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1 **Does Culture Moderate Gender Stereotypes? Individualism Predicts Communal (but**
2 **Not Agentic) Prescriptions for Men Across 62 Nations**

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CULTURE AS MODERATOR OF GENDER STEREOTYPES

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18 beliefs for people's health, well-being, and occupational outcomes.

19 **Colette Van Laar** is Full Professor at the Center for Social & Cultural Psychology (CSCP)
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22 and work. She conducts research on social identity, contact, and intergroup relations, making
23 use of both laboratory research with experimental groups, and field research with existing

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19 personality and social psychology. Recently, he has been involved in various projects related
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21 **Michał Olech** serves as an Assistant Professor at the Quality of Life Research Unit, Faculty
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- 1 statistics and data analysis, and he has a particular passion for working within the R
- 2 computing environment.
- 3 **Peter Glick** is the Henry Merritt Wriston Professor in the Social Sciences at Lawrence
- 4 University. His research focuses on understanding and overcoming biases and stereotyping.
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Abstract

The cultural moderation of gender stereotypes hypothesis (Cuddy et al., 2015) argues that societies assign the most culturally valued traits to men, the dominant group. Thus, in line with cultural ideals, collectivistic cultures should assign men more communality, whereas individualistic societies should assign men more individualism. Using archival data, Cuddy et al. found evidence for cultural moderation in descriptive stereotypes. We argue, however, that cultural moderation should be tested using prescriptive stereotypes, which more directly reflect cultural ideals about how men and women should be. We also provide a more robust test using contemporary data from 62 countries from Towards Gender Harmony project (N = 27,391) that allows multilevel modeling techniques. We found evidence for cultural moderation for communal (though not agentic) traits: collectivistic (compared to individualistic) nations prescribed relatively more communal traits to men. Thus, we show that prescriptions for men gravitate more toward core cultural values than prescriptions for women.

Keywords: gender stereotypes, cultural moderation, communality, agency, prescriptions

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1 **Does Culture Moderate Gender Stereotypes? Individualism Predicts Communal (but**
2 **Not Agentic) Prescriptions for Men Across 62 Nations**

3 Are gender stereotypes assigning agency to men and communality to women
4 universal? Evidence for agentic-male and communal-female stereotypes largely relies on
5 research in Western nations that value individualistic traits (i.e., personal agency) over
6 communal traits (e.g., helpfulness) (e.g., Eagly et al. 2020; Prentice & Carranza, 2002).
7 Cuddy and colleagues' (2015) cultural moderation of gender stereotypes hypothesis proposes
8 that societies assign men their most valued traits. Re-analyzing data from Williams and Best
9 (1990a) involving 26 nations, they showed that individualistic (as compared to collectivistic)
10 nations assigned more individualistic and less collectivistic traits to men. However, the
11 broader cross-national comparisons Cuddy et al. (Study 4) had both theoretical and
12 methodological limitations. The current study extends Cuddy et al work and offers a more
13 robust and sensitive test of the cultural moderation hypothesis across a broader set of nations.

14 Specifically, the current study assesses stereotypes in a manner that should more
15 directly test the cultural moderation hypothesis. Because they relied on archival data from
16 Williams and Best (1990), Cuddy et al. (Study 4) tested for cultural moderation in descriptive
17 gender stereotypes (i.e., expectations about how men and women are). We argue that
18 assessing prescriptive stereotypes, which reflect beliefs about how men and women "should"
19 be, better assesses cultural ideals, providing a more theoretically appropriate test of the
20 cultural moderation hypothesis. Further, because Cuddy et al. re-analyzed archival data, their
21 test for cultural moderation had several methodological and statistical limitations we
22 improved upon in the current study. First, the Williams and Best data originally collected
23 over 30 years ago (with some data collected over 40 years ago). These data do not reflect the

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1 dramatic changes in gender roles (e.g., women's influx into the paid workforce in many
2 nations) that have altered gender stereotypes. For example, Eagly and colleagues (2020)
3 showed that stereotypes regarding women's greater communality increased in the United
4 States from 1946 to 2018, whereas stereotypes regarding men's greater agency declined. We
5 present contemporary data testing whether cultural values moderate current prescriptive
6 gender stereotypes. Second, because Williams and Best reported national averages on their
7 stereotyping measure and the individual data they collected were no longer available, Cuddy
8 et al. could not test for the data's reliability, cultural invariance, or other psychometric
9 properties. The study presented here uses multilevel modeling techniques to ensure greater
10 reliability and validity of the inferences. Finally, the current study analyzes prescriptive
11 stereotypes in a much larger set of nations than the 26 studied by Cuddy et al. We collected
12 data in 62 nations that vary considerably on individualism-collectivism values, providing a
13 comprehensive, reliable, and up-to-date analysis of whether cultural values moderate the
14 content of contemporary prescriptive gender stereotypes concerning agency and
15 communality.

16 **Agency-communality, cultural values, and gender norms**

17 The trait terms used to describe people cohere into two broad dimensions: agency
18 (self-oriented) and communion (other-oriented) (Abele & Wojciszke, 2007). These
19 dimensions broadly correspond, respectively, with male (agentic) and female (communal)
20 stereotypes as well as individualistic, independent (focused on self) and collectivistic,
21 interdependent (caring for others) cultural values. Overall, collectivistic societies place more
22 value on communal traits (Markus & Kitayama, 1991) and people in collectivistic societies
23 rate themselves higher in communal than agentic attributes (e.g., Heine, 2001; Sedikides et

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1 al., 2003; Sugihara & Katsurada, 2000). Conversely, individualistic societies place more
2 value on agentic traits, and people in these societies rate agency as more personally important
3 than communality (Sedikides et al., 2003).

4 At the same time, robust cross-cultural evidence suggests a universal tendency to
5 attribute agency more to men and communality more to women (Bosson et al., 2021; Hsu et
6 al., 2021; Williams & Best, 1990a, 1990b), affecting how women and men describe
7 themselves as well as others (Diekmann & Eagly, 2000; Rudman & Glick, 2001; Wood &
8 Eagly, 2009). However, because femininity and masculinity represent cultural constructs
9 (Safdar & Kosakowska-Berezecka, 2015), expectations concerning femininity and
10 masculinity are also reflected in the prescriptive content of gender stereotypes, which can
11 vary depending on cultural context. Cuddy and colleagues (2015) suggested that cultural
12 values systematically determine differences in gender stereotype content across cultures.
13 Individualistic societies value personal agency (e.g., self-oriented, agentic, autonomous,
14 independent) over communality, and collectivistic societies value communality (e.g., helpful
15 to others, devoted to others, warm, supportive) over agency (Hofstede, Hofstede, & Minkov,
16 2010; Triandis & Gelfand, 2012). Therefore, if societies assign their most valued traits to
17 men (Correll & Ridgeway, 2006; Sidanius & Pratto, 1999; Jost & Banaji, 1994), stereotypes
18 associating men with personal agency and women with communality would be expected in
19 individualistic cultures but should be less prominent or even reversed in more collectivistic
20 nations. Cuddy and colleagues extracted a set of individualistic vs. collectivistic traits from
21 Williams and Best's (1990a) data and found that the more collectivistic the nation, the more
22 people viewed collectivistic traits as describing men, and the more individualistic the nation,
23 the more people viewed individualistic traits as describing men. However, in their 14-country

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1 study, with half of the countries being more collectivistic, Williams and Best (1990b) found
2 that in all countries both men's and women's ideal selves (prescriptive) were more masculine
3 (agentic) than their selves, suggesting those traits were more valued. We argue that gender
4 prescriptions, rather than descriptive stereotypes, more closely reflect cultural ideals and,
5 therefore, represent a more appropriate way to test the cultural moderation hypothesis. The
6 current study examines whether individualism-collectivism predicts stereotypical agency and
7 communality prescriptions for women and men in 62 countries.

8 **The present research**

9 Bosson and colleagues (2022) previously established that gender prescriptions
10 (agency for men, communality for women) vary in strength across countries but did not
11 examine whether cultural differences in individualism-collectivism predicted these variations.
12 The current study tests whether nations' collectivism-individualism moderates stereotypical
13 gender prescriptions about agency and communality in 62 countries. Similar to Cuddy et al.
14 (2015), we examined how gender stereotypes relate to nations' individualism-collectivism,
15 which represents one of the most fundamental and widely studied cultural value distinctions
16 in psychology (e.g., Oyserman et al., 2002; Triandis, 1989). However, while the current
17 paper's theorization is rooted in Cuddy et al.'s arguments and findings on the moderating role
18 of culture on gender stereotypes, we extended Cuddy et al.'s conceptualization of the cultural
19 moderation of gender stereotypes hypothesis in several ways.

20 First, we examined prescriptive (rather than descriptive) gender stereotypes. Cuddy
21 and colleagues focused solely on descriptive gender stereotypes, which describe the traits
22 people believe that men and women typically exhibit. We argue that the cultural moderation
23 hypothesis would be better tested by examining prescriptive gender stereotypes, which

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1 specify what women and men ideally should aspire to be like (Prentice & Carranza, 2002)
2 because prescriptions more directly reflect cultural ideals. For example, people may
3 descriptively stereotype men as “overbearing” and women as “shrill” yet view these traits as
4 undesirable rather than as ideals. Thus, gender prescriptions should afford a more
5 theoretically appropriate test of the cultural moderation hypothesis.

6 Second, unlike Cuddy et al. (2015), who treated masculinity and femininity as
7 opposite ends of a single bipolar dimension, we asked participants to rate the desirability of a
8 set of agency and communality traits for both binary genders separately, which allowed us to
9 meaningfully compare perceived prescriptions towards men and women for each respondent.
10 Third, we examined the cultural equivalence of prescriptive stereotypes regarding agency and
11 communality by establishing their invariance across cultures (i.e., if the constructs measured
12 are interpreted similarly across cultures). Fourth, we tested the moderating effect of culture in
13 contemporary samples (data collected between 2018 and 2020) in a wider variety of nations
14 (62 versus 2 and 26 for Cuddy et al.). Fifth, we employed multilevel modeling rather than
15 simpler correlational methods for cross-national comparisons across multiple nations,
16 allowing us to assess cross-cultural comparisons more reliably and accurately. In sum, the
17 current study provides a comprehensive and cross-culturally equivalent (i.e., by using
18 statistically comparable scores across cultures) test of whether individualistic-collectivistic
19 cultural values moderate prescriptive (rather than descriptive) gender stereotypes on agency
20 (broadly construed) and communality.

21 In our paper, we follow Hofstede (2001, p. 209) in conceptualizing country-level
22 individualism-collectivism as the “extent to which people are autonomous individuals or
23 embedded in their groups.” In collectivist cultures, people perceive themselves as closely

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1 linked to their in-group, tend to take the norms and duties prevalent in the in-group as strict
2 guides, and attach high importance to their relationship with other members of their in-group.
3 Individualist cultures, in contrast, replace the individual's dependence on small in-groups,
4 especially family and acquaintances, with a more anonymous form of dependence on
5 impartial institutions and universal norms. Individualism conceptualized and operationalized
6 by Hofstede (2001, and more recent Hofstede, Hofstede, & Minkov, (2010) correlates with
7 more recent conceptualizations of individualism-collectivism (Schwartz; 1994, 2008; Welzel,
8 2013; Minkov & Kaasa, 2022).

9 In this project, Hypotheses 1 and 2 stated that people in individualistic countries,
10 compared to those in collectivistic countries, should prescribe less communality (H1) and
11 more agency (H2) to men. We also explored gender gaps in prescriptions: whether people in
12 collectivistic as compared to individualistic cultures prescribe more communality to men than
13 women (Exploratory Question 1) and whether people in individualistic as compared to
14 collectivistic cultures are especially inclined to prescribe more agency to men than women
15 (Exploratory Question 2). Past research (Glick et al., 2000; Larsen & Long, 1988; Williams
16 & Best, 1990b) has shown that men generally report more traditional gender beliefs than
17 women, but with respect to prescriptive stereotypes, there is no direct evidence that men hold
18 women and men to stronger prescriptive standards. Thus, we explored whether men, who
19 typically report more traditional gender beliefs than women, hold stronger gender
20 prescriptions (for both men and women) than women (Exploratory Question 3).

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1 **Method**2 **Participants and Procedure**

3 Data were collected between January 2019 and February 2020 as part of a large cross-
4 cultural project Towards Gender Harmony¹ (see: <https://osf.io/fqd4p/> and
5 www.towardsgenderharmony.ug.edu.pl). Participants were undergraduate students who
6 volunteered their time and (in most countries) received course credit or no compensation.
7 Ethical approvals were obtained, and all participants gave their informed consent.
8 Participants completed a survey that included additional scales to those described here (see:
9 <https://osf.io/7tza3>). The order of measures was randomized. Data were collected via
10 SurveyMonkey or Qualtrics (or, in rare cases, paper surveys). From the initial sample ($N =$
11 33,313), we excluded from analyses the data of 5,922 individuals who failed one or more of
12 three attention checks, provided incomplete data, or self-identified with a different gender
13 other than male or female. Note that we consider gender as a spectrum, and we are aware that
14 categorizing it based on the female-male binary is limiting - and not a reflection of
15 everyone's experience. Nevertheless, as the sample of transgender, nonbinary, and gender
16 minority individuals was small ($n = 373$, 1.1%), we could not analyze their data for statistical
17 reasons. The final sample consisted of 27,391 respondents (38% self-identified men) from 62
18 countries. Sample composition and information on participants' age per country and country-
19 level scores for individualism and gross national income per capita appear in Table 1.
20

1 You can also find Towards Gender Harmony project's overall preregistration here:
<https://osf.io/mq48y>

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1 **Table 1**

2 *Composition of Samples and Country-Level Scores for Individualism and Gross National*
 3 *Income per Capita (GNI) (control variable)*

Country	<i>N</i>	% Male	<i>M</i> _{age}	<i>SD</i> _{age}	Individualism	GNI
Total Sample	27391	37%	23,1	6,9	-	-
Albania	199	36%	23,1	5,2	20	14350
Argentina	331	47%	32,7	12,3	46	22060
Armenia	184	58%	20,0	1,8	22	14460
Australia	587	33%	29,7	11,1	90	51560
Belgium	1587	48%	21,5	5,8	75	54730
Bosnia	175	47%	23,0	6,1	22	15770
Brazil	904	31%	23,8	7,4	38	14850
Canada	861	31%	19,9	3,3	23	50810
Chile	124	40%	21,8	5,4	20	24140
China	508	37%	19,5	2,0	13	16740
Colombia	505	40%	21,5	5,0	33	15150
Croatia	287	22%	23,4	6,0	58	29520
Czechia	356	74%	28,0	8,5	58	40660
Denmark	237	39%	25,4	4,7	74	61410
England	619	39%	22,4	7,8	89	48040
Finland	268	12%	26,1	7,1	63	51210
France	330	18%	22,2	6,9	71	50390
Georgia	146	53%	21,7	3,1	40	15020
Germany	1200	35%	30,0	10,5	67	57690
Ghana	248	41%	20,3	2,6	15	5510
Greece	246	27%	26,1	8,9	35	31350
Hungary	613	18%	22,4	4,4	80	32750
India	317	39%	22,1	5,2	48	6960
Indonesia	217	47%	21,0	4,0	14	11930
Iran	145	39%	29,2	8,2	41	15270
Ireland	536	46%	19,8	3,7	70	68050
Italy	2158	34%	22,8	5,3	76	44580
Japan	194	42%	21,6	2,5	46	44780
Kazakhstan	336	44%	20,2	3,8	20	24050
Kosovo	353	40%	20,3	4,0	25	14350
Lebanon	106	29%	19,6	0,8	40	15260
Lithuania	278	32%	23,9	6,7	60	37010
Luxembourg	174	35%	24,6	5,3	60	77570
Malta	225	32%	26,7	10,1	59	41690
Mexico	269	48%	23,7	9,0	30	19810
Morocco	227	46%	29,0	9,8	46	7680
Nepal	170	38%	22,8	5,6	30	3600
Netherlands	784	33%	20,7	3,5	80	59890
New Zealand	211	29%	19,0	2,3	79	42710

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Nigeria	355	43%	21,2	3,3	30	5170
Northern Ireland	271	39%	22,3	5,8	89	48040
Norway	180	47%	23,0	3,9	69	69610
Pakistan	344	44%	22,1	3,7	14	5210
Philippines	393	49%	19,8	2,1	32	10200
Poland	717	44%	23,0	4,8	60	32710
Portugal	150	15%	22,3	5,2	27	35600
Romania	216	41%	22,8	4,7	30	31860
Russia	601	31%	21,8	6,8	39	28270
Serbia	580	25%	22,1	5,1	25	17960
Slovakia	483	46%	22,0	4,5	52	33680
South Africa	320	40%	20,6	2,6	65	12630
Spain	968	36%	25,7	8,9	51	42300
Suriname	151	46%	22,9	5,4	47	15200
Sweden	593	47%	26,4	7,4	71	57300
Switzerland	518	36%	23,4	5,4	68	72390
Turkey	1314	31%	22,3	4,0	37	27410
UAE	437	35%	20,0	1,5	36	70240
USA	666	30%	20,4	4,4	91	65880
Ukraine	245	34%	19,1	1,4	25	13750
Uruguay	154	40%	22,7	6,3	36	21120
Vietnam	338	25%	22,5	7,0	20	7750
Wales	182	36%	30,2	10,2	89	48040

1 *Note.* England, Northern Ireland, and Wales are treated as separate countries in the analyses, but their
2 Individualism and Gross National Income per Capita (GNI) assigned are overall United Kingdom scores, based
3 on Hofstede, G., Hofstede, G.J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind*
4 (Rev., 3rd ed.) New York: McGraw-Hill.

5 **Measures**

6 Bilingual scholars used the back-translation procedure (Van de Vijver & Leung,
7 2021) to create 29 language versions of the scales. All items were translated from English to
8 the specific language and then back-translated by an independent translator (unless the item
9 was previously published in that language). All scale translations can be accessed (see
10 <https://osf.io/7tza3>).

11 *Individual Level Agentive and Communal Prescriptive Stereotypes*

12 Participants rated 24 traits selected by independent judges (members of our cross-
13 cultural consortium), out of which we used 16 in the analyses, as measurement invariance

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1 was found for those previously (Bosson 2022). Those assessed agency (competent, confident,
2 has leadership abilities, determined, courageous, active, capable, independent) and
3 communion (compassionate, helpful to others, sympathetic, understanding of others, aware of
4 others' feelings, devoted to others, warm, supportive; Prentice & Carranza, 2002; Rudman et
5 al., 2012; Williams & Best, 1990a). For each trait, participants rated "How desirable is it in
6 your society for a woman [man] to possess this trait?" on a scale of 1 (not at all desirable) to
7 7 (very desirable), and we used these ratings in tests of Hypotheses 1-2. In addition, for use in
8 Exploratory Questions 1-2 tests, we calculated difference scores for each participant,
9 subtracting desirability ratings of a given trait for women from desirability ratings of the
10 same trait for men.

11 Prior to primary analyses, we established the measurement invariance of the agency
12 and communion measures. Usually, three levels of invariance are assessed in the literature
13 (Milfont & Fisher, 2010): configural invariance, indicating whether the factor structure of the
14 measurement is equal across groups; metric invariance, indicating whether items' factor
15 loadings are equal across groups; and scalar invariance, indicating whether the items'
16 intercepts are equal across groups. The first ensures that the construct is replicable, the
17 second allows multigroup inferences on the relationships between variables, and the third
18 allows multigroup inferences on the levels of the variables.

19 Country Level Collectivism-Individualism

20 Hofstede's individualism vs. collectivism (IDV) measure (Hofstede et al., 2010)
21 assesses the degree of interdependence a society maintains among its members, assessing a
22 continuum from collectivism to individualism. Individualism places greater importance on
23 attaining personal goals, whereas collectivism places greater importance on goals that foster

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1 the group's well-being. IDV represents a scale ranging from 0 to 100, with low scores
2 indicating collectivism (e.g., Colombia, which scored 13) and high scores indicating
3 individualism (e.g., the United States of America, which scored 91). Globalization and
4 Westernization have increased individualism globally since Hofstede's country-level ratings
5 were initially created (Hofstede, 1980, 2002), but more recent rankings (Hofstede et al.,
6 2010), as well as gender inequality rankings (United Nations Development Program, 2013),
7 indicate that relative levels of individualism across countries have remained stable across the
8 years.

9 **Gross National Income (GNI).** In studies of the effects of culture, controlling for
10 national wealth is necessary to rule out the possibility that a particular cross-cultural
11 difference is caused by wealth differences (cf. Welzel, 2013). To detect culture-specific
12 effects, we followed best practices by calculating the country-fixed effect that results after
13 controlling for national wealth (cf. Beugelsdijk & Welzel, 2018; Minkov & Kaasa, 2022;
14 Minkov et al., 2023). We thus included Gross National Income (GNI; World Bank, 2020) in
15 the analyses. It measures the nation-level standard of living per capita adjusted for the price
16 level of the country. Among the countries we studied, Nepal had the lowest GNI (\$3600) and
17 Luxembourg the highest (\$77,570).

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1 **Analytical Strategy**

2 To obtain comparable scores across countries, we tested 2-factor models using factor
3 analyses of prescription measures (agency correlated with communion). First, we conducted
4 Confirmatory Factor Analysis (CFA) in all countries separately and then in both gender
5 groups separately. Second, we used Multigroup Confirmatory Factor Analysis (MGCFA) to
6 test each measure's cross-country and cross-gender measurement invariance. Third, we used
7 within-person MGCFA to test whether prescriptions for different genders were comparable
8 (e.g., agency prescriptions for men vs agency prescriptions for women). In all factor analyses,
9 we used the Robust Maximum Likelihood (MLR) estimator to account for deviations from
10 normality (Yuan & Bentler, 2000). Examining model fits in single-group analyses (CFAs),
11 we relied on the following thresholds for fit indices: CFI > .90, RMSEA < .08, and SRMR <
12 .08 (Brown, 2006; Byrne & Byrne, 2013). In multi-group analyses (MGCFA), we relied on
13 different thresholds depending on the number of groups analyzed. For within-person
14 MGCFA, we used Chen's (2007) criteria: $\Delta\text{CFI} = .01$, $\Delta\text{RMSEA} = .015$. In cross-country
15 MGCFA, given the large number of compared groups, we relied on more liberal thresholds to
16 test metric invariance ($\Delta\text{CFI} = .02$, $\Delta\text{RMSEA} = .03$; Rutkowski & Svetina, 2014). We tested
17 hypotheses using two-level Multilevel Regression Models (MLM), in which individuals were
18 nested in countries with random effects modeled for gender, using latent scores of all four
19 prescription variables (agentic prescriptions for women and men and communal prescriptions
20 for women and men), derived from CFAs conducted on the whole sample.

21 In all analyses, we additionally controlled for participants' demographics (age and
22 gender [with women as reference category]) and countries' GNI to verify whether the
23 country-level cultural value of individualism predicts individual-level endorsement of

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1 prescriptions, above and beyond country-level development and wealth and participants' age.
2 When testing Hypotheses 1 and 2, we additionally controlled for prescriptions for the other
3 gender group (i.e., we controlled for agentic prescriptions for women in the model predicting
4 agentic prescriptions for men) to partial out the non-gender-specific general expectations of
5 agency or communion in a given country.

6 We used R software for statistical analyses, specifically, the "lavaan" package
7 (Rosseel, 2012) for factor analyses and the "lme4" package (Bates et al., 2015) for MLM
8 analyses. All codes and detailed results, along with supplementary materials, are stored in an
9 open repository [https://osf.io/pw9eq/?view_only=60da45251aa74c42aa31fec31a003b16] for
10 reproducibility.

11

12

Results

13 Descriptive Statistics

14 Average scores and standard deviations of all agentic and communal prescription
15 variables across all studied countries are presented in Table 2

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1 **Table 2**2 *Observed Scores of Agentic and Communal Prescriptions for Men and Women - Descriptive*
3 *Statistics across Countries*

Country	Prescriptions for Men				Prescriptions for Women			
	Agentic		Communal		Agentic		Communal	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Total sample	6.09	0.84	5.25	1.26	5.25	1.28	5.94	0.89
Albania	6.18	0.71	5.58	1.08	5.47	1.39	5.96	0.74
Argentina	6.31	0.69	5.38	1.19	5.25	1.48	5.88	0.94
Armenia	6.07	0.93	5.45	1.23	5.44	1.15	5.41	1.15
Australia	6.17	0.84	5.33	1.25	5.45	1.09	6.18	0.83
Belgium	5.86	0.78	5.38	1.06	5.58	0.99	5.73	0.85
Bosnia	5.84	0.99	5.42	1.13	5.44	1.10	5.69	0.99
Brazil	6.37	0.79	4.56	1.62	4.79	1.77	5.91	0.91
Canada	6.17	0.87	5.20	1.34	5.42	1.14	6.17	0.80
Chile	6.09	0.89	5.68	1.19	5.59	1.24	6.05	0.93
China	5.94	0.97	5.50	1.03	5.47	1.11	5.48	0.94
Colombia	6.31	0.83	5.44	1.26	5.43	1.45	6.01	0.96
Croatia	6.19	0.68	5.40	1.22	5.21	1.27	6.17	0.76
Czechia	5.90	0.81	5.32	1.00	5.34	0.93	5.78	0.81
Denmark	6.06	0.67	5.40	1.15	5.52	0.91	6.17	0.66
England	6.02	0.83	5.23	1.20	5.23	1.09	6.05	0.77
Finland	6.07	0.74	4.94	1.05	5.31	1.00	5.95	0.77
France	5.90	0.87	5.77	0.97	5.78	1.05	5.76	0.86
Georgia	6.04	1.07	5.51	1.18	5.64	1.32	5.56	1.14
Germany	6.09	0.71	4.96	1.17	5.41	1.03	5.88	0.81
Ghana	6.53	0.73	5.52	1.21	5.81	1.20	6.17	0.94
Greece	6.38	0.63	5.12	1.27	5.01	1.36	6.21	0.75
Hungary	6.12	0.72	4.97	1.20	4.87	1.14	6.13	0.76

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India	6.28	0.70	5.14	1.25	5.27	1.30	6.05	0.86
Indonesia	6.46	0.73	6.05	0.85	5.75	1.01	6.15	0.70
Iran	6.55	0.75	5.30	1.11	4.64	1.54	5.84	1.12
Ireland	6.02	0.82	5.31	1.15	5.52	0.98	5.99	0.76
Italy	6.17	0.74	4.98	1.41	5.21	1.40	5.79	0.89
Japan	5.80	0.88	5.86	1.04	5.30	1.24	5.89	0.83
Kazakhstan	5.73	0.88	5.77	1.01	5.09	1.02	5.94	0.83
Kosovo	6.30	0.76	5.30	1.27	5.27	1.53	5.92	0.88
Lebanon	6.33	0.70	4.70	1.39	4.69	1.45	5.97	0.79
Lithuania	5.97	0.83	5.25	1.24	5.40	1.08	5.98	0.85
Luxembourg	6.14	0.80	5.25	1.14	5.60	1.08	5.87	0.77
Malta	6.35	0.71	5.21	1.41	5.48	1.26	6.22	0.77
Mexico	6.34	0.72	5.44	1.14	5.31	1.34	6.13	0.78
Morocco	5.50	2.31	4.80	2.15	4.82	2.11	5.50	2.10
Nepal	6.11	0.96	5.13	1.17	5.17	1.31	5.85	0.95
Netherlands	5.68	0.67	5.13	0.88	5.22	0.81	5.81	0.66
New Zealand	6.19	0.83	5.43	1.31	5.55	1.24	6.20	0.80
Nigeria	6.29	1.04	5.59	1.19	5.74	1.23	5.88	1.11
Northern Ireland	6.15	0.82	5.22	1.32	5.32	1.23	6.11	0.84
Norway	5.75	0.77	5.63	0.93	5.52	0.88	6.05	0.74
Pakistan	5.91	1.01	5.05	1.27	4.85	1.27	5.55	1.00
Philippines	6.31	0.76	5.59	1.20	5.68	1.15	6.21	0.75
Poland	6.14	0.66	5.21	1.11	5.07	1.00	5.99	0.81
Portugal	6.20	0.81	5.33	1.20	5.41	1.31	6.13	0.75
Romania	6.15	0.97	5.36	1.25	5.43	1.21	6.01	1.04
Russia	5.60	0.85	5.63	1.03	4.90	1.01	5.94	0.83
Serbia	6.26	0.74	5.66	1.18	5.68	1.17	6.02	0.85
Slovakia	5.81	0.91	5.10	1.22	5.18	1.02	5.68	0.99
South Africa	6.31	0.71	5.04	1.38	5.56	1.11	6.12	0.78

CULTURE AS MODERATOR OF GENDER STEREOTYPES

Spain	6.16	0.76	5.23	1.29	5.22	1.55	5.86	0.89
Suriname	5.92	0.95	5.55	1.15	5.58	1.08	5.86	0.87
Sweden	5.77	0.85	5.15	1.23	5.13	1.01	6.04	0.85
Switzerland	6.05	0.80	5.53	1.11	5.68	1.02	6.07	0.76
Turkey	6.10	0.78	5.29	1.28	4.15	1.56	6.08	0.82
UAE	6.27	0.72	4.92	1.24	4.83	1.33	6.06	0.83
Ukraine	6.17	0.85	5.13	1.39	5.23	1.26	6.18	0.86
Uruguay	6.28	0.76	4.81	0.96	5.05	1.07	5.46	0.93
USA	6.08	0.80	5.12	1.33	5.12	1.33	6.04	0.79
Vietnam	6.27	0.73	5.88	0.82	5.61	1.06	5.93	0.84
Wales	6.24	0.79	5.02	1.45	5.30	1.15	6.18	0.90

1

2 Factor Analyses

3 The tested CFA models and items used as indicators of measured constructs were
4 based on previous analyses conducted on the same database (see Bosson et al., 2022; we used
5 only complete cases of all studied variables, thus, the overall *N* differs from that paper), and,
6 similarly, were found to be well-fitted to the data (see supplementary materials in the OSF).
7 We established that gender prescriptions for both genders displayed cross-country
8 measurement invariance at the metric level, enabling us to test Hypotheses 1 and 2. Also, the
9 same prescriptions for different genders were scalar invariant, which enabled us to
10 meaningfully test their differences by subtracting one score from the other (Exploratory
11 Questions 1 and 2). Finally, we found scalar cross-gender invariance, allowing us to test for
12 gender differences in perceived cultural prescriptions (Exploratory Question 3).

13

14

1 **Hypothesis Testing**

2 *Communal and Agentic Prescriptions Across Countries*

3 For all prescriptions examined, data were substantially clustered by country (see null
4 models ICC in Table 3), thus requiring multilevel analyses. In line with Hypothesis 1, we
5 found a negative relationship between individualism and communal prescriptions for men: In
6 more individualistic countries, communion was less prescribed for men than in collectivistic
7 countries (Figure 1², Table 3). In contrast, we found a positive yet weak link between
8 individualism and communal prescriptions for women (Figure 2): Communion was more
9 strongly prescribed for women in individualistic countries than in collectivistic countries.
10 Country-level individualism was not significantly related to agentic prescriptions for men
11 (Hypothesis 2) or women (Figure 1, Table 3).

12

² For clarity and more detailed presentation of distribution of results across countries, all figures in the paper are based on zero-order analyses of the latent scores.

CULTURE AS MODERATOR OF GENDER STEREOTYPES

1 **Table 3**

2 *Results of Multilevel Regression Analyses Predicting Agentic and Communal Prescriptions*
 3 *for Men and Women*

	Prescriptions for Men		Prescriptions for Women	
	Agency	Communion	Agency	Communion
Fixed Effects				
Prescriptions of the same trait toward the other gender	.32**	.32**	.31**	.31**
Age	.02*	.01	.01	-.02**
Gender (men)	-.26**	.12**	.15**	-.32**
IDV	-.03	-.11**	-.02	.08*
GNI	-.08	0.01	.04	.01
Gender(men)*IDV	.04	0.03	.03	-.03
Random Effects				
Null model ICC	.17	.07	.08	.13
Residual Variance	.44	1.27	.93	.54
Cross-country intercept variance	.03	.10	.11	.03
Cross-country gender effect variance	.01	.05	.07	.02
Pseudo-R2 (fixed effects)	.116	.106	.098	.122
Pseudo-R2 (total)	.171	.151	.169	.164

4 *Note.* Standardized coefficients are reported for fixed effects. The analyses were conducted using a hierarchical
 5 approach (i.e., adding each predictor individually); we report only the full models here for clarity. Detailed
 6 results of all models are reported in the OSF, anonymized. $N = 62$ countries.

7 IDV = Individualism, GNI = Gross National Income per Capita.

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

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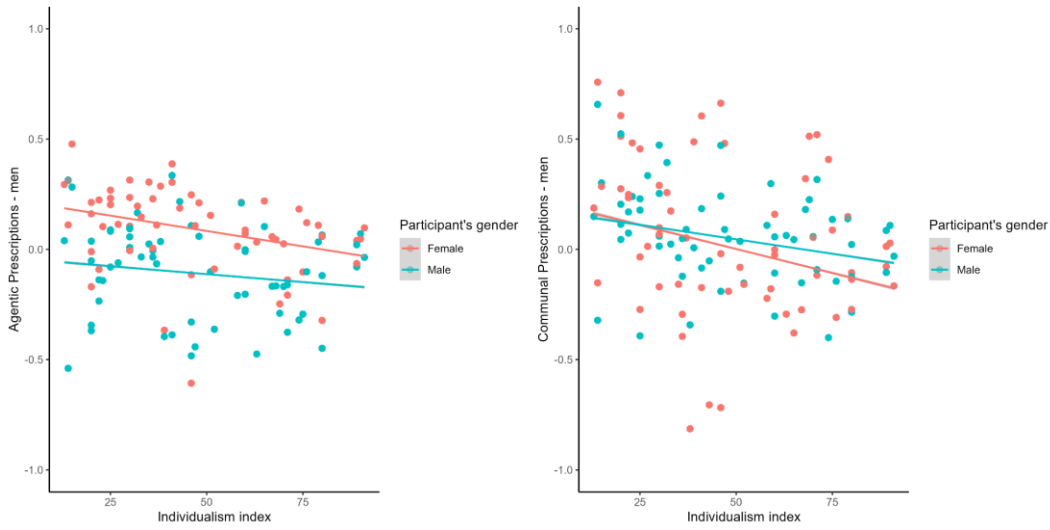
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CULTURE AS MODERATOR OF GENDER STEREOTYPES

1 **Fig. 1**

2 *The Relationship Between Individualism and Agentic and Communal Prescriptions for Men,*
3 *Including 95% Confidence Intervals*

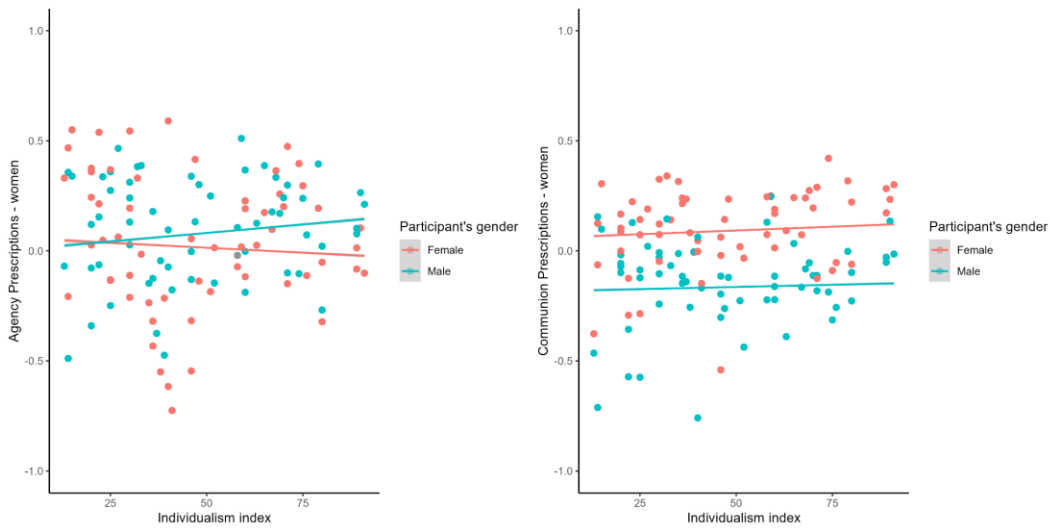
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6 **Fig. 2**

7 *The Relationship Between Individualism and Agentic and Communal Prescriptions for*
8 *Women, Including 95% Confidence Intervals*



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CULTURE AS MODERATOR OF GENDER STEREOTYPES

1 Analyzing differences in agentic and communal prescriptions for men versus women,
2 we found that in general - regardless of country-level individualism - more agency was
3 prescribed to men ($M = 0.83$, $SD = 1.35$, where 0 indicates no difference) than to women
4 (Exploratory Question 1) and more communion was prescribed to women ($M = -0.70$, $SD =$
5 1.34) than to men (Exploratory Question 2) (see Figure 3). However, a main effect of
6 individualism concerning differences in communality prescriptions (Table 4) indicated that
7 the gender gap in communality prescriptions was stronger in more individualistic countries.

8 We also observed a robust gender effect in predicting agentic and communal
9 prescriptions for women and men (Exploratory question 3), indicating that men (versus
10 women) viewed society as prescribing more communion and less agency to men, and more
11 agency and less communion to women. This means that women (more than men) viewed
12 society as prescribing more traditional gender traits to both binary genders. Moreover, the
13 difference in prescribing agency to men vs women and communion to men vs women was
14 smaller among men (see Figure 2).

15 All the observed effects were significant when controlling for GNI. We also found a
16 weak age effect such that younger (compared to older) participants viewed society as
17 prescribing agency more to men and communality less to women (Table 3). Finally, the
18 difference in prescribing communion to men vs women was smaller for older than younger
19 participants (see Table 4).

20

CULTURE AS MODERATOR OF GENDER STEREOTYPES

1 **Table 4**2 *Results of Multilevel Regression Analyses Predicting Prescriptions for Men and Women*

	Differences in prescriptions (traits prescription to men vs women)	
	Agency	Communion
Fixed Effects		
Age	-.01	.02**
Gender (men)	-.22**	.23**
IDV	.01	-.13**
GNI	-.07	.01
Gender(men)*IDV interaction	-.01	.04
Random Effects		
ICC	.07	.05
Residual Variance	1.58	1.63
Cross-country intercept variance	.18	.13
Cross-country gender effect variance	.10	.06
Pseudo-R2(fixed effects)	.016	.025
Pseudo-R2(total)	.093	.077

3 *Note.* Higher scores in differences indicate higher scores for men. Standardized coefficients are reported for
 4 fixed effects. IDV = Individualism, GNI = Gross National Income.

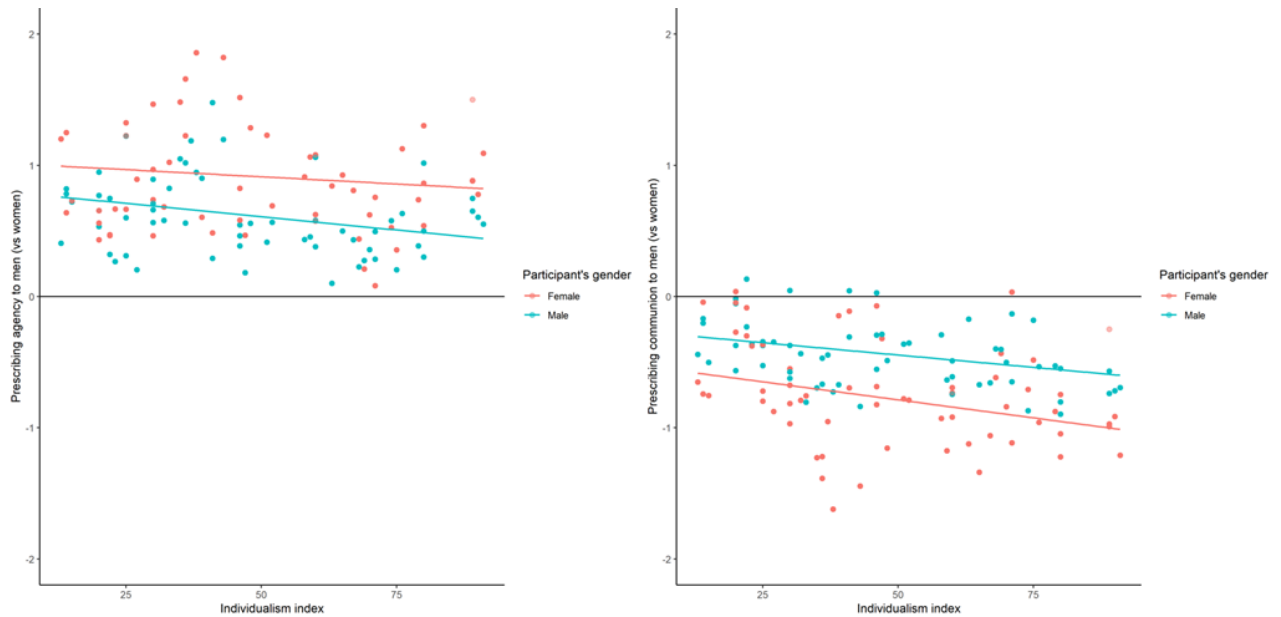
5 * $p < .05$, ** $p < .01$.

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CULTURE AS MODERATOR OF GENDER STEREOTYPES

1 **Fig. 3**2 *Gender Differences in Prescribing Agency and Communion to Men and Women*

3

4 *Note.* 0 indicates an equal prescription score. Negative scores indicate more trait prescribed for women.5 **Discussion**

6 We investigated whether collectivistic versus individualistic cultural values moderate
 7 stereotypical agency and communality prescriptions for women and men. Results supported
 8 Hypothesis 1, showing a negative (though weak) correlation between individualism-
 9 collectivism and communality prescriptions; collectivistic (relative to individualistic) cultures
 10 prescribed more communal traits to men. Hypothesis 2 was not supported: cultural values
 11 were unrelated to agentic prescriptions for men (as well as for women). Further, despite
 12 finding cultural moderation of communal prescriptions for men, we generally found similar
 13 gender stereotyping across cultures. Specifically, women were prescribed more communality
 14 than men (even in highly collectivistic cultures), and men were prescribed more agency than

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1 women (even in highly collectivistic cultures). Thus, we found no evidence for a reversal in
2 gender stereotypes in even the most collectivistic nations – men were not prescribed greater
3 communality or less agency than women. Thus, cultural moderation, while evident, was
4 limited; although culturally valued communal traits were more prescribed for men in
5 collectivistic cultures compared to individualistic cultures, they were not prescribed more
6 strongly for men than for women.

7 The analyses showed that the individualism-collectivism dimension was only weakly
8 linked to prescribing communality to women and was not linked to agentic prescriptions for
9 either women or men. Individualism more strongly negatively predicted communal
10 prescriptions for men than women. The non-significant relationship between agentic
11 prescriptions and individualism seems surprising given that agency and individualism often
12 load on a common factor (Abele & Wojciszke, 2007). Our agentic trait list contained mostly
13 competence-related traits, which Cuddy et al. (2015) distinguished from individualistic traits.
14 They found moderation for their individualistic trait index (e.g., self-focused) but not for
15 competence traits (e.g., intelligent). However, in the current study, factor analysis did not
16 support a 2-factor model for our agency indicators (see OSF Supplementary Materials),
17 which included one individualistic trait (independent) overlapping with Cuddy et al.'s
18 measure (Study 4) as well as competence traits (e.g., capable, leadership abilities). To the
19 extent that agency represents competence, these traits may be universally prescribed as
20 desirable, especially for men, regardless of differences in cultural values.

21 Cultural differences in the perceived relationship between agency and communion
22 provide another potential reason for the lack of cultural moderation on agentic prescriptions.
23 Researchers have noted that the presence of agentic traits might be perceived as the absence

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1 of communal traits and vice versa (Haines & Stroessner, 2019). For example, men who act
2 more communally might be perceived as less agentic. In their proposed Role Prioritization
3 Model (RPM), Haines and Stroessner (2019) argued that as long as an individual does not
4 neglect their prescriptive gender roles, it is acceptable, and even desirable, for them to engage
5 in gender ‘atypical’ yet generally desirable behaviors (e.g., nurturing) – provided that the
6 behavior complements (rather than implies a deficit in) gender traditional behaviors. Given
7 that collectivistic cultures value family-oriented, altruistic, and communal traits, manifesting
8 such traits might be seen as complementing rather than coming at the expense of agency and,
9 therefore, more expected from men than in individualistic cultures. This may explain why we
10 found that men in more collectivistic versus individualistic cultures were expected to possess
11 more culturally desirable communal traits alongside agentic traits. This explanation coheres
12 with the stronger correlation we found between agentic and communal prescriptions for men
13 in collectivistic as compared with individualistic nations.

14 Our results show that prescriptive gender stereotype content converges in
15 collectivistic countries; namely, the gap in prescribing communality and agency to women vs.
16 men was smaller in collectivistic countries as compared to individualistic countries. This
17 result parallels Cuddy et al.’s (2015) findings with descriptive stereotypes. Another analysis
18 performed on data collected in the larger Towards Gender Harmony project in which the
19 current study was embedded found a similar trend in gendered self-views: Men and women’s
20 communal self-views converged in more collectivistic countries (Kosakowska-Berezecka et
21 al., 2022). These parallel findings provide converging evidence for cultural moderation in
22 gendered expectations, prescriptions, and self-views.

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1 The current data also yielded noteworthy participant gender effects and a significant,
2 though weak, age effect. The participant gender effects revealed that compared to women,
3 men perceived society to prescribe more communion and less agency towards men.
4 Correspondingly, men viewed society as holding weaker communal prescriptions for women
5 and stronger agency prescriptions for women. These results seem to contradict prior research
6 in which men typically report more traditional gender beliefs than women (e.g., Brewster &
7 Padavic, 2000). Why might women perceive agentic and communal prescriptions as more
8 aligned with gender stereotypes than men? Perhaps because women generally experience
9 inequality and various disadvantages at work, home, and in their social lives, they are more
10 aware of societal gender inequality, prescribed roles, and stereotypes (e.g., Davis &
11 Robinson, 1991; Pew Research Center report, 2020). Likewise, a weak but significant age
12 relationship showed that younger (vs. older) participants perceived communality as
13 prescribed more to women than men. Younger participants too may have greater awareness
14 about continuing gender inequalities and social expectations than older participants - but due
15 to the age variation across countries in our sample, this claim requires further exploration.

16 Alternatively, gender differences in perceived prescriptions might stem from reactive,
17 aggrieved masculinity in response to changing roles. Some men who embrace conservative
18 ideologies view society as increasingly (and unfairly) privileging women and derogating men
19 who act in stereotypically masculine ways (e.g., as “toxic”) (Bosson et al., 2012). If so,
20 somewhat older and more conservative men may have responded to our questions about
21 “what society values” in men and women by rating society as (unhappily from their
22 perspective) valuing agentic women and demanding that men be “nicer.” Testing this idea

CULTURE AS MODERATOR OF GENDER STEREOTYPES

1 would require assessing people's personal prescriptions for men and women and contrasting
2 those with what they believe society prescribes.

3 **Limitations and Future Directions**

4 The current study has several limitations. First, we lack evidence of our participants'
5 personal endorsement of gender prescriptions. Participants rated what they thought their
6 society viewed as desirable for women versus men and not what they see as desirable for
7 women/men. We intended to capture gender stereotype content that reflects general
8 expectations about women and men, the shared knowledge or consensus about desired traits
9 and behaviors for each gender in a given social context (Ellemers, 2018). Societal gender
10 stereotypes help to perpetuate gender differences by leading people to treat men and women
11 differently and "guiding" women and men to behave in line with societal expectations (Eagly
12 et al., 2000; Prentice & Carranza, 2002).

13 Secondly, in the current study, we examined individualism at the country level using
14 Hofstede et al.'s (2010) approach, categorizing countries as either more individualistic or
15 more collectivistic along a single continuum. A meta-analysis by Pelham and colleagues
16 (2002) indeed showed that countries scoring low on individualism usually score high on
17 collectivism, but not always. Thus, at the cross-national level, it could be more useful to look
18 at individualism and collectivism more nuancedly (e.g., as two dimensions). Nevertheless,
19 despite the lack of strong face validity and internal reliability of his Individualism index,
20 Hofstede correctly identified many of the important facets of individualism and collectivism
21 dimensions (cf. Minkov & Kaasa, 2022)³. Following the "revised theory of modernization"

³ We have also tested our analyses using a more recent conceptualization that provides scores for nations' individualism by Minkov & Kaasa, 2022. Our analyses indicated that the effects manifest similar patterns across

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1 (Welzel, 2013), we expect national cultures to change, but the relative country rank orderings
2 remain stable. This means that countries undergoing similar socioeconomic transformations
3 change their values in the same direction, but they do so coming from different starting
4 positions and continue to move along separate trajectories, which reflect the lasting impact of
5 remote, country-specific historical drivers. Hence, even though countries change their
6 position in absolute terms relative to each other, they seem to remain at a stable distance
7 (Welzel, 2013; Beugelsdijk & Welzel, 2018). Research supports this notion, showing that
8 even though trends toward globalization and Westernization have increased since Hofstede's
9 country-level ratings were initially created (Hofstede, 1980, 2002), relative national rankings
10 on individualism (Hofstede et al., 2010) have remained stable across the years (Best & Puzio,
11 2019). Recent studies also found that individualism, as conceptualized and operationalized by
12 Hofstede, correlates strongly with more recent conceptualizations of individualism-
13 collectivism dimensions (Schwartz, 1994, 2008; Welzel, 2013).

14 Third, participants in the current study were university students, which limits
15 generalizability as we cannot presume that participants were representative of their nations.
16 However, such sampling standardization allowed us to make more reliable cross-country
17 comparisons. Nevertheless, future research would benefit from using more diverse
18 representative samples (including transgender, nonbinary, and sexual minority individuals) to
19 verify whether the current results replicate in community samples and to provide more
20 variance on potential moderators such as age and social class.

21

countries. As before, the most robust effects are observed when it comes to individualism scores predicting communal prescriptions towards men.

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1 **Conclusions**

2 Is the content of prescriptive gender stereotypes moderated by country-level cultural
3 values? Data from 62 countries that varied considerably on individualism-collectivism
4 showed that while men are generally prescribed to manifest agentic traits and women to
5 manifest communal traits, societal values moderate prescriptions for men's communality.
6 Consistent with the notion of men as cultural ideals (Cuddy et al., 2015), more collectivistic
7 (vs individualistic) nations prescribed more communality to men but not women. In contrast,
8 the individualism-collectivism dimension did not predict agentic prescriptions about either
9 men or women. Although we did not find cultural moderation for agentic traits that mainly
10 assessed competence-related characteristics, it remains possible that traits that more directly
11 assess individuals (i.e., pursuing and prioritizing self-interest) could show a cultural
12 moderation effect. For communality, however, converging evidence supports the cultural
13 moderation hypothesis that stereotypes of and prescriptions for men (but not women) link to
14 core cultural values (Best & Puzio, 2019).

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