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Citation

LIU, James H., ZHANG, Robert Jiqi, LEUNG, Angela K. Y., GIL DE ZÚÑIGA, Homero, GASTARDO-CONAC, Cecilia, VASIUTYNSKYI, Vadym, & KUS-HARBORD, Larissa.(2020). Empirical correlates of cosmopolitan orientation: Etiology and functions in a worldwide representative sample. *Political Psychology*, , 1-18.
Available at: https://ink.library.smu.edu.sg/soass_research/3184

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Empirical Correlates of Cosmopolitan Orientation: Etiology and Functions in a Worldwide Representative Sample

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Psychology has begun contributing to social theory by providing empirical measures of actually existing cosmopolitanism that complements more purely theoretical conceptions of the construct common in philosophy and sociology. Drawing from two waves of research on representative adult samples from 19 countries (N = 8740), metric invariance was found for the three factors of cosmopolitan orientation (COS): cultural openness (CO), global prosociality (GP), and respect for cultural diversity (RCD). In terms of etiology, among Wave 1 measures, the personality factor of agreeableness was the best predictor of the cosmopolitan factors of GP and RCD at Wave 2, whereas openness of personality best predicted CO. Wave 1 measures of education, political liberalism, and self-reported social status independently also explained a small amount of variance in COS. Functionally, COS was shown to predict less prejudice against immigrants, and more support for global civil society, even after controlling for social dominance orientation. All three COS factors independently predicted better attitudes towards immigrants. GP was the best predictor of trust in the United Nations, whereas RCD was the best predictor of support for environmental protection. The three-factor model of COS appears well-calibrated for assessing actually existing cosmopolitanism across cultures.

KEY WORDS: cosmopolitanism, political liberalism, cultural diversity, prejudice, globalization

Conceptualizing cosmopolitanism is a major challenge: As the great philosopher Immanuel Kant articulated (see Beck, 2002), it involves being both a citizen of the “cosmos” (the world) and the “polis” (city/locality), two group memberships that can be incompatible (Lundestad, 2004). Focusing on the world, Brock’s (2013) review of the literature argued that cosmopolitanism involves two components, one of identity (being a citizen of the world) and one of responsibility (action). These consist minimally of moral injunctions for “protecting everyone’s basic human rights or ensuring everyone’s capabilities are met to the required threshold” (p. 691), and they maximally require some form of global governance. In tension with this are perspectives that emphasize the enduring impact of local solidarities (“the polis”) based on civilizational and/or communitarian values. These may be rooted in religion (e.g., Muslim women’s preference for the hijab; Fisher Onar & Pakar, 2012), moral values (e.g., conservative Americans’ preferences for purity, ingroup loyalty, and authority; Haidt & Graham, 2007), and/or cultural scripts (e.g., deference to “benevolent authority” in China; Liu & Macdonald, 2016). They must be accounted for to develop a liveable and rooted form of cosmopolitanism (Calhoun, 2003).

After years sitting on the sidelines in debates about globalization (see Chiu, Gries, Torelli, & Cheng, 2011), psychology is now laying foundations for an empiricist approach to cosmopolitanism that may bring fresh insight into investigating and conceptualizing cosmopolitanism as it actually exists. What is cosmopolitanism, and how can this high-minded ideal be translated into a political agenda and research agenda capable of benefitting humanity? The first step forward provided by psychologists is the development of quantitative individual-difference measures. Chen et al. (2016) developed a two-factor model of global orientations grounded in acculturation theory, contrasting a promotion/approach strategy to a prevention/avoidance strategy in dealing with cultural diversity. McFarland, Webb, and Brown’s (2012) measure of Identification With All Humanity contrasts IWAH with national and local identifications, thus allowing situated comparisons of the three. Türken and Rudmin (2013) measured global identity in a completely different way, emphasizing on the one hand positive identification *and* attitudinal items about global community and different cultures, and including in another factor negatively worded items emphasizing nationalism.

While all these measures are highly relevant for the broader issues of globalization and global consciousness (see Liu & Macdonald, 2016), there is only one comprehensive purpose-built scale designed to measure cosmopolitanism, Leung, Koh, and Tam’s (2015) three-factor model; encompassing cultural openness, global prosociality, and respect for cultural diversity. Our aim here is to advance this emerging empirical literature by examining the etiology and functions of Leung et al.’s (2015) cosmopolitan orientation (COS) using representative samples from around the world. Previously published evidence using this measure has been mainly from Singaporean students, whereas any effective measure of cosmopolitanism should apply to populations worldwide.

The COS measure is desirable because it has two factors that map onto qualities of not only cosmopolitanism, but also of a humanistic psychology (Maslow, 1970) that emphasizes mature personhood. Maslow (1971) writes that self-actualizing people are “world citizens, members of the human species first and foremost” (p. 177). Both cosmopolitanism and humanistic psychology emphasize growth of the whole person over time, but cosmopolitan theory embeds (and submerges) the person within a more encompassing theory of institutions and social context than humanistic psychology (which developed largely out of personality theory). Theorizing about the two together connects the macrolevel of cosmopolitan theory with the micro/midlevel of humanistic psychology, through constructs like social status, education, and personality.

Both of these have normative elements, which are difficult to encompass in natural science epistemologies (see Liu, 2011, 2017, for a critique of this), but are essential for approaches theorizing about positive and agentic growth over time. According to Mittelman (1991), in his incisive reinterpretation of Maslow’s classic work, *openness is the most decisive and distinctive quality of self-actualizing individuals*. This emphasis on openness, shared by humanistic psychology and

cosmopolitanism, does not collapse into relativism because it *deeply incorporates concern, care, and empathy for the well-being of others*. Such emphasis on prosociality rooted in “human-heartedness” is what Liu and Macdonald (2016) theorized as being central to global consciousness across multiple and diverse religious and scholarly traditions related to cosmopolitanism.

For the project of cosmopolitanism, drawing from psychological theory and methods can be helpful, because the ambitions of this field span minimalist (i.e., individual-level ethics and morality) to maximalist (i.e., state-level, or global systems of governance) aims (Brock, 2013). To date, far more has been written about maximalist forms of cosmopolitanism *in theory* than about *actually existing* cosmopolitanism based on empirical data. This is a problem, because in the short term, realizing the maximalist ideals of cosmopolitanism at the systems level is too difficult. We need an empirical roadmap on how to get to a better future, because we live in a present where politics is dominated by sovereign “nation”-states, and commerce is driven by profit-oriented corporations (Ritzer, 2011). States would have to surrender political power to global or regional political institutions (that may be more bureaucratic than benevolent or democratic; see Calhoun, 2003), and corporations would have to accept profit reductions to accommodate universal human rights (like a living wage [Carr, Parker, Arrowsmith, & Watters, 2016] or basic income [Standing, 2017]). Thus, the minimalist approach adopted here (and in other emerging perspectives, like Reysen & Katzarska-Miller, 2013) of documenting the individual-level etiology and functions of COS around the globe is timely. We need to know where we are now with actually existing COS and connect this to theories of macro-mid- and micro-level change for the future.

Psychometrically, we need to see that the measure of COS works the same way across various populations around the world (e.g., has structural invariance; Vandenberg & Lance, 2000). Leung et al. (2015) derived their measure of cosmopolitan orientation after an extensive review of the literature and focused on its implications for environmental attitudes. Here, we articulate its implications for global society in a more comprehensive manner. Consistent with previous research on IWAH and related constructs (McFarland et al., 2019), we argue that individual-level cosmopolitanism should benefit humanity by encouraging individuals to cultivate (1) a less prejudicial mindset and (2) a more supportive approach towards many aspects of building a global civil society, including efforts to protect the biosphere. Extending Leung et al.’s (2015) formulation, and in accord with Maslow’s (1970) theory of mature personhood, we propose that (3) COS should be predicted by higher levels of education and social status; furthermore, it should have personality correlates such as openness. COS is predicted to be associated with personality and social statuses as antecedents, and it should function to predict a lack of prejudice towards outgroups and greater support for global institutions that protect human rights and the biosphere. The three factors of COS are detailed as follows:

1. *Cultural openness* orients the self towards valuing and acquiring more experience with other cultures and different kinds of people. This focus of opening up the self towards lifelong learning about and respect for disparate others is central to accounts of cosmopolitanism that focus on personal qualities (e.g., Smith, 2007; see also Leung et al., 2015; Türken & Rudmin, 2013). This openness is not naïve, but according to Nussbaum (1997), “requires a nation of adults, who do not need a childlike dependence on omnipotent parental figures” (p. 11) but rather thrive in political institutions “structured around that mature recognition of equal personhood and humanity” (p. 11). In the Stoic version of cosmopolitanism, “we should ‘enter into the mind’ of the other, as far as is possible and interpret the other’s action with understanding” (Nussbaum, 1997, p. 10). Psychologically, such a position resonates with Mittelman’s (1991) reinterpretation of Maslow’s (1970) self-actualizers as people who are extremely open to information from the world. He writes: “individuals who are very open will respond in a relatively autonomous manner to information (i.e., in a manner that is

not primarily determined by social convention” (Mittelman, 1991, p. 118). This is exactly the type of person we anticipate should be higher on cosmopolitan cultural openness.

2. *Global prosociality* is oriented towards service and helping others, regardless of their cultural background, or the social distance between self and other. This orientation towards helping others, rather than telling them what to do (as in a systems or rule-based approach) is a strength of the psychological approach to cosmopolitanism. This aspect of COS is action oriented and promotion focused: Psychologically, it complements openness with empathy, and a will to do good. The deep core of cosmopolitanism is “the idea of a kingdom of free rational beings equal in humanity, each of them to be treated as an end no matter where in the world he or she dwells” (Nussbaum, 1997, p. 12). Treating people as ends unto themselves (rather than a means to an end), together with a fairer legal system provides the basis for peaceful living (see Cavallar, 2012, summarizing Kant’s contribution to cosmopolitan theory). In Maslow’s humanistic psychology, the self-actualized person can “unite compassion and understanding toward wrongdoers with righteous indignation” (Mittelman, 1991, p. 119) because of their ability to take an integrative stance on difficult problems (Maslow, 1970). Thus, while a cosmopolitan personality is likely to be agreeable, cosmopolitan prosociality is theorized to be the consequence of a moral and ethical foundation towards universal justice for all human beings (Pogge, 1992). There may be a reciprocal relationship, a virtuous circle between natural tendencies (personality) and learned principles (acquiring a system of ethics) that forms a basis for global prosociality.
3. *Respect for cultural diversity*, by contrast, is more prevention focused than global prosociality, as it is oriented towards the preservation of cultural diversity and respect for cultural differences. This aspect of COS is less emphasized in the literature, but it is nevertheless important because it prevents the articulation of discriminatory views against other cultures on rational (or “enlightened”) grounds (see Billig, 1988). While traditional cosmopolitan theory articulates Western notions of human rights as universal and benevolent, this story has been contested by theorists across a spectrum of disciplines in the late 20th and early 21st centuries (Appiah, 2005; Küng, 1997; Liu, 2011; Liu & Macdonald, 2016). Analysis of 154 years of incoming governments’ legislative agendas in New Zealand, for example, show how European enlightenment discourses full of benevolent statements of “universal inclusion” were used hand in hand with military force to conquer, colonize, and assimilate indigenous Māori people who attempted to resist being subjugated by the British empire (Liu & Robinson, 2016). Genuine respect for other cultures acts as a curb on attempts to “help” others in a manner that destroys their cultural lifeways and forces them to become subordinated to an “enlightened” elite. This factor can be read as a more postcolonial take on COS, characterizing a more cautious and less universalistic approach, in contrast to the optimism of earlier, more enlightenment-era-influenced takes on the concept (e.g., Brock, 2013; Cavallar, 2012). Empirical research suggests that all three factors of COS are moderately strongly and positively correlated (Leung et al., 2015).

Etiology and Functions of Cosmopolitan Orientation (COS) Across Cultures

Etiology

Considering the parallels between COS as conceptualized by Leung et al. (2015) and the qualities of mature personhood according to Maslow (1970) and Mittelman (1991), we anticipate that all three COS factors should be correlated with social status and education. According to Maslow’s hierarchy of needs, higher-level qualities like cultural openness and global prosociality can only be realized if lower-level needs, like those for survival and safety, are satisfied. If this logic is carried

across cultures, we might also anticipate that COS should be more prevalent in wealthier, more developed societies compared to less affluent societies.

A limitation of humanistic psychology in the tradition of Maslow (1970) is its difficulty in establishing accurate measurements of core concepts (like self-actualization). Hence, we chose to employ personality traits derived from the Big Five (Costa & McCrea, 1992) instead. The most obvious personality correlate of COS is openness (also labeled intellect), a dimension of personality reflecting a general tendency toward complexity and flexibility in information processing. This includes the ability and motivation to explore the world cognitively, leading to “breadth, depth, and permeability of consciousness” (Costa & McCrea, 1992, p. 826). Logically, all three COS factors should be linked to a general propensity towards open and flexible (nondogmatic) information processing as described by this personality trait (see McFarland et al., 2019 for empirical evidence). Secondly, the personality trait of agreeableness, which connotes trust, sociability, altruism, and tendermindedness (e.g., Costa & McCrea, 1992; Graziano & Eisenberg, 1997), could also be positively related to all three COS factors, especially global prosociality. If being nice to other people is conceived as a personality trait, there is no reason why this should not extend to being nice to people of other cultures or people who are different than oneself. Finally (and least compellingly), COS might be related to extraversion, which connotes gregariousness, assertiveness, and sensation seeking, especially since cultural openness could be driven by novelty and sensation seeking.

Functions

While Leung and colleagues (Leung & Koh, 2018; Leung et al., 2015) focused on the relationship between COS and environmental attitudes and intentions (and we intend to replicate this finding worldwide), the literature on cosmopolitanism and global identification (see McFarland et al., 2019) would lead one to expect that a central function of COS would be to negatively predict group-based prejudice. As Brock (2013) argues, “cosmopolitanism’s force is often best appreciated by considering what it rules out...it rules out positions that attach no moral value to some people or weights the moral value some people have differentially according to their race, ethnicity, or nationality” (p. 690). Similarly, Pogge (1992) writes “the status of ultimate concern attaches to every living human being equally- not merely to some subset” (p. 48). Lack of group-based prejudice is perhaps the defining functional characteristic of a cosmopolitan individual. To demonstrate this, we control for well-established measures of prejudice such as social dominance orientation (Pratto et al., 2013) as well as liberalism-conservatism.

We also expect COS to be associated with support for global institutions such as the United Nations. Pogge (1992) argues that the concentration of power at the level of the state (country) is not morally defensible and, therefore, that power should be distributed across different levels of authority, including the global level represented by the UN. McFarland et al. (2019) found substantial evidence for this in previous research.

Finally, we have some preliminary hypotheses about how COS might operate across cultures (given that our sample of countries is relatively small). First, following the reasoning of Maslow’s (1970) hierarchy of needs, one might expect COS to be higher in countries higher on the human development index (HDI) since in those countries, basic needs are better satisfied, leaving people more able to pursue higher-level needs like cosmopolitanism. Second, given the universal claims for the structure of personality (e.g., Costa & McCrea, 1992), we thought that this antecedent factor should have relatively consistent correlations with COS across cultures. By contrast, research on prejudice towards immigrants (as a prototypical outgroup) seems to be resource and threat triggered (e.g., Araújo et al., in press; Esses, Dovidio, Jackson, & Armstrong, 2001). In terms of country-level effects, people in countries with high levels of human development (HDI) (that are frequently targets

of immigration) tend to regard immigration as more of a threat than countries with lower human development (Quillian, 1995). So, we anticipated that COS should be more influential against prejudice in more developed compared to less developed countries, functioning as an antidote to poorly reasoned societal discourses that problematize “the Other” (see Ettinger & Udris, 2009 for an account of societal framings in one high HDI society, and Araújo et al., in press, for empirical evidence). Finally, we did not have a priori predictions for country-level effects on the relationship between COS and environmental protection attitudes or global institutions.

Method

Participants and Sampling Procedure

Participants were recruited through online samples curated by Nielsen, an international polling firm in two waves, September 2015 and March 2016. Wave 1 was a nationally representative sample stratified according to age, gender, and region and was collected in September 2015 as part of a large international project (for details, see Gil de Zúñiga & Liu, 2017). The same respondents were invited to Wave 2 six months later. Only those responding to both waves were selected in the present study (as the critical variable of interest was measured in Wave 2), which resulted in 8740 respondents retained for the following analyses (49.7% female, $M_{\text{age}} = 44.98$, $SD_{\text{age}} = 14.547$). Those respondents were from 19 countries/societies, including Argentina, Brazil, China, Estonia, Germany, Indonesia, Italy, Japan, South Korea, New Zealand, the Philippines, Poland, Russia, Spain, Taiwan, Turkey, the United Kingdom, Ukraine, and the United States. The average sample size for each country/society was 460, ranging from 101 in Ukraine to 733 in Estonia (see detailed sample characteristics in Table S1 in the online supporting information; for comparison of samples with census data, see Gil de Zúñiga & Liu, 2017).

Measures

Cosmopolitan orientation was measured in Wave 2 by a 15-item cosmopolitan orientation scale (COS). According to Leung et al. (2015), COS constitutes three factors: cultural openness (CO: five items; e.g., “I am willing to study or work abroad in another culture”; $\alpha = .90$), global prosociality (GP: five items; e.g., “I would serve the world community by helping human beings”; $\alpha = .92$), and respect for cultural diversity (RCD: five items; e.g., “I respect cultural differences”; $\alpha = .86$). Respondents were asked to respond on a scale from 1 (*disagree completely*) to 7 (*agree completely*).

Predictors of COS (Etiology)

Personality was measured in Wave 1 by an adaptation of mini-IPIP scales (Donnellan, Oswald, Baird, & Lucas, 2006; Gil de Zúñiga, Diehl, Huber, & Liu, 2017). Three subscales deemed relevant to COS were included in the present study: openness to experience (six items; e.g., “I am not interested in new ideas”; reverse-coded, $\alpha = .72$), agreeableness (seven items; e.g., “I sympathize with others’ feelings”; $\alpha = .77$), and extraversion (six items; e.g., “I like to start conversations”; $\alpha = .83$). Respondents were asked to respond on a scale from 1 (*not at all*) to 7 (*completely describes me*). The average score of each subscale was used.

Liberalism was measured in Wave 2 by three items: “On political/economic/social issues, where would you place yourself on a scale of 0–10, where 0 = strong conservative (right leaning) and 10 = strong liberal (left leaning)?” The average score was used as an indicator of liberalism/conservatism ($\alpha = .93$).

COS Functions

Attitude toward immigrants was measured in Wave 2 by one item: “Please rate your feelings towards the immigrants using the ‘feelings thermometer scale’ with 1 (‘least warm’) indicating ‘least positive’” and 7 (“most warm”) indicating “most positive.”

Immigrants as a threat was measured in Wave 2 by one item: “Immigrants are a threat to world peace today.” Respondents were asked to respond on a scale from 1 (*disagree completely*) to 7 (*agree completely*).

Trust in the UN was measured in Wave 2 by one item: “Please rate your feelings of trust towards the United Nations.” Respondents were asked to respond on a scale from 1 (*do not trust at all*) to 7 (*trust completely*).

Climate change cause was measured in Wave 2 by one item: “Human activity (e.g., carbon emissions) is causing global climate change.” Respondents were asked to respond on a scale from 1 (*disagree completely*) to 7 (*agree completely*).

Governmental responsibility for climate change was measured in Wave 2 by one item: “It is of great importance that governments of the world act together to reduce global carbon emissions.” Respondents were asked to respond on a scale from 1 (*disagree completely*) to 7 (*agree completely*).

Covariates and Demographics

Social dominance orientation (SDO) was measured in Wave 1 by a four-item brief SDO scale (Pratto et al., 2013; e.g., “Superior groups should dominate inferior groups.”). Respondents were asked to respond on a scale from 1 (*strongly oppose*) to 7 (*strongly support*). The average score was used ($\alpha = .65$).

Demographics were measured in Wave 1, including participants’ age (in years), gender (0 male, 1 female), and education (1 under high school, 2 high school, 3 certificate/diploma, 4 undergrad or equivalent, 5 postgrad). Participant’s self-reported social status was measured using a single item: “On a Scale of 1 to 10, with 10 being the people who are the most well off, and 1 being the people who are the least well off, where would you describe your position?”

Results

Factorial Structure of COS

Descriptive statistics and bivariate correlations in the overall sample used in the current study are presented in Table 1 (the average scores for the COS subfactors are displayed). The three-factor structure of COS was then tested for the overall sample and in each individual country. The three-factor structure showed good model fit for the overall sample, $\chi^2(87) = 3623.079$, RMSEA = .070 [.068, .072], CFI = .929, TLI = .914, and acceptable to good model fits for most countries/societies (see Table S1 in the online supporting information). The standardized factor loadings for the overall sample are presented in Table 2.

After confirming its factorial structure in individual countries, multigroup CFA was used to test the measurement invariance of the three-factor model across cultures. Specifically, three increasingly restrictive models were tested to confirm configural, metric, and scalar measurement invariance (Vandenberg & Lance, 2000). In the baseline configural invariance model, all of the model parameters are freely estimated, but items must load on the preassigned factors. In the metric invariance model, all of the factor loadings are constrained to be equal across cultures. This allows interpretation of observed covariance relationships and comparisons of these relationships between groups. In the scalar invariance model, all the factor loadings and item intercepts are constrained to

Table 1. Descriptive Statistics and Bivariate Correlations in the 19-Country Sample

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 Cultural Openness																	
2 Global Prosocial	.55**																
3 Respect Diversity	.62**	.53**															
4 Extraversion	.21**	.17**	.16**														
5 Agreeableness	.17**	.32**	.27**	.37**													
6 Openness	.26**	.19**	.25**	.45**	.48**												
7 Att. Immigrants	.36**	.48**	.32**	.11**	.16**	.12**											
8 Immigrants Threat	-.28**	-.32**	-.29**	-.05**	-.14**	-.14**	-.44**										
9 SDO	-.25**	-.32**	-.35**	-.11**	-.33**	-.26**	-.25**	.29**									
10 Trust UN	.18**	.25**	.18**	.11**	.17**	.08**	.20**	-.07**	-.12**								
11 Resp. Climate	.24**	.28**	.29**	.06**	.16**	.11**	.18**	-.12**	-.25**	.17**							
12 GVT Responsible	.26**	.32**	.38**	.08**	.23**	.17**	.17**	-.16**	-.31**	.20**	.76**						
13 Liberalism	.14**	.14**	.14**	-.01	.04**	.07**	.15**	-.20**	-.25**	.04**	.17**	.16**					
14 Age	-.15**	.00	-.001	.10**	.10**	.01	-.08**	.06**	.00	.08**	-.06**	.01	-.08**				
15 Gender(M = 0/F = 1)	.03*	.02	.04**	-.01	.15**	.03*	.03*	-.03*	-.07**	.00	.07**	.07**	.04**	-.12**			
16 Education	.17**	.09**	.12**	.06**	.00	.09**	.10**	-.10**	-.05**	.03*	.04**	.03*	.03**	-.07**	-.04**		
17 Social Status	.16**	.10**	.07**	.20**	.10**	.15**	.08**	-.04**	.02	.15**	.00	.01	-.13**	-.02*	.00	.15**	
M	4.55	4.38	5.16	4.16	5.07	4.94	3.79	3.73	3.04	3.69	5.38	5.71	4.87	44.98	-	3.32	5.42
SD	1.38	1.29	1.10	1.24	0.96	0.95	1.59	1.70	1.00	1.57	1.41	1.31	2.11	14.55	-	1.19	1.81

*Correlation is significant at $p < .05$.

**Correlation is significant at the .01 level (2-tailed).

Table 2. Standardized Factor Loadings for the Overall Sample Across the 19 Countries

Items	Factor Loadings
<i>Factor 1: Cultural Openness</i>	
1. I am willing to study or work abroad in another culture.	0.698
2. I am open to living in a different culture.	0.798
3. I enjoy learning more about different cultures in the world.	0.746
4. I want to travel to experience many different cultures.	0.880
5. It is exciting to immerse in a foreign culture.	0.862
<i>Factor 2: Global Prosociality</i>	
6. I would serve the world community by helping human beings.	0.830
7. I get upset when people do not want to offer help when those in need are foreigners.	0.909
8. I want to play my part to help make the world a better place for all.	0.788
9. When people from other countries are in need, I will help them to the best of my abilities.	0.780
10. I want to help the unfortunate ones even if they are from other countries.	0.868
<i>Factor 3: Respect for Cultural Diversity</i>	
11. I respect cultural differences.	0.606
12. It is important to preserve the authenticity of native cultures.	0.839
13. I embrace cultural diversity.	0.913
14. We should celebrate cultural differences.	0.807
15. I am against having one dominating culture.	0.605

be equal across cultures. Scalar invariance allows meaningful mean-level comparisons across countries/societies. To compare the increasingly restricted models in large scale cross-national studies, $\Delta CFI \leq .02$ and $\Delta RMSEA \leq .03$ were used as cut-off criteria from configural to metric invariance and $\Delta CFI \leq .01$ and $\Delta RMSEA \leq .01$ from metric to scalar invariance (Boer, Hanke, & He, 2018; Rutkowski & Svetina, 2014).

As can be seen in Table 3, the configural invariance model (Model A) had good model fit. The metric invariance model showed poorer model fit, although it was not significantly worse than the configural invariance model. Based on examination of modification indices as well as the findings from the individual country CFA, we adjusted the model (Model B) by allowing residuals of item 14 and item 15 to be correlated in Estonia. With this adjustment, both configural and metric invariance models now had good model fit, and the metric invariance model was not significantly worse than the configural invariance model. The scalar invariance model showed poor model fit and was significantly worse than the metric invariance model. This indicates that mean comparisons between countries/societies should not be made. Thus a metric invariance model was established for COS across cultures. This means that correlations, regressions, and path coefficients can be interpreted as equivalent across cultures.

Etiology of COS

To assess the etiology of COS, we conducted a series of multilevel analyses, considering the hierarchical structure of data. All analyses were conducted using R with a REML estimator, as restricted maximum likelihood (REML) is more suitable for small level-two samples (e.g., only 19 countries; see Hox, 2010). All individual-level variables were group-mean centered, and all country-level variables were grand-mean centered. First, an intercept-only model was assessed in which only a random intercept was included (Model 1). Then, individual-level predictors as fixed effects were added into the model (Model 2). Finally, a cross-interaction model was assessed in which country-level predictor and cross-level interaction were further added into the model (Model 3). Model 1 allowed us to estimate the intraclass correlation (ICC), which is the proportion of the country-level variance compared to the total variance. While there may be no universally accepted cut-off criterion

Table 3. Fit Measures for the Multiple Group Confirmatory Factor Analysis for COS Across 19 Countries

	χ^2 (df)	RMSEA [90% CI]	CFI	TLI	Δ RMSEA	Δ CFI
<i>Model A</i>						
1. Configural invariance	6291.071 (1653)	.080 [.078, .083]	.916	.899		
2. Metric invariance	7611.006 (1869)	.084 [.082, .086]	.896	.889	.004	.020
<i>Model B (Allowing the correlation between residuals of item 14 and item 15 in Estonia)</i>						
1. Configural invariance	6041.091 (1652)	.078 [.076, .080]	.921	.904		
2. Metric invariance	6922.159 (1868)	.079 [.077, .081]	.909	.903	.001	.012
3. Scalar invariance	11,786.344 (2087)	.104 [.102, .105]	.825	.833	.025	.084

Note. Maximum likelihood with robust estimates of standard errors (MLR).

for ICC, 10% was used as a practical criterion to decide whether further analyses were necessary (Hox, 2010). To allow comparison of the effects of different predictors, we standardized the estimates of individual-level predictors (β) using the equation recommended by Hox (2010).

Age, gender, education, liberalism, social status, and three of personality subfactors (extraversion, agreeableness, and openness) were used as individual-level predictors, and the HDI was used as a country-level predictor. These were used to predict the three COS subfactors as dependent variables in separate models. Results showed that ICCs were lower than 10% for all three models with COS subfactors as dependent variables (ICC = 9.9% for cultural openness, 8.5% for global prosociality, and 5.3% for respect for cultural diversity). This suggests that relatively small amounts of variance could be explained by the hierarchical structure of the cross-cultural data on COS, so Model 3 was not employed. Thus, the Maslow-inspired hypothesis of COS being higher in higher HDI societies was not confirmed.

Considering the intercepts of COS were not invariant across cultures (i.e., lack of scalar invariance), Model 2 was used as the reference for further explanation as it assessed the individual-level effects while allowing random intercepts to be assessed across cultures (see detailed results for all multilevel analyses in Tables S2–S9 in the online supporting information).

Demographic Predictors

According to Model 2 (see Table 4), and in accord with hypotheses, education (CO: $b = .119$, $p < .001$; GP: $b = .068$, $p < .001$; RCD: $b = .061$, $p < .001$) and social status (CO: $b = .071$, $p < .001$; GP: $b = .056$, $p < .001$; RCD: $b = .021$, $p = .002$) positively predicted all three COS subfactors. Also consistent with expectations, political liberalism predicted all three COS subfactors (CO: $b = .085$, $p < .001$; GP: $b = .089$, $p < .001$; RCD: $b = .069$, $p = .002$). Age positively predicted global prosociality and respect for diversity (GP: $b = .002$, $p = .025$; RCD: $b = .004$, $p < .001$; respectively) but negatively predicted cultural openness (CO: $b = -.008$, $p < .001$).

Psychological Predictors

Moreover, COS could also be predicted by personality factors, even after controlling for demographics. Cultural openness was positively predicted by openness ($b = .205$, $p < .001$), extraversion ($b = .093$, $p < .001$), and agreeableness ($b = .104$, $p < .001$); global prosociality was positively predicted by agreeableness only ($b = .431$, $p < .001$); respect for cultural diversity was positively predicted by agreeableness ($b = .246$, $p < .001$) and openness ($b = .159$, $p < .001$). In accord with hypotheses, agreeableness and openness were the personality traits most consistently predictive of COS.

Table 4. Unstandardized Parameters of Multilevel Regressions Predicting Cosmopolitan Orientation (COS)

	Cultural Openness	Global Prosociality	Respect Diversity
(Intercept)	4.639***	4.492***	5.202***
Age	-.008***	.002*	.004***
Gender	.026	-.043	.044
Education	.119***	.068***	.061***
Social Status	.071***	.056***	.021**
Extraversion	.093***	.021	.003
Agreeableness	.104***	.431***	.246***
Openness	.205***	.008	.159***
Liberalism	.085***	.089***	.069***
Individual-level variance	1.529	1.336	.998
Country-level variance	.194	.148	.065
REML criterion	26,199.37	25,121.09	22,780.35
AIC	26,221.37	25,143.09	22,802.35
BIC	26,298.22	25,219.94	22,879.20

* $p < .05$, ** $p < .01$, *** $p < .001$.

Functions of COS

The three COS subfactors, together with demographics (age, gender, education, liberalism, social status) and SDO, were used as individual-level predictors; HDI was used as the country-level predictor; and attitude toward immigrants and immigrants as a threat were used as dependent variables in three separate models. Tests for multicollinearity indicated a low level of multicollinearity ($VIF = 1.39$ for CO, 1.64 for GP, 1.43 for RCD; see O'Brien, 2007). Results showed substantial country-level variance in attitudes toward immigrants ($ICC = 14.2\%$) and immigrants as a threat ($ICC = 13.0\%$). Therefore, Model 3 was used as the main reference point for further explanation as it provides a comprehensive assessment of cross-level interactions between individual-level and country-level predictors.

Predicting Attitudes Towards Immigrants

According to Model 3 (see Table 5), after controlling for demographics and SDO, more positive attitudes toward immigrants were significantly predicted by global prosociality ($b = .384$, $p < .001$) and cultural openness ($b = .116$, $p < .001$), but not by respect for cultural diversity ($b = .037$, $p = .050$); immigrants as a threat was negatively predicted by all three COS factors as well (CO: $b = -.064$, $p < .001$; GP: $b = -.224$, $p < .001$; RCD: $b = -.084$, $p < .001$).

Moreover, some relationships between cosmopolitan orientation and immigrant-related attitudes were strengthened by country-level HDI: in accord with expectations and prior research, the positive link between global prosociality and attitude toward immigrants ($b = .767$, $p = .001$), the negative link between cultural openness and immigrant threat ($b = -.799$, $p = .006$), and the negative link between global prosociality (GP) and threat ($b = -1.632$, $p < .001$) were stronger in higher-HDI countries/societies. The country-level moderation effects of HDI are shown in Figure 1 for GP and immigrants as a threat.¹

Predicting Global Civic Attitudes

The three COS subfactors, together with demographics (age, gender, education, conservatism, social status) and SDO, were used as individual-level predictors; HDI was used as a country-level

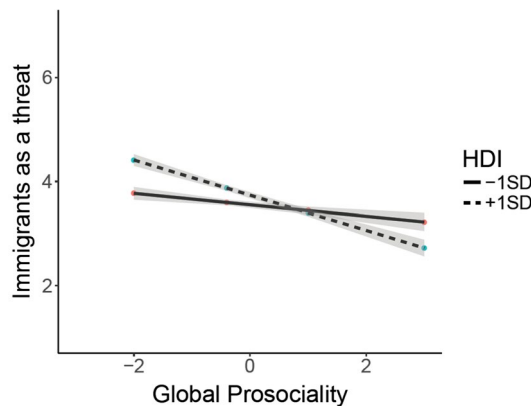
¹Figures for the other two country-level moderation effects can be seen in the online supporting information.

Table 5. Unstandardized Parameters of Multilevel Regressions Predicting Prejudice

	Attitude to Immigrants	Immigrants as a Threat
<i>Level 1</i>		
(Intercept)	3.876***	3.644***
Age	-.006***	.002
Gender	-.004	.003
Education	.040**	-.048**
Liberalism	.051***	-.103***
Social Status	.040***	.013
SDO	-.110***	.204***
Cultural Openness	.116***	-.064***
Global Prosociality	.384***	-.224***
Respect Diversity	.037	-.084***
<i>Level 2</i>		
HDI	-2.388	1.320
<i>Interaction</i>		
CO × HDI	-.146	-.799**
GP × HDI	.767**	-1.632***
RD × HDI	.479	.274
Individual-level variance	1.665	2.098
Country-level variance	.331	.383
REML criterion	26,810.94	28,585.19
AIC	26,842.94	28,617.19
BIC	26,954.67	28,728.89

Note. UNDP does not have an HDI score for Taiwan. Taiwan's government calculated its HDI to be .882 based on the 2010 methodology of UNDP (we used this score).

* $p < .05$, ** $p < .01$, *** $p < .001$.

**Figure 1.** Perceiving immigrants as a threat as a function of global prosociality, moderated by country-level HDI.

predictor; and trust in the UN, the cause of climate change, and government responsibility for mitigating climate change were used as dependent variables in three separate models.

Results showed relatively little variance was explained by the hierarchical structure of data for all three global civic attitude variables (for trust in the UN, ICC = 8.9%; for humans as cause of climate change, ICC = 7.9%; for government responsibility, ICC = 5.1%), so Model 2 was used. According to Model 2 (see Table 6), after controlling for demographics and SDO, trust in the UN was positively predicted by all three COS factors (CO: $b = .035$, $p = .036$; GP: $b = .214$, $p < .001$; RCD:

Table 6. Unstandardized Parameters of Multilevel Regressions Predicting Global Civic Attitudes

	Trust in the UN	Climate Change Human Cause	Government Responsibility
(Intercept)	3.695***	5.382***	5.682***
Age	.007***	.001	.006***
Gender	-.003	.175***	.147***
Education	-.020	.002	-.010
Liberalism	.018*	.053***	.039***
Social Status	.128***	.006	-.001
SDO	-.054**	-.161***	-.197***
Cultural Openness	.035*	-.007	-.037**
Global Prosociality	.214***	.093***	.111***
Respect Diversity	.085***	.245***	.327***
Individual-level variance	2.051	1.621	1.330
Country-level variance	.222	.158	.088
REML criterion	28,303.92	26,623.49	25,032.01
AIC	28,327.92	26,647.49	25,056.01
BIC	28,411.65	26,731.31	25,139.82

* $p < .05$, ** $p < .01$, *** $p < .001$.

$b = .085$, $p < .001$); climate change cause was positively predicted by global prosociality ($b = .093$, $p < .001$) and respect for cultural diversity ($b = .245$, $p < .001$), but not by cultural openness ($b = -.007$, $p = .620$); governmental responsibility for climate change was positively predicted by global prosociality ($b = .111$, $p < .001$) and respect for cultural diversity ($b = .327$, $p < .001$), but *negatively* predicted by cultural openness ($b = -.037$, $p = .007$).²

Finally, we conducted additional analyses where three personality factors were entered into the individual-level-only model together with demographics, SDO, and COS in predicting the dependent variables (i.e., attitudes towards immigrants and global civic attitudes). Results showed that the relationships between COS and the dependent variables were not altered by inclusion of control factors; this result further ensures the robustness of our findings (see Tables S10 and S11 in the online supporting information).

Discussion

The three COS components of global prosociality, cultural openness, and respect for cultural diversity showed metric invariance across 19 countries/societies, thus enabling theoretically coherent interpretation of their relationships with demographic factors, personality traits, prejudice indicators, and attitudes to global civil society. Without metric invariance, relationships between different measures cannot be compared across cultures because this indicates the scales carry different meanings in different societies. With invariance, we can assert that COS shows promise as a measure of actually existing cosmopolitanism across 19 societies. With invariance, we can confirm that, as hypothesized, education, self-perceived social status, and political liberalism showed small positive correlations with the three COS components (r 's from .07 to .17). Among them, political liberalism (together with personality) was a bit stronger than social status and education in explaining variance within all three COS components.

The relatively low predictive value of education is concerning from the perspective of classic theorists of enlightenment following Kant. It may be that the content and quality of education is what

²We also calculated standardized beta weights in addition to the unstandardized coefficients reported; the relative magnitude of the coefficients remain consistent after standardization. Details are available in the online supporting information.

is important to developing COS, rather than years of formal education, as measured in this research. If so, this weakens the expectation that COS should grow as a natural consequence of societies getting more educated and better developed. That we also did not find expected country-level effects for COS increasing as a function of HDI raises concerns that COS might be a form of politicized consciousness (correlated with liberalism) rather than a more universal product of formal education. Growing COS through institutional structures like education and HDI might be more difficult and contested than cosmopolitan theorists previously imagined. Our cross-national finding of no relationship between HDI and COS probably reflects the rising popularity of right-wing political opposition to the liberal principle of an open society in high HDI Western democracies (see Araújo et al., in press). In countries ranging from Switzerland (Ettinger & Udriș, 2009) to the United States (Powell, 2011) right-wing discourses have problematized immigration (particularly from Muslim countries, conflating this with terrorism) and challenged maximalist approaches to cosmopolitanism as opening the nation to existential threats. Maximalist assertions like Pogge's (1992) that "the global moral force of human rights is activated only through the emergence of a global scheme of social institutions" (p. 51) hold little political currency when immigration is popularly framed as a threat, and refugees and asylum seekers are regularly dehumanized (Araújo et al., in press; Esses, Mediano, & Lawson, 2013).

Supporting a more minimalist approach to cosmopolitanism, the personality traits of agreeableness, openness, and extraversion had somewhat larger correlations (r 's from .16 to .32) with COS compared to its demographic correlates. Agreeableness was the only personality trait that predicted all three COS factors, and it was the strongest predictor of global prosociality and respect for cultural diversity in multilevel regressions. It appears to be the personality trait closest to the comprehensive virtue of "human-heartedness,"³ the abstract concept at the heart of global consciousness (Liu & Macdonald, 2016; see Liu, 2017 for philosophical discussion of human-heartedness). The trait of openness was the strongest predictor of cultural openness and the second strongest predictor of respect for cultural diversity. Extraversion independently predicted only cultural openness.

The fact that the "out-going" aspects of personality are associated only with cultural openness and not the other two cosmopolitan factors is important theoretically. This is illustrated by two anomalous findings in our multilevel regressions involving cultural openness (CO): after controlling for global prosociality and respect for cultural diversity, CO was: (1) a weak but *negative* predictor of wanting governments to take responsibility for reducing carbon emissions, a useful indicator of support for proenvironmental policy and (2) unable to predict either trust in the United Nations or support for the idea that human activity is causing climate change. These regressions suggest that cultural openness might have an expansive element (e.g., personality factors of extraversion and openness) associated with compromising one's principles for the sake of expediency. That is, a culturally open person might accept (as Marcus Aurelius and the other Stoic cosmopolitan philosophers did with respect to slavery in the Roman Empire; see Nussbaum, 1997) that proenvironmental policies might have to be sacrificed for the "greater good" of the prosperity brought about by liberal (open) trading regimes.

By contrast, all three COS factors contributed independently to explaining the variance in feelings towards immigrants and perceiving immigrants as less of a threat to world peace, as hypothesized. This is consistent with a comprehensive literature review by McFarland et al. (2019) showing that global human identification is associated with less prejudice. In our study, global prosociality was the most influential factor in COS, positively predicting attitudes towards immigrants and negatively influencing their being perceived as a threat.

³Encompassing love, respect for others, dutifulness, loyalty, self-mastery, and benevolence, each expressed in the appropriate situation and relationship.

Interestingly, these relationships were stronger in more developed countries/societies, which are typically more of a desired destination for immigrants compared to less developed countries. This is in accord with research suggesting that immigrants are more likely to be manufactured as a threat in right-wing political rhetoric in these societies (Araújo et al., in press; Esses et al., 2013; Quillian, 1995). It is important to cosmopolitan theory that COS appears capable of acting as an antidote to anti-immigrant feelings, especially in high HDI countries where there are major discourses capitalizing on new media that can be used to position immigrants as threats (Ettinger & Udris, 2009; Schumann, Boer, Hanke, & Liu, in press). High levels of societal development do not automatically increase citizens' cosmopolitanism, but citizens' cosmopolitanism is associated with lesser anti-immigrant feelings, especially in wealthier societies with highly contested rhetoric about immigrants.

Global prosociality and respect for cultural diversity independently predicted trust in the United Nations, the institutional symbol of global society (consistent with the literature as reviewed by McFarland et al., 2019), and they also independently predicted support for human activity as the cause of climate change, a useful indicator of commitment to reason in making a political judgement. The environmentally oriented results are consistent with previous research by Leung et al. (2015) and Leung and Koh (2018).

Altogether, global prosociality was the most influential among the three COS factors in predicting trust in the UN, positive feelings towards immigrants, and perceiving immigration to be less of a threat to peace. Respect for cultural diversity was the strongest predictor among the three for higher levels of belief that human activity is causing climate change and more support for governments trying to reduce carbon emissions. Cultural openness was the weakest among the three factors: It involves the self more than others, and therefore it might be expected to be more influential on dependent measures involving the individual's plans for the future (e.g., travel abroad, taking foreign students as borders, studying a foreign language) than the politically and group-oriented dependent variables measured here.

Conceptually the factor of cultural openness is oriented towards long-term self-development in learning to relate to other cultures. The factor of global prosociality by contrast orients towards helping others (especially people from other countries); and the third factor of respect for cultural diversity concerns preserving and celebrating group diversity (including indigenous cultures, overlooked in many cosmopolitan theories). These three factors of COS together form a system of liveable ethics in the context of globalization.

Having adopted a minimalist approach to cosmopolitanism, we feel that these results hold promise as seeds of hope for building cosmopolitanism wherever it begins to manifest. The causal sequences this might involve need to be elaborated in future research. Of particular interest is whether there might be a virtuous cycle between cosmopolitan orientation leading to benevolent action and benevolent action leading to increases in cosmopolitanism over time: not only within individuals, but in communities and social networks. Within such a virtuous cycle, a major developmental issue is how people in leadership positions can navigate the dominant discourses and norms of their reference groups to take actions to produce positive culture change. In leading such a process, would people say that they are self-actualizing?

ACKNOWLEDGMENTS

This research was supported by Grant FA2386-15-1-0003 from the Asian Office of Aerospace Research and Development. Correspondence concerning this article should be addressed to James H. Liu, School of Psychology, Massey University, Private Bag 102904, Auckland 0745, New Zealand. Email: J.h.liu@massey.ac.nz

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Supporting Information

Additional supporting information may be found in the online version of this article at the publisher's web site:

Table S1. Sample Characteristics and Model Fit (MGCFA Model with Configural Invariance for the Overall Sample and CFA Model for Individual Countries/Societies)

Table S2. Estimated Parameters of Multilevel Regressions Predicting Cultural Openness

Table S3. Estimated Parameters of Multilevel Regressions Predicting Global Prosociality

Table S4. Estimated Parameters of Multilevel Regressions Predicting Respect for Cultural Diversity

Table S5. Estimated Parameters of Multilevel Regressions Predicting Attitude Toward Immigrants

Table S6. Estimated Parameters of Multilevel Regressions Predicting Immigrants as a Threat

Table S7. Estimated Parameters of Multilevel Regressions Predicting Trust in the UN

Table S8. Estimated Parameters of Multilevel Regressions Predicting Climate Change as Caused by Humans

Table S9. Estimated Parameters of Multilevel Regressions Predicting Governmental Responsibility for Climate Change

Table S10. Estimated Parameters of Multilevel Regressions Predicting Attitudes Towards Immigrants (Individual-Level Model)

Table S11. Estimated Parameters of Multilevel Regressions Predicting Global Civic Attitudes (Individual-Level Model)

Figure S1. Attitude toward immigrants as a function of global prosociality, moderated by country-level HDI.

Figure S2. Immigrants as a threat as a function of cultural openness, moderated by country-level HDI.