





Preference for modernization is universal, but expected modernization trajectories are culturally diversified: A nine-country study of folk theories of societal development

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Cultural sensitivity in societal development has been advocated for since at least the 1960s but has remained understudied. Our goal is to address this gap and to investigate folk theories of societal development. We aimed to identify both universal and culturally specific lay beliefs about what constitutes good societal development. We collected data from 2,684 participants from Japan, Hong Kong (China), Poland, Turkey, Brazil, France, Nigeria, the USA, and Canada. We measured preferences for 28 development aims. We used multidimensional scaling, analysis of variance, and pairwise comparisons to identify universal and country-specific preferences. Our results demonstrate that what people understand as modernization is fairly universal across countries, but specific pathways of development and preferences towards these pathways tend to vary between countries. We distinguished three facets of modernization—foundational aims (e.g., trust, economic development), welfare aims (e.g., poverty eradication, education), and inclusive aims (e.g., openness, gender equality)—and incorporated them into a folk meta-theory of modernization. In all nine countries, the three facets of modernization were preferred more than conventional aims (e.g., military, demographic growth). We propose a method of implementing our findings into a culturally sensitive modernization index.

Keywords: cultural sensitivity, culture, HDI, modernization, societal development.

Sen (1988) proposed that the purpose of societal development is the “enhancement of living conditions” (p. 11). However, no consensus exists as to which specific pathways of societal development should be pursued. Economic prosperity appeared to be a dominant answer for the second half of the 20th century (Krys et al., 2020, cf. Madrueño & Tezanos, 2018; Park, 2017), but the growing body of research documenting the drawbacks of a purely economic paradigm (Arrow et al., 1995; Balestra, Boarini, & Ruiz, 2018; van den Bergh, 2009) indicates that new paradigms of societal development are arguably needed for the 21st century (Krys et al., 2020; Stiglitz, Sen, & Fitoussi, 2009; van den Bergh, 2009). The

contemporary public debate, however, is far from reaching a consensus on what direction should be taken when developing societies (Stiglitz et al., 2009).

Following the recent proposition of Krys et al. (2020) and older postulates of the social indicators movement (Bauer, 1966; Land & Michalos, 2018; Shek & Wu, 2018), we employ a culturally sensitive paradigm to study the perspectives of lay people on societal development. The culturally sensitive paradigm acknowledges that lay people across cultures may have various ideas on how societal development should progress and that preferred trajectories of societal development may vary across cultures. The purpose of this paper is to explore what is common (universal) and what is culturally different (specific) in folk theories about societal development. This perspective is consistent with the 1960 United Nations General Assembly Resolution declaring that “all peoples have the right to self-determination” and “freely pursue their economic, social and cultural development”. We present findings from an empirical study carried out

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among 2,684 participants across nine countries from five different continents. Our study reveals similar lay beliefs in the general direction of modernization across cultures but variability in lay beliefs in the specific trajectories of modernization across cultures. This paper extends the current discussion on paradigms of societal development and highlights the need for more research on the cultural diversity of preferred developmental pathways.

Towards cultural sensitivity in societal development paradigms

The origins of the culturally sensitive paradigm can be dated back to at least the 1960s. Bauer (1966) laid the groundwork for what is currently known as the social indicators movement (Land & Michalos, 2018), declaring that social development indicators should enable societies to assess whether they are developing with respect to their own values and goals. Similarly, Solomon *et al.* (1980) argued that the “notion of quality of life itself should be defined in various ways from culture to culture” (p. 230). Moreover, among 11 guidelines for future research, Solomon *et al.* proposed to develop studies that “reflect upon their own value frameworks and cultural background; that recognize that other projects and other cultures may have different value systems; that learn from these differences and try to systematize this knowledge” (pp. 231–232). However, in their recent summary of what the social indicators movement managed to achieve and what still needs to be done, Shek and Wu (2018) concluded that:

“Reflection and recognition about cultural differences” is a neglected aspect in the movement. Social indicators researchers have commonly assumed that the indicators are universally valid, and can be used in different cultures. Even though some social indicators researchers recognize cultural differences, the related reflection is not substantial (p. 977).

The current study addresses this gap by using a cross-cultural psychology approach and studying the preferences of lay people for a variety of societal development aims. We also provide practical solutions, proposing and briefly discussing methods of employing the culturally sensitive idea in indexes of societal development.

Perspectives of social sciences on societal development

Societal development has long been an area of study for political scientists and sociologists (Hansen & Postmes, 2013; Howarth *et al.*, 2013). These disciplines investigate

mechanisms of societal change and drivers/consequences of societal development. For instance, one group of political scientists used data from the World Values Survey to examine post-materialistic concerns and values (Inglehart, 1997; Inglehart & Abramson, 1999; Inglehart & Welzel, 2005; Welzel, 2013). Their research showed that post-materialistic concerns are rising, and they proposed a theory of modernization whereby industrialization and post-industrialization tend to lead to greater endorsement of secular values over traditional values and self-expression values over survival values, respectively (Inglehart & Welzel, 2005). While emphasizing the importance of socioeconomic development, they also acknowledge that “societies follow different trajectories even when subject to the same forces of modernization, because specific factors, such as the cultural heritage of a given society, also shape how ... society develops” (Inglehart & Welzel, 2005, p. 21). Indeed, Inglehart and Baker (2000) wrote that “economic development tends to push societies in a common direction, but rather than converging, they seem to move on parallel trajectories shaped by their cultural heritages” (p. 49). They also noted that “what we witness with the development of the global economy is not increasing uniformity, in the form of a universalization of Western culture, but rather the continuation of civilizational diversity through the active reinvention and reincorporation of non-Western civilizational patterns” (Inglehart & Baker, 2000, p. 22). This lends credence to a culturally sensitive approach and is consistent with Weber (1904) and Huntington (1993), who claimed that cultural values are relatively enduring and that values may influence trajectories of societal development.

In psychology, research into how lay people across cultures conceptualize societal development is a relatively novel area. Kashima *et al.* (2009, 2011) described Australians, Chinese, and Japanese people as holding a view of societal change as moving from a traditional communal society where people live in close-knit communities to a modern urban society prevailing with market-based exchange relationships. In this folk theory of social change (FTSC), people believe that societal development changes their society from more moral but less competent to less moral but more competent. FTSC recognizes three components of folk theorizing on societal development: development from a traditional to a modern society (1) is significant (i.e., the change is qualitative and large), (2) is natural (i.e., it is the natural course of societal change), and (3) has a universal direction (i.e., the change from a traditional to a modern society applies to all cultures). At first glance, the assumption of the FTSC that lay people recognize the direction of societal development as culturally universal seems to contradict that suggested by the culturally

sensitive paradigm. However, these two propositions may be complementary: lay people across cultures may want to pursue different and indigenous pathways of development towards what they universally recognize as modernization. Indeed, Kashima et al. (2011) concluded that “particular historical experiences of the past and present are also implicated in future imaginations about society” (p. 710).

In FTSC, Kashima et al. (2011) studied the universalistic set of lay assumptions towards societal change; we target differences in lay theories about societal development and, therefore, study multiple folk theories of societal development. Importantly, Bain et al. (2015) reanalysed the data from Kashima et al. (2011) to find that, although the dominant FTSC pattern was observed universally, it differed significantly in degree; they also identified beliefs about social change that differed across countries, i.e., utopianism versus dystopianism and expansion versus contraction. The study by Bain et al. (2015) supports and strengthens our theoretical claims of both cultural universality and specificity in folk theorizing on societal development.

In another study, Bain (2016) researched how people across cultures conceptualize societal development and found that development/progress is only one of the five possible lay worldviews on societal change. The remaining four worldviews include balance/moderation, golden age/regress, endless cycle, and maintenance. In yet another line of research, Bain et al. (2019) showed that some lay people perceive incompatibilities between the 17 sustainable development goals defined by the United Nations (i.e., achieving environmental sustainability raises tensions with social sustainability, and economic sustainability remains incompatible with environmental and social sustainability). The differences revealed by Bain et al. (2016, 2019) in how lay people think about societal development may be consistent with the culturally sensitive paradigm, as some societies may prioritize different aspects of sustainability or specific worldviews on societal change.

To sum up, differences between our study and the main line of social studies on societal development are as follows:

- 1 FTSC studies lay *perceptions of actual changes* brought by societal development; our study investigated lay *expectations* towards societal development.
- 2 FTSC studies the *universalistic* set of lay assumptions towards societal change; we targeted *specific differences* in lay theories about societal development.
- 3 FTSC, political scientists, and sociologists all acknowledge the importance of the cultural sensitivity approach on the margin of their studies and indicate it as potential future directions; we attempted to address this call.

Cross-cultural societal development

The assumptions underlying the current research into folk theories of societal development were influenced by previous research in cross-cultural psychology, especially Schwartz's (2006) work on values. Similar to how Schwartz mapped values, we assumed that lay people's judgements of development aims could also be mapped. These mappings of societal development aims may serve as graphical illustrations of folk theories of societal development. Second, Schwartz demonstrated that the configuration of values is similar across all cultures; we assumed that certain aspects of the configuration of societal development aims may be shared by people from various cultural backgrounds (e.g., FTSC proposes universal recognition of the direction of development from traditional to modern society). However, following the culturally sensitive paradigm, we assumed that there may also be cross-cultural differences in conceptual frameworks of societal development aims. Third, Schwartz documented that certain qualities (e.g., friendship, intelligence, social order, or exciting life) are universally valued as positive across cultures, but the degree to which they are positively valued varies across cultures. We assumed a similar pattern for societal development aims: various aims may be universally viewed as important to achieve, but the degree of importance may vary across cultures.

What lay people understand and recognize as societal development may not necessarily translate into actual processes of societal development. Nevertheless, lay people are important actors in development processes as development is about the enhancement of their living conditions, and they often have some say in the direction of their society (e.g., through elections). Understanding how lay people conceptualize development may help policy makers and scientists steer societies in a more tailored, indigenously defined, and efficient manner.

The present study

To date, societal development actions have been designed using a top-down approach. Our study draws from psychological science to employ the bottom-up approach to study societal development, exploring what is culturally universal and what is culturally specific in folk theories of societal development. As researchers from various cultural backgrounds, we collaboratively generated a list of 28 developmental aims proposed by philosophers, social scientists, and others. Next, we measured the degree to which people across diversified cultural contexts preferred each developmental aim. In addition, we asked these individuals to rank the three aims that constitute the Human Development Index

(HDI) to further examine how people across cultures may differently prioritize pathways of development. The HDI is one of the most popular alternatives to purely economic measures of societal development, and its construction implicitly assumes that every culture prioritizes each of its constituting aims (i.e., economic prosperity, education, and health/longevity) to the same extent. We tested the validity of this assumption.

Method

Selection of cultures and participants

To study folk theories of societal development in a culturally sensitive way, we aimed to collect data from at least one sample from each large macro-cultural region. Thus, we collected data in Confucian Asia (Japan, Hong Kong), Eastern Europe (Poland), the Middle East (Turkey), Latin America (Brazil), Western Europe (France), Sub-Saharan Africa (Nigeria), Southern Asia (India),¹ and North America (the United States, Canada). The majority of data were collected based on convenience samples of post-secondary students; however, seven teams also complemented their student sample with a general population sample. As a rule of thumb, we aimed to collect data from around 200 participants for each sample. However, we collected fewer in two samples (Hong Kong and Nigeria) and more in six samples. After excluding low-quality data (participants with missing values; failed attention check; nonsense answers in the qualitative part of the questionnaire; no-variance answers; see Supplementary materials S11 for more information), our sample consisted of 2,684 participants (from the 3,323 originally collected), with an average age of 30 years, of which 52% were female (see Supplementary material S1 for detailed demographic information).

Materials and procedure

To begin, we needed a list of developmental aims as experimental stimuli. These developmental aims were required to fulfil the following criteria: (1) easily understood by and potentially important to lay people; (2) comprehensive and included an ideal number of aims (e.g., to avoid participant fatigue); (3) culturally sensitive (e.g., aims, such as harmony or averageness, that are important not only to Western lay people but may also be especially important for lay people in non-Western cultures); and (4) focused on developing societal agency (e.g., economic prosperity, freedom of individuals) and communion in society (e.g., social bonds, cherishing life of families). Along with post-materialistic/modernizing aims, several aims that are regarded as being more

traditional (e.g., strong defence/military forces, demographic growth, religiosity/spirituality) were also included to provide a comprehensive map of potential societal development aims. As a result, 28 developmental aims identified from a variety of disciplines, such as philosophy, sociology, psychology, development studies, and political science (see column 2 in Table 1 for advocates/sources/rationales for each aim), were finalized and presented to participants. Participants were asked to indicate how well each of the aims (e.g., “A good society should develop openness to new people and to new ideas”) described a good society using a rating scale: 1 = “does not describe a good society at all”, 3 = “describes a good society a little”, 5 = “describes a good society moderately”, 7 = “describes a good society very well”, to 9 = describes a good society exactly”. In the instructions, participants were asked about the development of a *good society* instead of the participants’ own society because we assumed general ideals to be more universal, more stable over time, and relatively more immune to the influence of current political and economic fluctuations.

We also explored preferences for the three aims constituting the HDI by asking participants to rank the importance of “economic prosperity”, “health and longevity”, and “good education”². Unlike the abovementioned 28 aims that were studied on a Likert-type scale, for the HDI we were interested in priorities to be able to provide a simple illustration of how preferences differed across cultures. The study was approved by the Committee for Ethics in Scientific Research of the Institute of Psychology of the Polish Academy of Sciences (approval #1/II/2018).

Analysis

To explore folk theories of societal development based on the 28 aims, we followed Schwartz’s (2006) approach with values and used a multidimensional scaling (MDS) procedure as the basic method of analysis (Borg & Groenen, 2005). MDS is typically used to understand the similarities and dissimilarities of individuals’ judgements towards specific objects/concepts. In our study, MDS represents the societal development aims as points in a multidimensional space. The distances between the points reflect the empirical relations among them (i.e., the correlation between their preference ratings). The PROXSCAL command in SPSS version 25 was used to perform the MDS analyses. We used ordinal transformations of proximity and the Euclidean distance as the measure of dissimilarity (by monotonic transformation). The transformation of data was in *z*-scores (Bilsky *et al.*, 2011; Uchida & Kitayama, 2009). To examine the robustness of our findings, we also conducted

Table 1
Development Aims Rated by Participants (Column 1), Advocates/Sources/Rationale for Each Aim (Column 2), and Categorization According to Findings (Column 3)

(1) Development aim	(2) Advocates/sources/rationales	(3) Categorization
Allowing its citizens to reach their full potential	Maslow's need for self-actualisation	Welfare
Balanced life	Important value in many cultures	Foundational
Being stronger than neighbouring countries	Traditional aim of policies before World War II	Conventional
Cherishing life of families	Research on social capital	Foundational
Democracy	Ancient Greece; contemporary ideal in Euro-American cultures	Foundational
Demographic growth (population increase)	Still important aim for several governments.	Conventional
Economic prosperity	Adam Smith's <i>The Wealth of Nations</i> ; pursued by majority of contemporary governments; 60% of people in World Values Survey indicate it as the number one aim (of four options)	Foundational
Environment protection	Greenpeace; anti-global warming movements	Inclusive
Equality	Karl Marx; Thomas Piketty	Inclusive
Equality of men and women	Feminist movements	Inclusive
Facilitating communication between people	Research on social capital	Foundational
Freedom of individuals	John Locke's <i>Second Treatise of Government</i>	Welfare
Good education	One of three sub-dimensions of HDI	Welfare
Happiness	Aristotle; Ed Diener's <i>National Accounts of Well-Being</i> ; traditionally valued among individualistic societies	Inclusive
Harmony	Confucius; traditionally valued among East Asian societies	Inclusive
Healthy and long life	One of three sub-dimensions of HDI	Foundational
Human rights	United Nations: Universal Declaration of Human Rights	Inclusive
Justice	John Rawls' <i>A Theory of Justice</i>	Welfare
Averageness ^a	Important Japanese value of being humble, ordinary, and quiescent	Unspecified ^a
Libertarianism ^b	Political libertarian philosophers (e.g., Robert Nozick)	Unspecified ^b
Openness to new people and new ideas	Karl Popper's <i>The Open Society and Its Enemies</i>	Inclusive
Poverty eradication	Aim of many intergovernmental bodies (e.g., United Nations)	Welfare
Religiosity/spirituality	Saint Augustin; Quran; Bible	Conventional
Safety	John Locke; Maslow's basic need of safety	Foundational
Societal trust	Research on social capital	Foundational
Strengthening social bonds	Research on social capital	Foundational
Strong defence/military forces	Militarism/neoconservative movements	Conventional
Upholding traditions	Edmund Burke	Conventional

^aWe use the term "averageness" in this table and in subsequent figures to be succinct; however, in the questionnaire, we administered the following item to participants: "meeting good enough standards in each direction, although being the best is not necessary". Averageness is a concept popular in Japanese culture. However, teams in other countries signalled that this concept raised problems with participants. Moreover, averageness was located between conventional and modernizing aims in our mapping (see Figure 1a). Therefore, we labelled it as unspecified and did not analyse it further in this article.

^bWe use the term "libertarianism" in this table and in subsequent figures to be succinct; however, in the questionnaire, we administered the following item to participants: "minimal governmental interference in social life and the economy". Because libertarianism was also located between conventional and modernizing aims in our mapping (see Figure 1a), we labelled it as unspecified and did not analyse it further in this article.

Abbreviations: HDI, Human Development Index.

exploratory factor analysis (EFA). We briefly discuss the EFA results, but we focus on the MDS results in this article for simplicity (for more detailed reasons behind this decision, please see supplementary materials S9).

Lastly, to analyse preferences towards the three components of the HDI, we compared the percentage of individuals in each country who selected "economic prosperity", "health and longevity", or "good education"

as the most important, and used the chi-squared test to formally test whether distributions of preferences differed across societies.

Results

MDS findings

Number of dimensions. The MDS procedure allows for 2, 3, 4, ... $n-1$ (n = number of analysed phenomena) dimension solutions (2D, 3D, 4D, etc.). Each additional dimension tends to improve goodness-of-fit indices, but fewer dimensions in a solution facilitates the interpretability of results. We adopted the rule of thumb cut-off points suggested by Kruskal and Wish (1987) for interpreting normalized raw stress indexes: 0.20 = poor, 0.10 = fair, 0.05 = good, 0.025 excellent, and 0 = perfect. In our data, we found that 2D solutions had fair to good goodness of fit: the normalized raw stress indexes ranged from .027 to .071 across countries. The 2D solution also provided a dispersion accounted for (DAF) ranging from .93 to .97 and Tucker's congruence coefficients (TCCs) ranging from .96 to .99.³

When compared with the 2D solution, the 3D and 4D solutions revealed new dimensions and possessed better goodness-of-fit indices (see Table S2 for the exact results for the 2D, 3D, and 4D solutions for each country). For the 3D solution, the normalized raw stress indexes ranged from .014 to .031, the DAFs ranged from .97 to .99, and the TCCs ranged from .98 to .99 across

countries. For the 4D solution, the normalized raw stress indexes ranged from .007 to .015, the DAFs ranged from .98 to .99, and the TCCs ranged between .99 and 1.00 across countries.

However, the 3D and 4D solutions did not substantially alter the results for the first two dimensions. For each country, the correlations between the primary dimension from the 2D, 3D, and 4D solutions were all above .87. The correlations between the secondary dimensions from the 2D, 3D, and 4D solutions were above .85 in every country except Brazil ($r_s > .68$) and Japan ($r_s > .28$; see Supplementary materials S3 for all country-specific results). Thus, irrespective of the number of dimensions used in the MDS procedure (2D, 3D, or 4D), each approach resulted in a very similar pattern within the first dimension and (with the exception of Japan) a similar pattern within the second dimension. For this reason, we focused our results and interpretation on the 2D solution.

Mapping developmental aims. Figure 1a presents the map of all 28 aims for the overall sample (ignoring country of origin). The vertical axis represents the primary dimension, and the horizontal axis represents the secondary dimension. The two dimensions are orthogonal in the overall sample and in each country.

To aid interpretation of Figure 1a, and to foster understanding of what is culturally specific and what may be universal in folk theories of societal development, we investigated how the dimensions (i.e., the axes in

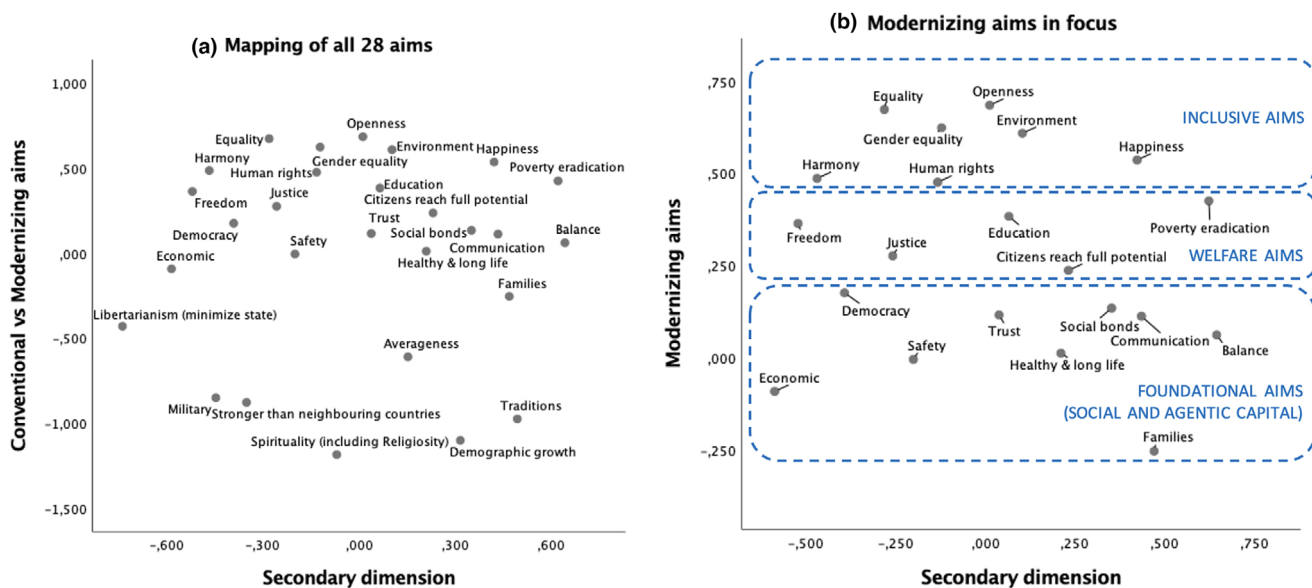


Figure 1 (a) Mapping of all 28 societal development aims for the whole sample. (b) Mapping of just the modernizing aims (i.e., the upper part of Figure a) with our three proposed layers (i.e., foundational, welfare, and inclusive).

Figure 1a) were correlated across countries. Figure 2 displays how the primary MDS dimension was correlated between countries and how the secondary MDS dimension was correlated between countries.⁴ We found that the average between-country correlation for the primary dimension was .77 and the average between-country correlation for the secondary dimension was .23. A paired samples *t*-test (comparing the correlation coefficients for primary dimension with correlation coefficients for secondary dimension) revealed that these two average between-country correlations were significantly different: $t(35) = 11.82, p < .001$.

These findings suggest that the horizontal axis in Figure 1a represents a dimension that is not universal across cultures. In other words, the secondary dimension is culturally variant (e.g., inconsistently recognized across cultures). Because the horizontal distribution of aims in Figure 1a has little in common across cultures, it should not be interpreted further. However, the relative universality of the primary dimension represented by the vertical axis in Figure 1a deserves interpretation.

Primary MDS dimension. Conventional versus modernizing. One can gain a better understanding of what the primary dimension represents by comparing the societal development aims at its lower versus upper poles. The lower part of Figure 1a displays aims that can be considered and labelled *conventional* aims: upholding traditions, being stronger than neighbouring countries, strong military/defence forces, demographic growth, and religiousness/spirituality. Conversely, the upper part of Figure 1a displays societal development aims that can be considered and labelled as *modernizing* aims. The apparent cross-cultural universality of this

dimension suggests that people across cultures universally recognize what constitutes modernization (vs. conventional/non-modernizing aims of development).

Three layers of modernizing aims. To obtain an even more detailed understanding of lay conceptualizations of modernization, we plotted in Figure 1b just the modernizing aims identified in the upper part of Figure 1a. Based on the vertical distribution of the modernizing aims in Figure 1b, we distinguished three categories/layers of modernizing aims. The first layer in the lower part of Figure 1b contains what we call *foundations for modernization*. This layer includes aims for fostering social capital (e.g., communication between people, trust, cherishing life of families,⁵ social bonds) and agentic capital (e.g., economic prosperity, democracy, healthy and long life). The second layer in the middle part of Figure 1b contains what we call *welfare aims* (e.g., poverty eradication, education, citizens reaching their full potential, freedom). Finally, the third layer in the upper part of Figure 1b contains what we call *inclusive aims* (e.g., gender equality, human rights, openness to new ideas and people, equality). See column 3 in Table 1 for which categories each of the aims fell into.

Primary MDS dimension: Analysis of preferences

Mappings of concepts do not inform about preferences for concepts. To address this gap, we next calculated preferences for each type of development separately—inclusive, welfare, foundational, conventional—by computing means of aims within each type of development

	GENERAL	USA	CANADA	FRANCE	POLAND	BRAZIL	TURKEY	JAPAN	HONG KONG	NIGERIA
PRIMARY DIMENSION: CONVENTIONAL VS MODERNIZING AIMS (UPPER RIGHT HALF OF TABLE - ABOVE DIAGONAL)										
GENERAL		0,96	0,95	0,90	0,90	0,89	0,90	0,81	0,77	0,76
USA	0,68		0,97	0,86	0,87	0,92	0,83	0,79	0,67	0,80
CANADA	0,79	0,82		0,85	0,82	0,91	0,81	0,74	0,67	0,82
FRANCE	0,03	0,37	0,21		0,83	0,87	0,70	0,77	0,62	0,68
POLAND	0,03	0,26	0,22	-0,09		0,86	0,87	0,82	0,72	0,58
BRAZIL	0,06	0,60	0,35	0,64	0,23		0,78	0,87	0,61	0,74
TURKEY	0,65	0,28	0,50	0,19	-0,09	0,04		0,74	0,81	0,64
JAPAN	0,30	0,25	0,40	0,02	0,59	-0,10	0,12		0,58	0,68
HONG KONG	0,45	0,28	0,30	-0,29	-0,18	-0,08	0,36	-0,25		0,50
NIGERIA	0,51	0,41	0,54	-0,06	0,56	-0,02	0,27	0,59	0,20	
SECONDARY DIMENSION: PATHWAYS OF DEVELOPMENT (LOWER LEFT HALF OF TABLE - BELOW DIAGONAL)										

Figure 2 Between-country correlations for primary (above diagonal) and secondary (below diagonal) dimensions. “General” includes all participants (ignoring country of origin). Colours mark the strength of the correlation: greener for stronger correlations, redder for weaker correlations. Example interpretation: correlation of multidimensional scaling parameters for Japan and Brazil is .87 for the primary dimension, and -.10 for the secondary dimension.

(reliabilities for general sample: $\alpha_{\text{inclusive}} = .88$; $\alpha_{\text{welfare}} = .80$; $\alpha_{\text{foundational}} = .88$; $\alpha_{\text{conventional}} = .78$; within-countries $.70 < \alpha_s < .91$ apart from $\alpha_{\text{welfare Turkey}} = .64$ and $\alpha_{\text{welfare France}} = .69$; for detailed reliabilities, please see supplementary online material S6). To formally test whether preferences for these four types of development differed across countries, we conducted a mixed-design analysis of variance: country served as the between-subjects factor, and the type of development served as within-subjects factors.

This analysis revealed a significant effect of type of development, $F(3, 2,675) = 2398.90$, $p < .001$, $\eta_p^2 = .473$. We therefore compared the preferences for each type of development separately for the whole sample. This analysis indicated that the highest preference was for welfare aims ($M = 7.72$, $SD = 1.25$), followed by inclusive aims ($M = 7.63$, $SD = 1.31$), and foundational aims ($M = 7.46$, $SD = 1.24$), and far behind were conventional aims ($M = 5.19$, $SD = 1.78$). Pairwise comparisons showed that all differences between all types of development were significantly different (with $t_s > 6.30$, and $p_s < .001$). We also found that the conventional aims were over 1.50 standard deviations behind any of the modernizing aims; in social sciences, this gap is considered very large (Cohen, 1992). This finding lends strong support to contrasting the bottom layer from the three upper three layers; conventional aims seem to be qualitatively different from modernizing aims.

Next, we tested for the main effect of country and found a significant effect on preferences: $F(8, 2,675) = 139.66$, $p < .001$, $\eta_p^2 = .295$. This effect can be interpreted in several ways. For example, people across countries may have different preferences for development in general (e.g., as compared with balance or maintenance; see Bain, 2016), or people across countries may have different response styles (He & van de Vijver, 2015). Analysis of these interpretations reaches beyond our interest in the current article, so we do not further discuss this main effect. Importantly, we also found a significant interaction effect between type of development and country: $F(24, 2,675) = 31.76$, $p < .001$, $\eta_p^2 = .087$. This interaction effect indicates that preferences for types of development differ across countries. To analyse this finding, we calculated preferences for each type of development for each country separately. Pairwise comparisons within each country separately demonstrated that, similar to the main effect of type of development, each modernizing type of development was preferred over conventional development in each analysed country (all $t_s > 9.96$, $p_s < .001$). Figure 3 illustrates a variety of preferences towards modernizing aims (see also supplementary material S7).

Apart from the general differences in preferences for modernization above conventional aims, in several cases

we found a pattern of preferences that differed from the one for the general sample. In particular, in France and Turkey, inclusive aims were preferred over welfare aims ($t_s > 2.92$, $p_s < .004$). This difference did not reach statistical significance ($t_s < 1.15$, $p_s > .25$) in Canada and Hong Kong and reached only the level of statistical tendency in the United States ($t = 1.76$, $p = .080$). Similarly, unlike in the general sample, we found higher preferences for foundational aims over inclusive aims in both Poland and Brazil ($t_s > 2.86$, $p_s < .005$) and no difference in Japan and Nigeria ($t_s < 1.03$, $p_s > .30$). Together, these findings indicate that the pattern of preferences for specific modernization aims diversified somewhat across countries.

Secondary MDS dimension: Cultural diversity of development pathways

Unlike the primary dimension, which was relatively similar across cultures, we found minor between-country similarities in how the secondary dimensions were construed (see Figure 2; the average correlation for the secondary dimension was $r = .23$). With the exception of the high correlation for Canada and the United States ($r = .82$; i.e., the two countries of very similar historical backgrounds and cultures, at least relative to other cultures), other similarities remained small to medium. Further elucidation of this finding would require each country to be analysed separately, but this is beyond the scope of this article (configuration of aims in each country can become a subject of a separate detailed analysis; mappings for each country are provided in Supplementary online materials S5 [accompanied by raw scores as S4], and we encourage readers to search for their own country-specific explanations [and maybe prepare a paper on this topic]). Figure 1 shows that the dimensions that are on the horizontal axis of Figure 1 tend to differ according to country. We interpret this as showing that, across cultures, people conceptualize pathways of societal development in substantially different ways.

Findings from EFA. Additional analyses showed that the first two factors emerging in EFA replicated the primary dimension from the MDS. That is, the first EFA factor aggregates all aims that we labelled as modernizing, and the second factor aggregates all aims that we labelled as conventional (please see Supplementary material S10 for the graphic illustration of two EFA factors and for their comparison with Figure 1). The two factors emerging in EFA were strongly negatively correlated ($r = -.88$, $p < .001$ for the general sample; with the exception of Japan [$r = -.46$, $p = .014$], country's r_s ranged from $-.91$ to $-.67$ with all $p_s < .001$), thus, they

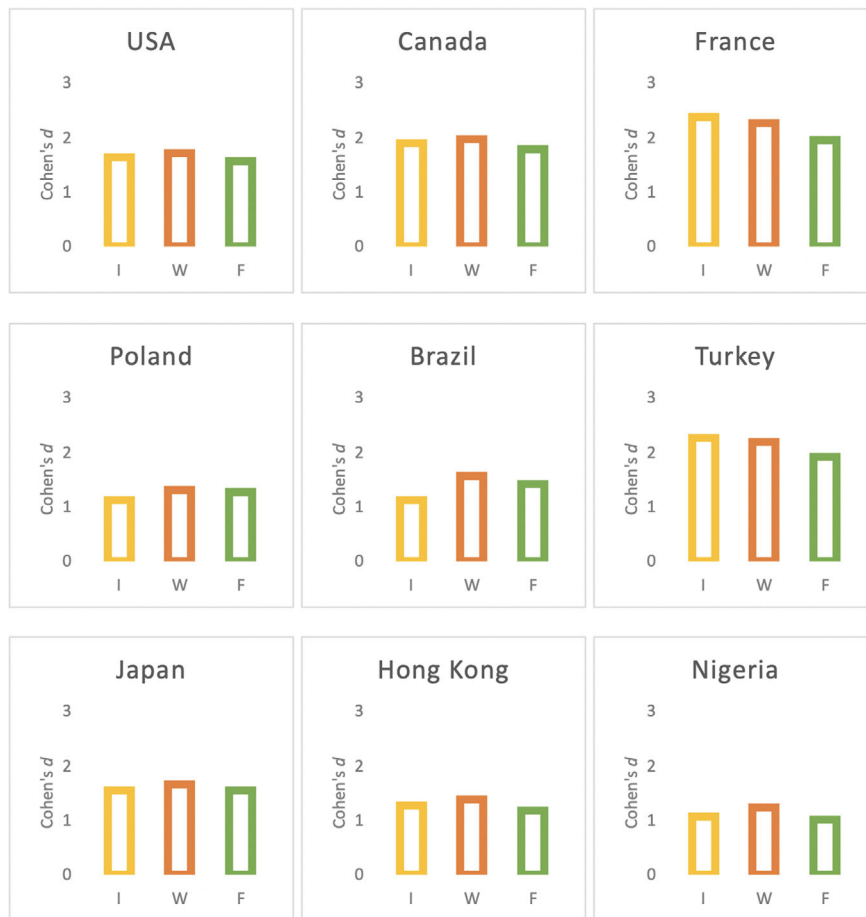


Figure 3 Relative preference (reflected in Cohen's d) for modernizing aims over conventional aims (zero on vertical scale is the preference for conventional aims). I, inclusive aims; W, welfare aims; F, foundational aims.

actually formed one dimension of conventional–modernizing aims. The fact that the third and further EFA factors had little in common between countries lends additional support to our thesis that configurations of development aims (i.e., pathways of development) vary across cultures. In supporting analyses (EFA), we found three factors in the general sample and four to six factors in the country samples (for details, see supplementary materials S10). The third and further factors emerging in the EFA were either single- or two-item factors or were not reliable (e.g., Cronbach's $\alpha = .34$ for the third factor in the general sample). As such, we do not analyse them further in this article.

Analysis of preferences towards HDI aims: Additional argument for cultural diversity of development pathways. Analysis of preferences for the three aims constituting HDI revealed that, although in general these three aims were prioritized to a similar extent (economic aim by 30%, education by 32%, and longevity by 37% of all participants), the level of their endorsement

varied significantly across countries ($\chi^2 [16, N = 2,636] = 620.3, p < .001$): prioritising economic prosperity varied from 9% in France to 60% in Nigeria, prioritising good education varied from 11% in Turkey to 73% in Brazil, and prioritising health and longevity varied from 13% in Brazil to 56% in Turkey. Figure 4 provides an illustration of these findings for each aim across samples. This finding provides additional and strong support for our reasoning that preferences for specific pathways of development differ across cultures.

Discussion

Probably the most frequently expressed doubt about the culturally sensitive paradigm is that if lay people were allowed to co-decide on how to develop societies, modernization would stall. Here, we dispel these doubts by documenting that lay people prefer modernization over conventional aims *universally* (i.e., across all nine studied cultures) and *strongly* (i.e., difference reached from >1 to >2 standard deviations). We also found that distinguishing

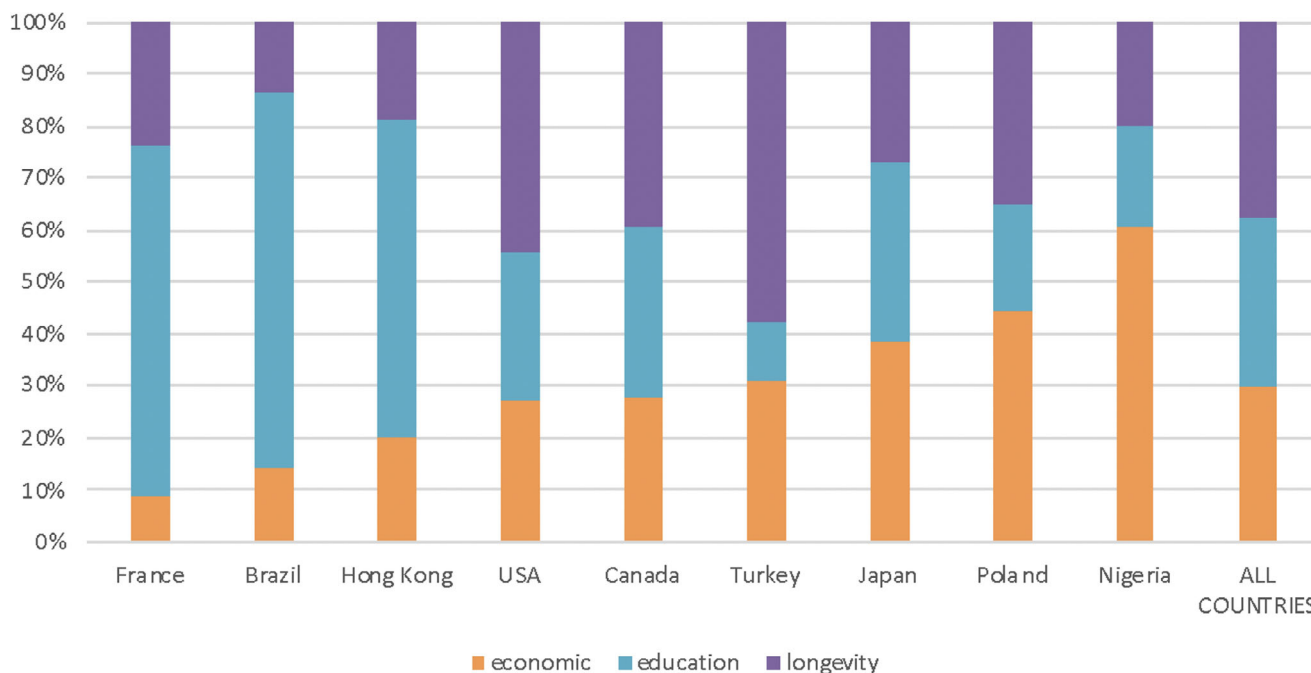


Figure 4 Prioritization of three aims constituting the Human Development Index: economic prosperity, good education, and health and longevity.

between conventional and modernizing aims was the primary characteristic of societal development in each of the nine analysed countries. Thus, modernization seems to be the key and the most expected category in folk theories of societal development, and letting people co-decide on its pathways would not stall it. With this finding acknowledged, we propose to channel future culturally sensitive discussion on studying differences in expectations towards modernization across cultures.

We demonstrated differences in peoples' expectations about modernization in three ways. First, we found that the secondary dimension on which folk theories of societal development are organized had little in common across cultures (see Figure 2). Specifically, in some cases, we found no similarity at all for secondary dimensions (e.g., Brazil and Nigeria, Japan and France); on the other hand, we found high similarity for Canada and the United States. The latter may lend strong support to our reasoning that folk theories of societal development are inherently "cultural". Canada and the United States—however different—remain historically and culturally very similar to each other, so our finding that their mapping of developmental aims overlaps on both dimensions suggests the "cultural" nature of folk theories of societal development.

Second, we found a range of preferences for three layers of modernization across countries (see Figure 1 for layers). In general, people prioritized welfare aims (e.g.,

poverty eradication, education) over inclusive aims (e.g., openness to new people and ideas, gender equality, human rights), and inclusive aims over foundational aims (e.g., trust, safety, economic development), but the pattern of preferences varied across cultures.

Third, by asking participants to indicate their priority from among three aims constituting the HDI—economic prosperity, education, and longevity—we demonstrated substantial between-country variability in these aim prioritizations (see Figure 4). The HDI is one of the most popular alternatives to purely economic measures of societal development, and its construction implicitly assumes that people across cultures endorse its three constituting aims to an equal extent. Our study contests this assumption.

Implications for Societal Development Measures

People differ. Cultural diversity may need to be reflected in how the development of societies is conceptualized and studied. Until now, societal development actions have been designed using the top-down approach, i.e., solutions were elaborated by experts in the societal development field, with a one-size-fits-all approach. Our study employed the bottom-up approach (i.e., we studied lay people's conceptualizations of societal development) and the culturally sensitive paradigm, which may be

novel and complementary to the top-down approach to understanding societal development processes.

Future comprehensive studies may provide an opportunity to calculate indexes of development in a more culturally sensitive way. For example, it is possible that the three proposed types of modernization—foundational aims, welfare aims, and inclusive aims—could help establish the Culturally Sensitive Modernization Index (CSMI). Following Kryś et al.'s (2020) proposition, the CSMI could be calculated as follows:

$$CSMI = (I_{\text{foundation}}^{W_{\text{foundation}}} \times I_{\text{welfare}}^{W_{\text{welfare}}} \times I_{\text{inclusive}}^{W_{\text{inclusive}}})^{1/(W_{\text{foundation}} + W_{\text{welfare}} + W_{\text{inclusive}})}$$

where $I_{\text{subscript}}$ stands for the sub-index for a given type of modernization (i.e., some objective measure of development on a given set of aims) and $W_{\text{subscript}}$ stands for the weight of a given dimension that could be drawn from studies like the herein described. As a result, the CSMI would be calculated on the set of objective measures for each type of modernization, and—at the same time—weighing three sub-indexes according to peoples' preferences would place relatively more significance on a dimension that a given society aspires to attain.

Currently, popular societal development measures can also become culturally sensitive (Yin et al., 2021). For example, the HDI is universally calculated as a geometric mean of three sub-indexes: economic prosperity, longevity, and education. Our findings (see Figure 4) indicate that societies prioritize each of these three qualities to a different extent. Thus, following the formula proposed by Kryś et al. (2020, p. 311), a culturally sensitive HDI could be calculated:

$$CS\text{-HDI} = (I_{\text{health}}^{W_{\text{health}}} \times I_{\text{education}}^{W_{\text{education}}} \times I_{\text{economics}}^{W_{\text{economics}}})^{1/(W_{\text{health}} + W_{\text{education}} + W_{\text{economics}})}$$

To enable calculations of culturally sensitive measures such as the CS-HDI or CSMI,⁶ future studies on a large number of countries and collecting data from possibly representative samples are needed. Ideally, aims of societal development could be incorporated into the World Values Survey or Gallup research; international institutions such as the World Bank or the United Nations could also incorporate measures of preferred directions of development in their statistical missions. With this article, we call for this action. Further research investigating how cultures differ in term of preferences for development pathways will facilitate the design of metrics that will be complementary to economic measures of modernization. These new measures will guide

societies beyond the basics of modernization (i.e., economic prosperity) in a more culturally sensitive way.

Implications for Public Debate on Societal Development

Our findings carry important implications for the public debate on the future of world development. Instead of searching for one universal pathway of modernization that will be effective for all countries, actors in the pub-

lic debate may start to explicitly affirm that preferred development pathways could differ between countries. The culturally sensitive paradigm is particularly important for the richest societies that—thanks to economic prosperity—have already secured resources and fulfilled the basic needs of their citizens and now seem to search for a compass for further development (Stiglitz et al., 2009). Each post-economic society may discuss and formulate its own pathway of further modernization (Kryś et al., 2020, 2018). The culturally sensitive idea may also help poorer societies formulate their own indigenous pathway of development (Badaan & Chouair, 2022; Rappleye et al., 2020). Although the emphasis on creating a basis for modernization may still be high in less affluent societies (i.e., accumulating resources via economic development can still be a priority; see Nigeria on Figure 4), other aims may be harmonized with economic way in an indigenously defined way.

Outcoming Folk Meta-Theory of Modernization?

The patterns in our results can trigger various post-hoc interpretations of how lay people organize their beliefs on societal development. Here, we propose one possible meta-theory orchestrating lay beliefs. Lay people may perceive modernization as a three-stage process with different purposes at each stage: From securing resources (foundational aims), through distributing resources to a possibly broad range of citizens (welfare aims), up to “patching the holes” in social fabric (inclusive aims). Each society may advance via its own indigenously defined trajectory in this process.

The purpose of the first stage of modernization is to establish processes that secure accumulation of resources. Two pillars seem to be important at this stage: creating agentic capital (e.g., economic growth shall secure material resources, democracy shall help solve power conflicts) and maintaining or establishing social capital (e.g., social bonds and trust are prerequisites for more advanced types of modernization). After foundational aims are established, the purpose of the second stage of societal development is providing welfare to the majority of citizens: education, eradication of poverty, and justice are example aims at the second stage of modernisation. At the second stage, processes that distribute welfare among broad groups of citizens are set up, but perfectly efficient distribution of resources may be difficult, with some groups remaining disadvantaged and some higher motives remaining to be satisfied. Therefore, the purpose of the third stage of modernization is to “patch the holes” in the social fabric. The well-being of disadvantaged groups (example aims: gender equality, human rights, openness to new ideas and people) and the satisfaction of “higher societal needs” (example aims: happiness, harmony, environment) become more salient as societal development aims. Please see Table 2 for the summary of the meta-theory.

Kashima *et al.*'s FTSC studied lay perceptions of what development processes are *actually* changing (even if based on people's expectations/predictions towards

future). In our current study, we investigated *expectations* of societal development. According to FTSC, people believe that development changes their societies from a more moral but less competent to a less moral but more competent society. Conversely, in our study, people expected that higher stages of modernization would bring moral foundations (back?) to societies. Whereas the first stage of modernization—accumulation of resources—can be regarded as predominantly agency encompassed (i.e., building the power of society), the two later stages—distribution of resources and “patching holes” in social fabric—seem to be morality encompassed.

The universality of three stages does not stand in contradiction with the culturally sensitive paradigm. Each culture may have its own indigenous set of priorities for each stage. For instance, individualistic cultures may foster foundational aims through agentic capital, and collectivistic societies may foster foundational aims through communal capital.

Limitations

List of aims

We based our mappings on a set of 28 aims selected in a way that may be called subjective. We acknowledge that the analysed list is probably not comprehensive and

Table 2
Proposed Folk Meta-Theory of Modernization

Stage of modernization (counting from conventional aims)	First Stage	Second Stage	Third Stage
Meta-process	Securing resources	Distribution of resources	“Patching the holes” in the modern social fabric
Purpose	Establishing processes that secure accumulation of social and agentic capitals	Possibly efficient distribution of accumulated resources among possibly large number of citizens	Fostering well-being of previously disadvantaged groups; satisfaction of “higher” (previously less emphasized) needs
Group of aims (see Figure 1)	Foundational aims	Welfare aims	Inclusive aims
Example aims	Agentic capitals: <i>economic, democracy</i> Social capitals: <i>social bonds, trust, communication</i>	<i>Education, eradication of poverty, justice, citizens reach full potential</i>	Social inclusion of disadvantaged groups: <i>gender equality, human rights, openness to new people and ideas</i> Satisfaction of “higher” needs: <i>happiness, environment</i>
Compass: agentic vs. moral	Agentic: resources build societal power/agency	Moral: resources are shared communally	Moral: community stimulates inclusion of disadvantaged
Endorsement (as of 2019, across nine studied countries)	Third priority	First priority	Second priority

should be improved in future studies. Another problem is that the aims we studied were categories that may be regarded as both means and aims of development. For example, economic development may foster better education and increase longevity. However, it may be difficult to propose a list of perfectly exclusive aims that will not partly overlap with each other and that will not confound means and aims of development; for instance, economic prosperity, and education and longevity are all three treated as aims in the HDI.

Explorative approach and *post-hoc* theorizing

The labels of types of modernization are the effect of *post-hoc* reasoning. Alternative interpretations and other propositions on how to label and group modernization aims are possible. We encourage readers to do so. Also, the interpretation of findings into folk meta-theory of modernization needs to be done with caution; it is one of many possible interpretations and is speculative in nature. We decided that it is better to take the first step into the topic in an explorative way, and in this way build foundations for further studies, than to abandon a topic that we find socially important.

Methods

We adopted a 2D solution in the MDS analyses, although other solutions (i.e., 3D and 4D) might also provide insightful results. Yet, as discussed previously, the 2D solution analysed in this paper overlapped with two primary dimensions in 3D and 4D solutions (see correlation coefficients presented in supplementary material S3), therefore the conclusions we propose would remain substantially the same no matter how many dimensional solutions we focus on. Another methodological limitation is the lack of statistical equivalence for our measures of endorsement for conventional and modernizing aims (e.g., Figure 3); we created them based on MDS (and not EFA). Achieving equivalence in studies in nine countries in different macro-cultural regions is difficult. Welzel et al. (2021), recently argued that non-invariance is “an overstated problem with misconceived causes”. Thus, conclusions from our cross-cultural comparisons of endorsements need to be drawn with caution; our intention is to illustrate the diversity of preferences without proposing strong conclusions about the nature of this diversity. It is also worth mentioning that we sampled a limited number of countries; future studies should further expand the samples by including more countries to increase the generalisability of the findings.

Abandoning traditions?

It is also important to clarify that our findings should not be taken to mean that, to foster modernization, traditions should be abandoned, for instance. Similar to Schwartz values that are universally endorsed but to various degrees, we document that the lay people perceived all the development aims studied here as somewhat important, with some aims being judged as of key importance (i.e., welfare aims) and others being moderately important (conventional aims, to which upholding traditions belongs).

Future Direction: Explanations

The current article *described* that folk theories of societal development differ across cultures. Future studies are needed to *explain* these differences. Drawing a general picture requires more than nine countries.⁷ Future studies should identify what shapes preferences for given configurations of development aims. For instance, Koh and Leung (2019) documented that the desired progress depends on the current creativity. Studies on collective futures (Bain et al., 2013) may be another promising avenue in searching for comprehensive explanations for how lay people conceptualize societal development. In addition, according to previous studies, societies are becoming less warm and less benevolent (Kashima et al., 2011), with more societal dysfunction (Bain et al., 2013), and full of struggle (e.g., long hours of stressful and hard work; Koh & Leung, 2019). Future studies may research not only how societal development should look but also people’s fears related to development.

Studies are needed to determine how folk theories about societal development overlap with psychological phenomena. For instance, values (Schwartz, 2006) seem to be a promising variable shaping folk theories on societal development. Values are the central feature of culture and serve individuals as a general compass across a variety of contexts. Societal development aims are a specialized tool guiding a narrow set of judgements on how to enhance living conditions in a society. It seems plausible that Schwartz’s values model, which contrasts conservation with self-transcendence, could help improve understanding of the relative endorsement of the conventional versus modernizing aims in our models. Schwartz’s conservation values emphasize safety and tradition, similar to the aims we identified as conventional; self-transcendence highlights tolerance and protection for the welfare of all people and for nature, which resonates with modernizing aims (Schwartz & Cieciuch, 2021; Skimina et al., 2021).

Concluding Remarks

Contemporary societies are shaped by different histories, institutions, norms, and values. However, until now, conceptualizations of societal development were mostly based on culturally universal paradigms (Kryś *et al.*, 2020; Shek & Wu, 2018). In this article, we took a small step into documenting the cultural diversity of preferred societal development pathways. New pathways of development are discussed not only by scientists and politicians but also by lay people. In this study, we assumed that lay people are one of the key actors of the new development paradigm formulation and thus studied folk theories of societal development.

We document that what links folk theories of societal development across nine very different countries is broad agreement towards the general direction of modernization. At the same time, we document the cultural variability of developmental trajectories. Importantly, we found that people across all cultures substantially prefer modernization over conventional development aims. This finding attenuates the potential criticism towards the culturally sensitive paradigm that “if we let people decide on the development pathways, we may halt the modernization efforts”. We will not. Instead, by listening to people’s voices on modernization, we can fine-tune policy-making and reinvigorate the development processes; ultimately, these processes are about enhancing people’s living conditions. We hope this study will encourage further research on development that will be carried out with less of a one-size-fits-all approach and with more sensitivity to cultural diversity.

Conflict of Interest

None.

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Author Contributions

Conceptualization: KK, CAC, YU, KC. Investigation: all authors. Analyses: KK, CT (MDS). Writing: KK, CAC, BWH, VWLY.

Data Availability Statement

The data that support the findings of this study are available as supplementary online material.

Research Materials Statement

The description of research materials from this study is available in the supplementary online material.

Pre-Registration Statement

The study was not pre-registered.

Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher’s website.

End notes

- 1 The Indian sample was excluded from analyses reported in this paper because of data quality issues (i.e., over two-thirds of entries were classified as unreliable). Regardless, the inclusion of data from the Indian sample did not substantially change the interpretation of results.
- 2 The beginning of the questionnaire contained open-ended questions that asked participants to list what they and others in their society think would make their society better. These questions were included to understand preferences for societal development from a more emic/qualitative perspective and to potentially improve our list of societal development aims for subsequent studies. Several other scales were administered in the questionnaire (see Supplementary materials S8). These additional scales reach beyond the focus of this article and are not discussed further.
- 3 Because the MDS is an absolute metric model (i.e., the Euclidean distances obtained from the calculated space of representation correspond as closely as possible to the distances observed in the original dissimilarity matrix), there is no *p*-value associated with the tests (Shye *et al.*, 1994). The goodness-of-fit indexes indicated that the mapping adequately represented the covariance matrix underlying it.
- 4 The 2D MDS analyses produced 10 matrixes (nine countries plus one general sample) of 2 (dimensions) \times 28 (aims) parameters. We correlated parameters for the first dimensions for 10 matrixes, and separately parameters for the second dimension for 10 matrixes.
- 5 One may wonder why “cherishing life of families” popped up among modernizing aims instead of conventional aims. We argue that, no matter how much populists abuse the argument of “protecting family life” to disrupt emancipation, family life may be and is an important ingredient of social capital. Although many modern societies have zero population growth, a weak or non-existent army, or low levels of religiosity (three conventional aims), none of the modern societies neglects the importance of family life (see also Kryś *et al.*, 2021).
- 6 We propose example formulas. Alternative approaches are possible. Discussion on the best mathematical formula for culturally sensitive indexes is needed but reaches beyond the scope of this article.
- 7 One can consider drawing a detailed picture for each country; we provide mappings and raw scores for each country as Supplementary material S4 and S5 and encourage readers to propose their own interpretations. We believe that detailed analysis of each country’s mapping may require deeper insight into social processes

occurring in a given country and may be a subject of further papers focused on each country separately. This article's focus is on documenting that people across cultures differ in their expectations towards modernization.

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