects misfits, Culture Change Builds Them



Notes: **Horizontal axis** measures change in autocracy-vs-democracy from t_{-30} till t_0 (i.e., the pure amount of change disconsidering its direction). **Vertical axis** measures change in absolute regime-culture misfit scores (square-root of squared residuals) from t_{-30} till t_0. In this diagram, t_{-30} is 1980 and t_0 is 2010. Yet, the pattern exemplified with this temporal choice is generalizable to other 30-year intervals since 1970: regime change functions to ***diminish*** regime-culture misfits.



Notes: **Horizontal axis** measures change in estimated authoritarian-vs-emancipative values from t_{-30} till t_0 (i.e., the pure amount of change disconsidering its direction). **Vertical axis** measures change in absolute culture-regime misfit scores (square-root of squared residuals) from t_{-30} till t_0. In this diagram, t_{-30} is 1980 and t_0 is 2010. Yet, the pattern exemplified with this temporal choice is generalizable to other 30-year intervals since 1970: cultural change funcitons to ***magnify*** culture-regime misfits.

Source: Figure 12 of Welzel, "Democratic Horizons." By permission of the author.

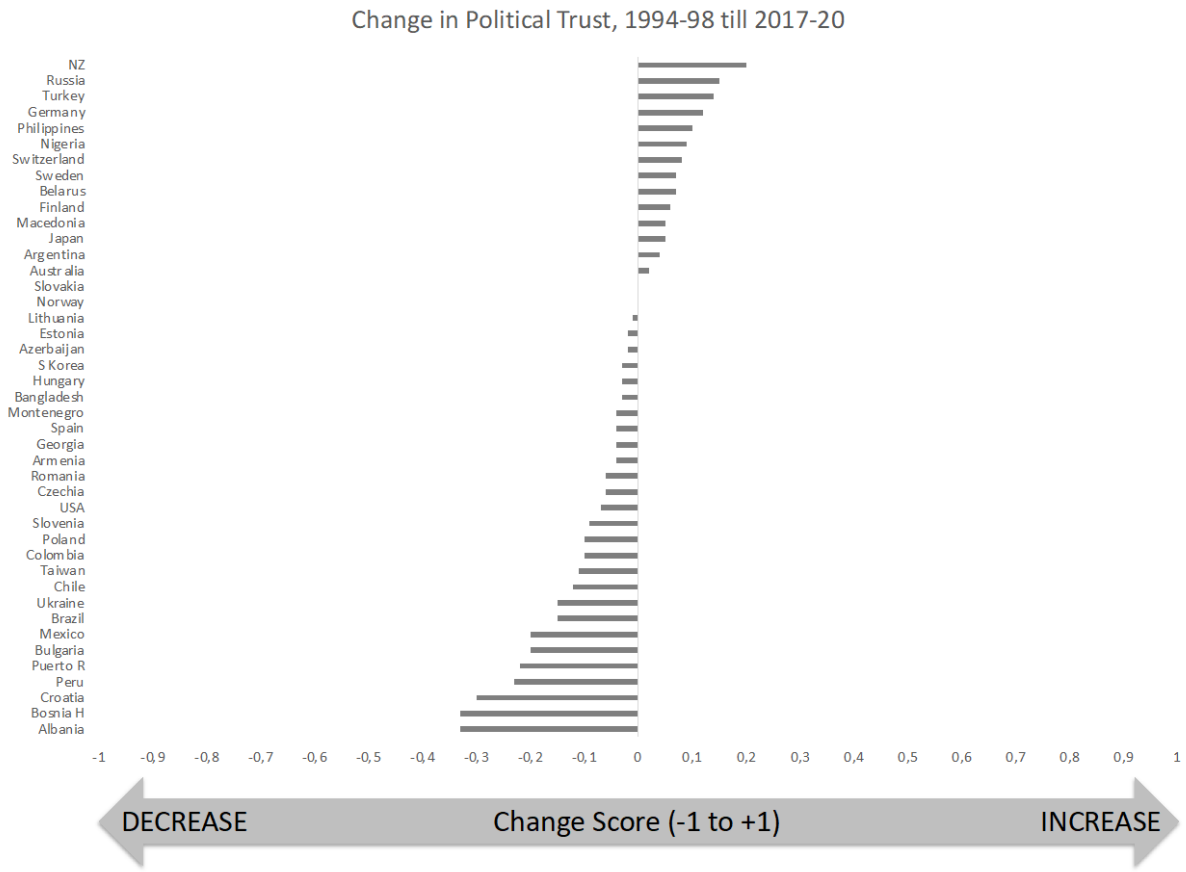
Appendix—Christian Welzel, "Why the Future is Democratic," *Journal of Democracy* 32 (April 2021): 132–44.

4 OPINION TRENDS

4.1 PUBLIC TRUST

World Values Surveys data from rounds three (1994–98) till seven (2017–20) show that—among the 46 countries covered in both survey rounds (national samples weighted in proportion to the respective country's population size)—public trust in governments, parliaments, and parties has increased slightly from 0.39 to 0.43 over this period on average (on a standardized scale range from zero to one). The standard deviations of these mean scores (around 0.25) have not increased over time, which defies the idea that publics have become more divided over public trust-versus-distrust. If we filter out mature democracies (such as Australia, Finland, Germany, New Zealand, Norway, Spain, Sweden, Switzerland, the United Kingdom, and the United States), public trust shows also *no* uniform downward trend, even though the mean trust level is lower in mature democracies (at about 0.35) because propaganda in autocracies paints rosy pictures of reality while critical journalism in democracies focuses on bad news (see Haerpfer et al., *World Values Surveys Time Series Dataset*).

OA-Figure 12. Change in Political Trust

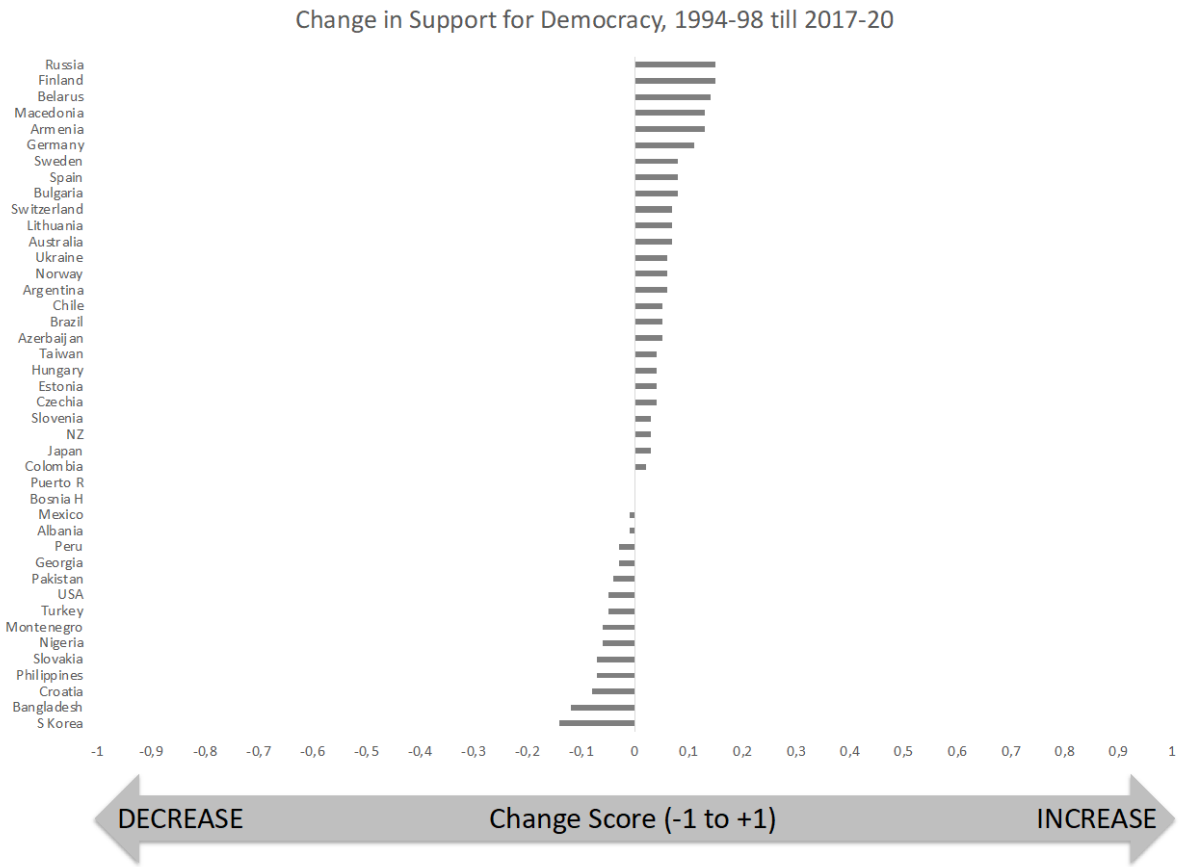


Appendix—Christian Welzel, "Why the Future is Democratic," *Journal of Democracy* 32 (April 2021): 132–44.

4.2 SUPPORT FOR DEMOCRACY

World Values Surveys data from rounds three (1994–98) till seven (2017–20) show that across the world popular support for democracy is static, with an average score of 0.75 in 1994–98 as well as in 2017–20 (measured on a continuous zero-to-one scale, national samples weighted in proportion to the respective country's population size). Looking only at mature democracies (such as Australia, Finland, Germany, New Zealand, Norway, Spain, Sweden, Switzerland, the United Kingdom, and the United States), the same holds true: 0.81 in 1994–98 and 0.80 in 2017–20, which is a negligible difference within the margin of measurement error. Standard deviations of these mean scores (at about 0.25) did not increase, suggesting that citizenries did not become more divided over their support for autocracy-versus-democracy. In terms of the number count, support for democracy increased in 26 countries and decreased in fourteen, yet all these changes are small, between -0.15 and +0.15. This is not the stuff of big drama. Studies claiming a sweeping decline in support for democracy do not consider the full evidence but cherry-pick their cases (see Haerpfer et al., *World Values Surveys Time Series Dataset*).

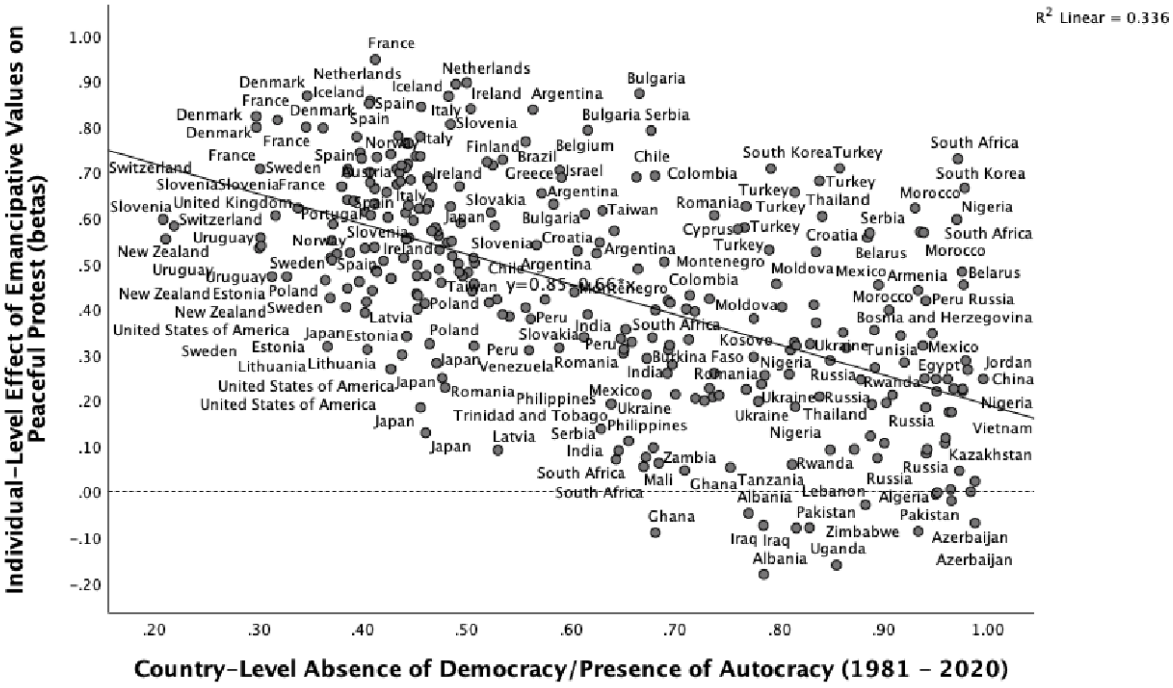
OA-Figure 13. Change in Support for Democracy



4.3 PEACEFUL PROTEST

Examining the full evidence from the World Values Surveys rounds one (1981–83) till seven (2017–20), I find that among 299 country-year observations (covering about a hundred countries worldwide and seven observation periods from 1981 to 2020), the individual-level effect of emancipative values on peaceful protest is statistically significant in 291 observations and positive in 289 of them. Even in autocratic and semiautocratic countries in which protestors face severe repression—as in China, Russia, Turkey, or Venezuela—the effect is highly significant and strongly positive. Of course, as one would expect, the extent to which democracy is absent and autocracy present in a country does tend to diminish the individual-level effect of emancipative values on peaceful protest (r = -0.58, N = 299, p < 0.001, two-tailed distribution). This tendency, however, is not so powerful as to entirely extinguish or render insignificant the ubiquitously positive protest effect of emancipative values. In conclusion, rising emancipative values make people more critical and unruly (see Haerpfer et al., *World Values Surveys Time Series Dataset*).

OA-Figure 14. The Protest-Effect of Emancipative Values by Level of Autocratic Repression

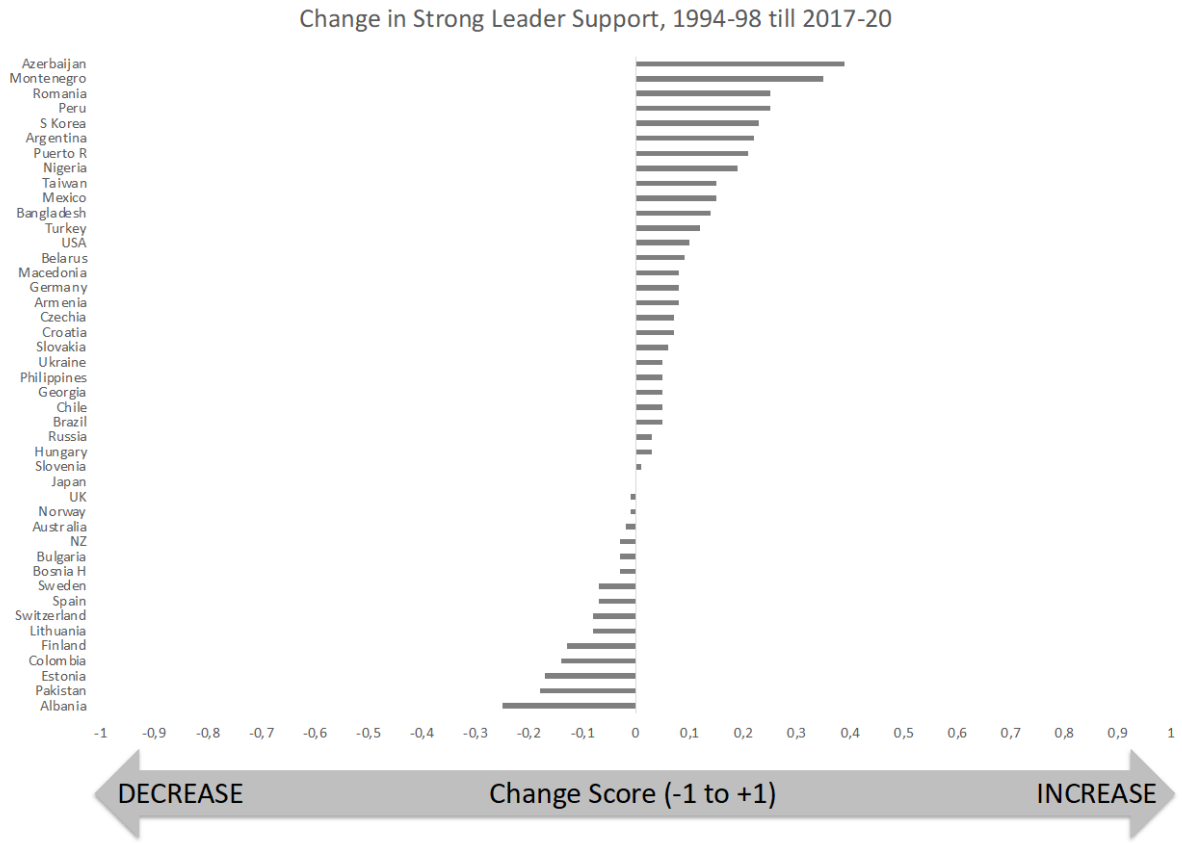


Appendix—Christian Welzel, "Why the Future is Democratic," *Journal of Democracy* 32 (April 2021): 132–44.

4.4 STRONG-LEADER SUPPORT

Looking at the World Values Surveys, support for "*strong leaders who do not have to bother with parliaments and elections*" increased from rounds three (1994–98) through seven (2017–20) in 27 countries, while it decreased in fifteen countries. This corresponds with a modest, albeit noticeable, overall increase from 0.39 (SD: 0.34) to 0.46 (SD: 0.31) worldwide (on a zero-to-one scale range, national samples weighted in proportion to the respective country's population size). Among mature democracies only (including Australia, Finland, Germany, New Zealand, Norway, Spain, Sweden, Switzerland, the United Kingdom, and the United States), strong-leader support rose, though from a lower base level, to the same extent from 0.25 (SD: 0.29) to 0.33 (SD: 0.34) over the same period. Although this evidence testifies to an illiberal cycle in global public mood, it is beyond the over-dramatic picture that countless authors are painting (see Haerpfer et al., *World Values Surveys Time Series Dataset*).

OA-Figure 15. Change in Strong-Leader Support

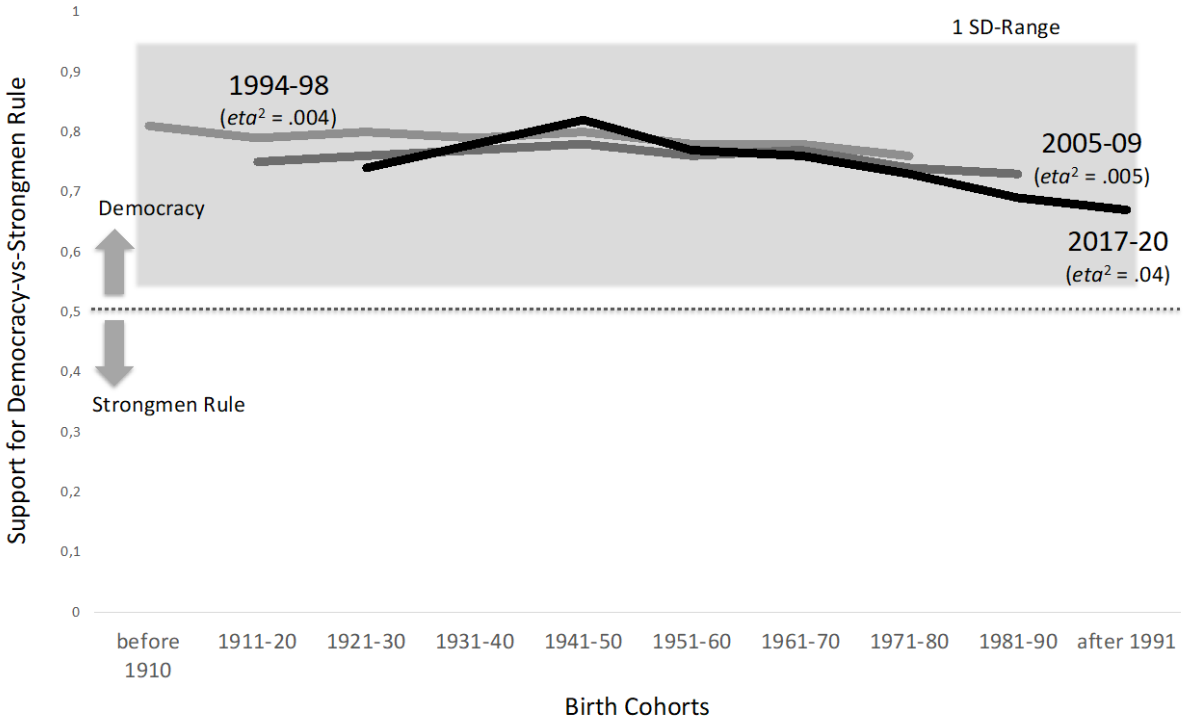


Appendix—Christian Welzel, "Why the Future is Democratic," *Journal of Democracy* 32 (April 2021): 132–44.

4.5 THE GENERATIONAL PROFILE IN SUPPORT FOR DEMOCRACY

Looking at the World Values Surveys and measuring people's support for democracy against their support for strongman rule, the claim that there is a breakdown of democratic support over time and across generations in mature Western democracies turns out to be untenable. The reasons are as follows: 1) over time, base levels of the cohort lines barely shifted downward (in numbers, the base level is 0.78 in 1994–98 and 0.74 in 2017–20); and 2) across the generations, the cohort lines are basically flat and only show a slight downward slope, which accounts for only four percent of the total individual-level variation in support for democracy-versus-strongman rule. Again, this is not the stuff of big drama. (see Haerpfer et al., *World Values Surveys Time Series Dataset*).

OA-Figure 16. Change in Strong-Leader Support



Note: Data are from the World Values Surveys (www.worldvaluessurvey.org): Haerpfer, Inglehart and Moreno et al. (citation in endote 8). Fractions are equivalent to percentages of national samples agreeing strongly or fairly with the statement that it is a good idea to have "*democracy*" and who at the same time disagree strongly or fairly with the statement that it is is a good idea to have a "*strong leaders who do not have to bother with parliaments and elections*." National samples are weighted in proportion to the respective country's population size and cover a constant set of mature Western democracies participating in rounds 3 (1994-98), 5 (2005-09) and 7 (2017-19) of the World Values Surveys, including: Australia, Finland, Germany, New Zealand, Norway, Spain, Sweden, Switzerland, the UK and the US.

5 REGIME TYPES AND COUNTRIES

The four regime types displayed in OA-Figure 8 include the following countries covered by the World Values Surveys:

1) ***Straight Autocracies*** (*N* = 11): Azerbaijan, China, Egypt, Iran, Kuwait, Qatar, Saudi Arabia, Uganda, Uzbekistan, Venezuela, and Vietnam.

2) ***Hybrid Autocracies*** (*N* = 20): Algeria, Armenia, Belarus, Ethiopia, Georgia, Iraq, Jordan, Kazakhstan, Kyrgyzstan, Libya, Malaysia, Morocco, Nigeria, Pakistan, Peru, Singapore, Thailand, Turkey, Yemen, and Zimbabwe.

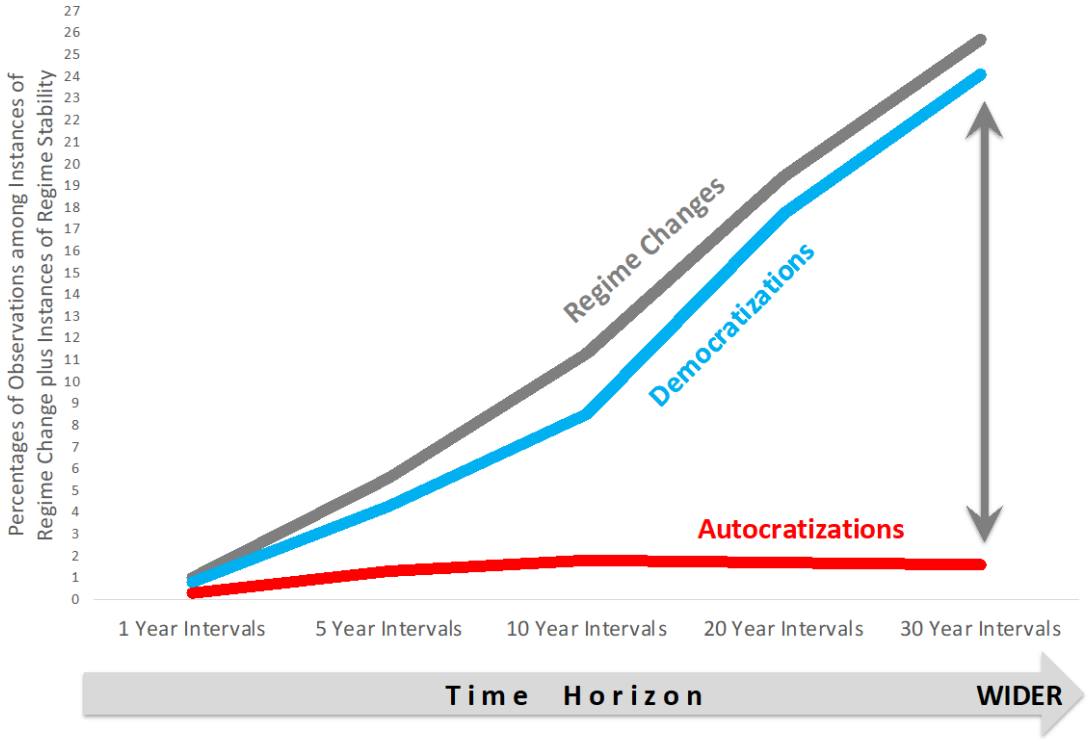
3) ***Deficient Democracies*** (*N* = 42): Albania, Argentina, Bangladesh, Bosnia and Herzegovina, Brazil, Bulgaria, Chile, Colombia, Croatia, Cyprus, Dominican Republic, Ecuador, El Salvador, Georgia, Ghana, Guatemala, Hong Kong*, Hungary, India, Indonesia, Kosovo, Kyrgyzstan, Lebanon, North Macedonia, Mali, Malta, Mexico, Moldova, Montenegro, Philippines, Poland, Romania, Rwanda, Slovakia, South Africa, Tanzania, Trinidad and Tobago, Tunisia, Ukraine, and Zambia.

4) ***Full Democracies*** (*N* = 34): Andorra, Australia, Austria, Belgium, Canada, Chile, Czechia, Denmark, Estonia, Finland, France, Greece, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxemburg, Netherlands, New Zealand, Norway, Portugal, Slovenia, South Korea, Spain, Sweden, Switzerland, Taiwan, United Kingdom, United States, and Uruguay.

* Hong Kong's categorization is not my own but follows the scoring in Varieties of Democracy Project (V-Dem) data before the introduction of the 2020 national-security law: If one averages V-Dem's electoral, liberal, and participatory democracy components, Hong Kong scores between 0.50 and 0.75, which defines the category "deficient democracy." It is, of course, debatable whether a partially sovereign territory should count as a democracy at all. After the People's Republic of China's new legal restrictions (enacted in March 2021), Hong Kong ceases to be even a "deficient" democracy and slides into the "hybrid autocracy" category.

6 The Temporality of Democracy's Advantage

OA-Figure 17. The Evolutionary Advantage of Democracy in Temporal Perspective - I

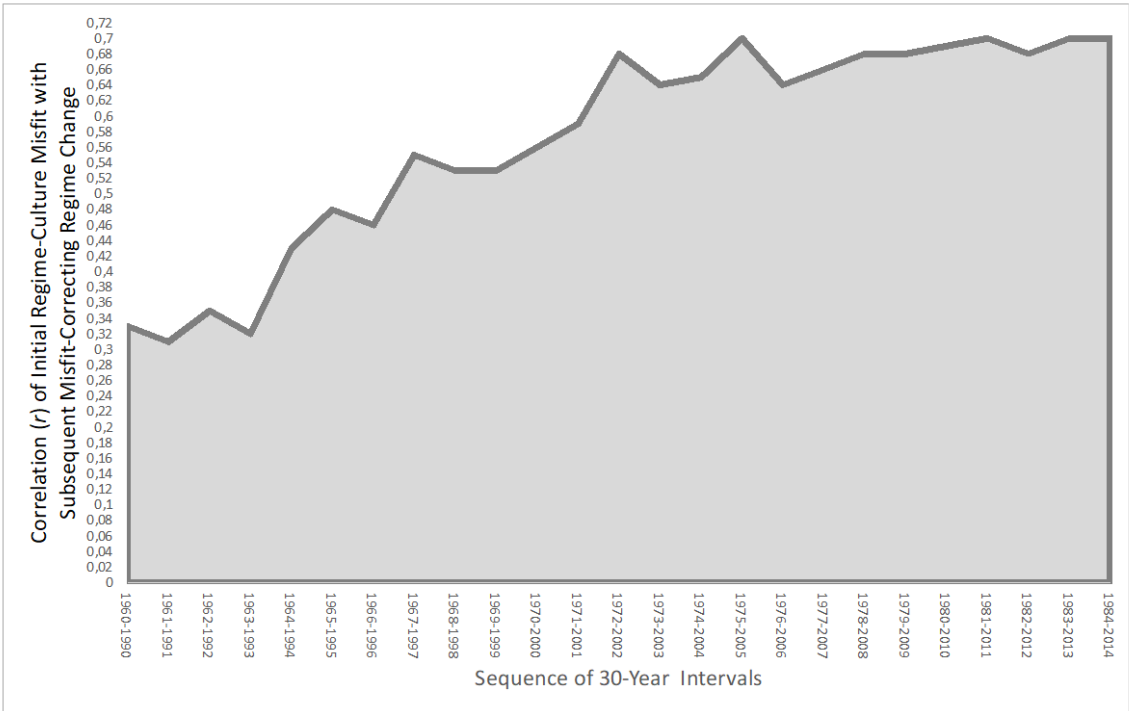


Notes: Source is the V-Dem dataset (Lindberg et al. 2018), release version 2018. I measure regime change by subtracting a country's score on the Comprehensive Democracy Index (CDI) at an earlier time from that at a later time, using varying temporal spans. I count as autocratization any temporal change on the CDI surpassing -.10 into the negative and as democratization any temporal change on the CDI surpassing +.10 into the positive. All temporal changes on the CDI below these thresholds are counted as instances of regime stability. Observations are country-years. *N* varies from 15,282 for all 1-year changes between 1900 and 2015 and 10,848 for all 30-year changes between 1930 and 2015.

Source: *Source*: Figure 13 of Welzel "Democratic Horizons." By permission of the author.

The frequencies of autocratization and democratization episodes indicate the comparative reproductive power of autocracies and democracies. This measure provides insight into competitive evolutionary advantage of each regime type. It is striking to see how steep and monumental democracy's reproductive advantage over autocracy grows as one widens the temporal intervals over which one measures regime change.

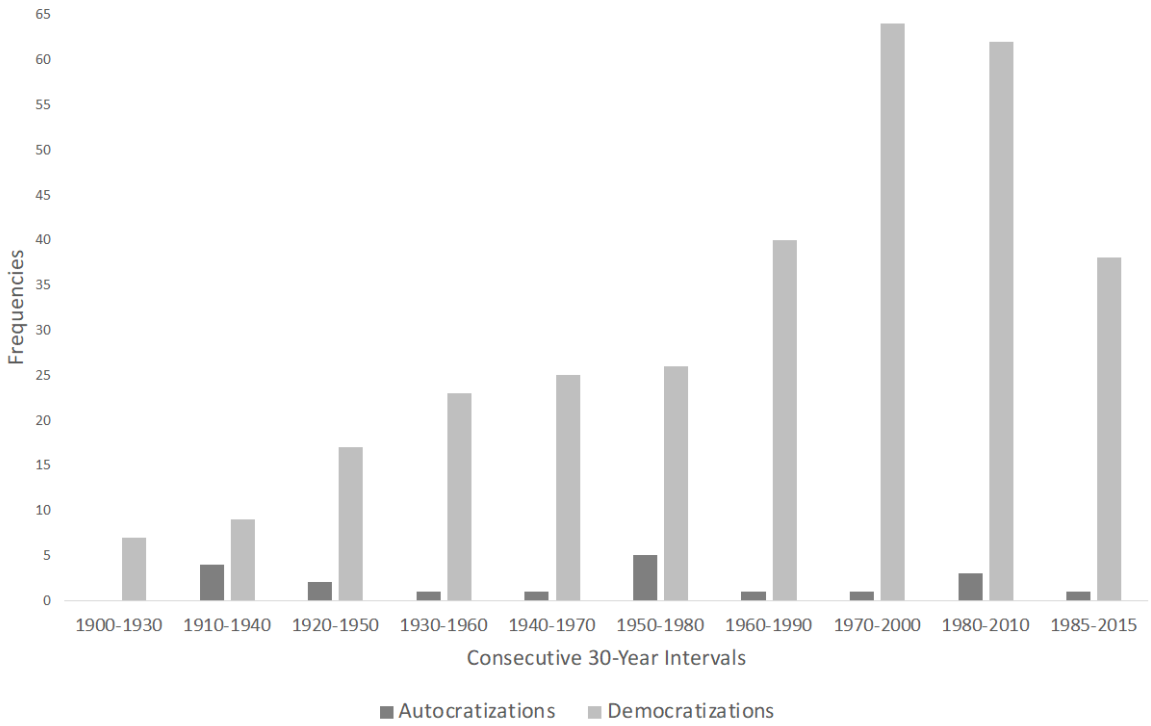
OA-Figure 18. The Evolutionary Advantage of Democracy in Temporal Perspective - II



Notes: Correlation between regime-culture misfits at t_{-30} with misfit-correcting regime changes from t_{-30} till t_0. Noteworthy is the increase starting from 1971 (the beginning of the 3rd Wave) and the persistent stability since then. It might be that emancipative values have grown so strong that regimes can no longer escape the psychological pressure of their populations.

The tendency of regime transitions to correct regime-culture misfits within the timespan of a generation has doubled in strength from the Cold War to the post–Cold War period. More recently, the further growth of this tendency has stalled, although it remains significant. The reason for this pattern is that the Cold War allowed larger regime-culture misfits to persist because the two superpowers supported communist autocracies (in case of the Soviet Union) and anticommunist autocracies (in case of the United States), thus propping up regimes that often lacked popular support. This observation is reminiscent of Huntington who wrote that "in terms of cultural tradition, economic development and social structure, Czechoslovakia would certainly be a democracy today (and probably Hungary and Poland) if it were not for the overriding veto of the Soviet presence" (see Samuel P. Huntington, "Will More Countries Become Democratic?" *Political Science Quarterly* 99 (Summer 1984): 211).

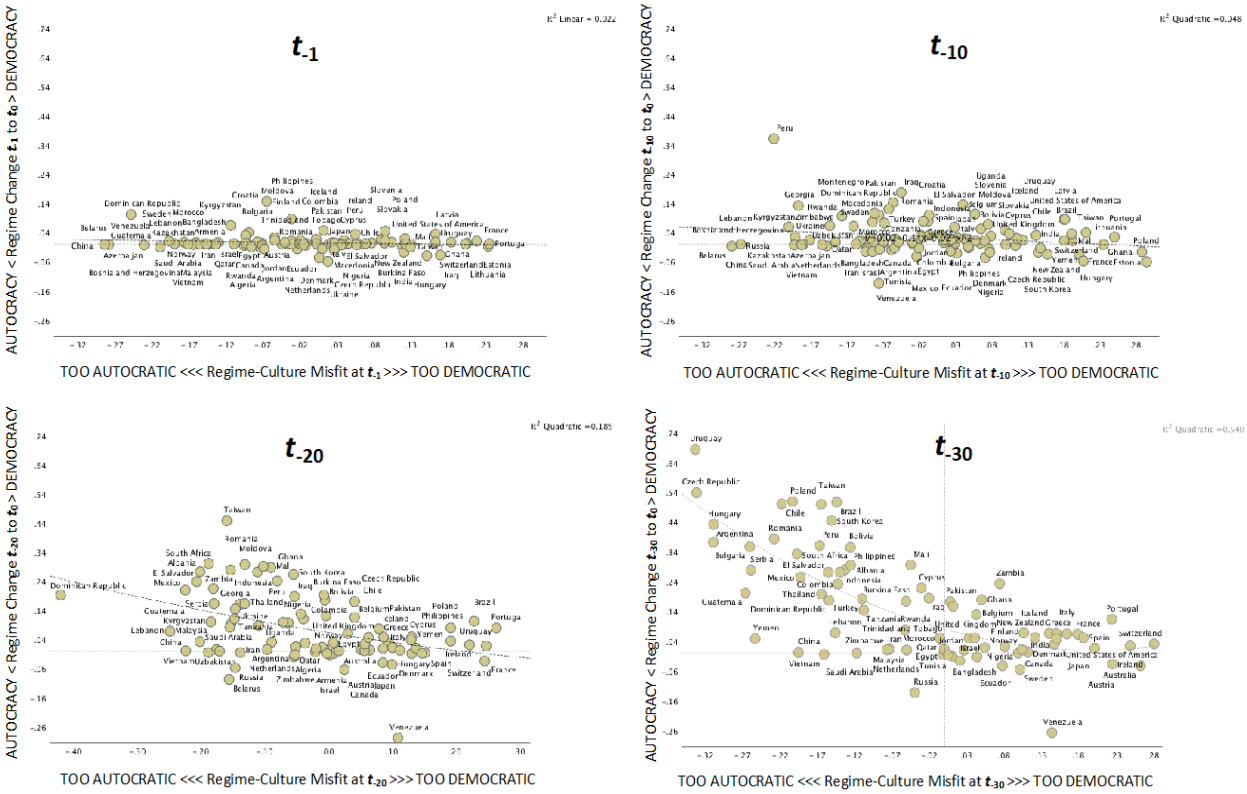
OA-Figure 19. The Evolutionary Advantage of Democracy in Temporal Perspective – III



Notes: Source is the V-Dem dataset (Lindberg et al. 2018), release version 2018. I measure regime change by subtracting a country's score on liberal democracy at an earlier time from that at a later time, using varying temporal spans. I count as autocratization any temporal change on liberal democracy surpassing -.10 into the negative and as democratization any temporal change surpassing +.10 into the positive (scale range of liberal democracy is 0-to-1, so change scores can vary from -1.0 to +1.0). All temporal changes on liberal democracy below these thresholds are counted as instances of regime stability. Observations are country-years. *N* is 10,848 regime observations for all 30-year intervals between 1900-1930 till 1985-2015.

The thirty-year reproductive advantage of democracy over autocracy that has existed since the beginning of the twentieth century continued to grow until it reached its peak after the end of the Cold War. In the most recent thirty-year interval (according to the latest data available at the time of writing in March 2021), it has returned to its pre–Cold War level but remains monumental.

OA-Figure 20. The Evolutionary Advantage of Democracy in Temporal Perspective - IV



Notes: **Horizontal axes** measure the regime-culture misfit at time $t_{-1\ (-10,\ -20,\ -30)}$ by regressing liberal democracy at time $t_{-1\ (-10,\ -20,\ -30)}$ on backward estimated emancipative values at time $t_{-1\ (-10,\ -20,\ -30)}$ and plotting the residuals. Negative residuals suggest that the regime has been too autocratic relative to the population's emancipative values back in time. Positive residuals suggest that the regime has been too democratic relative to the population's emancipative values back in time. **Vertical axes** measure change in liberal democracy from time $t_{-1\ (-10,\ -20,\ -30)}$ till time t_0. In this diagram, time t_0 is set to 2010. The pattern exemplified here with t_0 set to 2010 is similar for any t_0 from 2000 to 2016.

In the narrow temporal perspective of yearly or even decennial time intervals, short-term regime cycles allow autocratizations to be as numerous as democratizations. But in the generational perspective of thirty-year intervals, democratizations heavily outnumber autocratizations and largely exceed the latter in scope. More generally, the scope of democratizations increases with the width of the temporal horizon.