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# Open society fosters satisfaction: explanation to why individualism associates with country level measures of satisfaction

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## ABSTRACT

Although the association between individualism and satisfaction in societies is well documented, the precise mechanism linking these two remained understudied so far. Here we coin and describe the specific facet of individualism responsible for the above association—the ‘open society’. Open societies foster four others-benefitting attitudes: tolerance, trust, civic engagement, and minimization of materialistic pressure. In the others-benefitting qualities of these four attitudes, this paper finds the mechanism promoting life satisfaction of societies. Further, when open society attitudes are controlled for, the most common facet of individualism (quantified by Hofstede) turns out to be a negative predictor of satisfaction in societies. At the individual level of analysis, the relation of endorsement of four open society attitudes with individual life satisfaction is almost absent. Thus, open society promotes the satisfaction of communities in a eusocial way only.

## ARTICLE HISTORY

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## KEYWORDS

Open society; life satisfaction; subjective well-being; individualism; collectivism; trust; tolerance; materialism; civic engagement; happiness

It must not be forgotten that although a high standard of morality gives but a slight or no advantage to each individual man and his children over the other men of the same tribe... yet that an increase in the number of well-endowed men and advancement in the standard of morality will certainly give an immense advantage to one tribe over another.

Darwin, 1871

Large cross-country studies document that individualism is positively associated with satisfaction of societies endorsing it (Diener, Diener, & Diener, 1995; Hofstede, 2001; see also Table 1). Up to now, however, remained unclear why ‘a social pattern that consists of loosely linked individuals who view themselves as independent of collectives’ and ‘give priority to their personal goals over the goals of others’ (Triandis, 1995, p. 2) could lead to the satisfaction of the country as a whole. The purpose of the current paper is to identify this mechanism. We indicate the set of four attitudes connected to societal well-being: tolerance, trust, civic engagement, and non-materialism. We label them ‘open society’ attitudes, and in their others-benefitting qualities, we find the mechanism responsible for higher societal life satisfaction.

An open society is associated with individualism since it focuses on individual responsibility in each society or

community, but not with its competitive or achievement-oriented facet. Rather, open society attitudes are based on seeking a good relationship between individuals and societies. With two-level modeling, we show that open society attitudes benefit society as a whole, but do not substantially promote individual life satisfaction directly, meaning that open societies are more satisfied, but individuals endorsing open society attitudes are not considerably more satisfied than prejudiced, suspicious, and uninvolved in civic issues and materialistic members of the same society.


## Individualism and life satisfaction

Individualism is not a uniface phenomenon, but rather a set of multifaceted processes (Oyserman, Coon, & Kimmelmeier, 2002; Triandis & Gelfand, 1998). The first, and the most popular by now, cross-country quantification of individualism thus far (as opposed to collectivism) was proposed by Hofstede (2001). Two other large cross-country comparisons label individualism as autonomy (opposed to embeddedness; Schwartz, 2004) and self-expression (opposed to survival values; Inglehart, 1997). Inglehart and Oyserman (2004) propose that these three country level dimensions form the ‘human development syndrome’. Numerous studies

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Data availability: Data and syntax supporting the results can be downloaded from (1) [www.kuba.krys.pl/TheJournalOfPositivePsychology/OpenSociety\\_data\\_plus\\_syntax.zip](http://www.kuba.krys.pl/TheJournalOfPositivePsychology/OpenSociety_data_plus_syntax.zip) and (2) [https://osf.io/2fz98/?view\\_only=39530e2ee3d443c29b1eda2f1507e981](https://osf.io/2fz98/?view_only=39530e2ee3d443c29b1eda2f1507e981).

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Table 1. Zero-order correlations between variables of interest.

	source	dimension	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	own calculation	open society	92	.68***	.96***	.71***	-.80***	.69***	.74***	.67***	.46***	.60***	.68***	.51***	.73***	.52***	.70***
2	Hofstede	individualism	56	70	.64***	.48***	-.59***	.63***	.63***	.21 <sup>+</sup>	.38**	.33*	.28*	.55***	.42***	-.07	.32**
3	Inglehart	self-expression	88	54	88	.69***	-.78***	.67***	.72***	.70***	.54***	.62***	.72***	.56***	.73***	.57***	.75***
4	Schwartz	intellectual autonomy	62	56	59	77	-.89***	.75***	.72***	.57***	.27*	.53***	.52***	.42**	.69***	.41**	.56***
5	Schwartz	embeddedness	62	56	59	77	77	-.86***	-.80***	-.63***	-.36**	-.55***	-.61***	-.53***	-.76***	-.49***	-.64***
6	Schwartz	affective autonomy	62	56	59	77	77	77	.73***	.56***	.39**	.52***	.49***	.56***	.66***	.42**	.60***
7	World Bank	LN GDP <i>per capita</i>	91	69	87	76	76	76	195	.78***	.48***	.55***	.71***	.53***	.84***	.54***	.79***
8	Veenhoven	satisfaction with life	88	68	84	75	75	75	153	155	.43*	.74***	.91***	.45**	.87***	.87***	.94***
9	Díez Medrano	happiness index	85	68	81	69	69	69	102	101	103	.28 <sup>+</sup>	.63***	.68***	.45***	.47***	.69***
10	Kuppens et al.	satisfaction with life	38	37	36	44	44	44	46	46	43	46	.64***	.72***	.67***	.61***	.80***
11	Minkov	life satisfaction	83	64	79	67	67	67	94	93	95	43	95	.49***	.81***	.87***	.94***
12	Diener et al.	subjective well-being	44	44	41	46	46	46	56	53	52	34	51	56	.64***	.33*	.74***
13	WHR	happiness	91	70	87	75	75	75	150	146	102	46	94	55	152	.73***	.91***
14	WVS	life satisfaction	92	58	88	63	63	63	97	94	88	40	86	44	97	98	.89***
15	own calculation	satisfaction MF	92	70	88	77	77	77	195	155	103	46	95	56	152	92	221

Note: Correlations are presented above the diagonal; numbers of countries available for a given dimension are presented at the diagonal; number of countries for each calculated correlation (i.e. common countries for both co-related variables) are presented below the diagonal; WVS – World Values Survey; WHR – World Happiness Report; satisfaction MF (meta factor) – seven previous indices of life satisfaction (numbered 8–14) standardized and averaged.

document that the human development syndrome associates with societal life satisfaction – above and beyond other social, economic and cultural factors characterizing societies (Diener et al., 1995; Kuppens, Realo, & Diener, 2008; Oyserman et al., 2002).

Psychologically good life of societies has been most often conceptualized and quantified across countries as the average life satisfaction of members of a given society (Diener et al., 1995; Kuppens et al., 2008; Minkov, 2009; Veenhoven, 2017; for a comment on cultural diversity in conceptualizations of well-being see supplementary materials). Here, we identify and analyze seven large cross-country datasets on societal life satisfaction, extract a single meta-factor from them, and compare all eight measures with three dimensions of the human development syndrome (see Table 1). This way, we confirm previous findings that regardless of how human development syndrome and societal life satisfaction are measured, these two phenomena are associated. The question remains – why?

Life satisfaction in individualistic societies may be promoted by high social mobility, which enables individuals to choose good opportunities such as desirable persons with whom to interact (Yuki, Sato, Takemura, & Oishi, 2013), or by a strong sense of self-efficacy (Kitayama, Mesquita, & Karasawa, 2006). On the other hand, individualistic people pursue personal achievement and compete more (Oishi, 2000), which might cause potential exhaustion. In addition, high social mobility may lead to social anxiety (Oishi et al., 2013), focusing on personal achievements may undermine interpersonal relationships (Park & Crocker, 2005), and individualistic values may relate to lower number of close friends and lower subjective well-being especially in an interdependent cultural context (Ogihara & Uchida, 2014).

An ambivalent relation between individualism and societal life satisfaction can also be found in studies on liberalism. Liberal mentality–common for people shaped in individualistic countries–may take at least two different forms: (1) prosocial form based on universal values and human rights, and (2) egocentric form based on self-protection and self-enhancement values, called libertarianism (Reykowski, 2017). The prosocial form of liberalism associates with identification with all humanity (McFarland, 2016) or humanitarianism (Feldman & Steenbergen, 2001) which may benefit life satisfaction of communities endorsing these values. The another–egocentric–pole of liberalism (i.e. libertarianism) downplays democracy and equality (Gutman, 2003), links to social Darwinism (Radkiewicz & Skarzynska, 2011), and increases alienation and social exclusion (Cacioppo & Patrick, 2008).

The egocentric form of individualism is an example of a mechanism that may promote life satisfaction of individuals endorsing it, but as well, may undermine life satisfaction of their communes as a whole. Thus, it is quite important to distinguish between individual and societal levels of analyses – mechanisms promoting life satisfaction at one level, do not have to promote life satisfaction on the another level (Uchida, Ogihara, & Fukushima, 2015). The importance of this distinction in studies on well-being was also signaled by sociobiologists: Competitive individuals outperform cooperative individuals, but groups that promote cooperation outperform groups that promote competition (Nowak, Tarnita, & Wilson, 2010; West, Griffin, & Gardner, 2007).

### Mechanism identification

In order to identify the mechanism linking the human development syndrome with societal life satisfaction we reviewed and theoretically analyzed indicators proposed by Hofstede, Schwartz, and Inglehart. We find the sought mechanism in Inglehart's self-expression dimension (see supplementary materials for a discussion of all three dimensions). Inglehart's mapping of countries comes from the World Values Survey (WVS), which is a large international collection of data, carried out since the 1980s and repeated over time on representative samples that cover countries representing 80% of the world's population. As of 2018, data is available for over 340,000 participants from six waves of data collection (the seventh wave is in progress). In a factor analysis of country-level WVS data, Inglehart (1997) found two main dimensions, which he termed traditional vs. secular-rational values, and survival vs. self-expression values.

In order to calculate self-expression values, Inglehart averaged the country level data for five questions covered by WVS: (1) respondents gave priority to post-materialistic aims of societal development, (2) respondents had signed or would sign a petition, (3) respondents disagreed with the statement that homosexuality is never justifiable, (4) respondents disagreed with the statement that you have to be very careful about trusting people, and (5) respondents admitted that their sense of happiness is high. We propose that the factor analysis procedure used by Inglehart and collaborators led to scrambling the causes (the set of four attitudes shared in a given society) with the outcome (the sense of societal life satisfaction). We offer an alternative interpretation of the results of this statistical procedure: We propose to label the four values–i.e. trust, tolerance, civic engagement, and non-materialism–the open society attitudes, and to find in them the mechanism fostering societal life satisfaction.

### Others-benefitting qualities of the open society

All four attitudes, identified by Inglehart (1997) to construct the open society, are eusocial: They promote the well-being of a society as a whole, and not individual satisfaction. First, out of all 'faces' of tolerance – towards LGBTQ groups, other religions, foreigners, etc. – the most sensitive indicator of overall tolerance is tolerance towards LGBTQ, the least liked group in most societies (at least at the current point of human history). However, being tolerant in general, and being tolerant towards homosexuals in particular, does not have to directly make one considerably more satisfied. Rather, a tolerant societal environment improves the life satisfaction of the whole community – tolerance benefits all.

Second, living in a trustful societal environment brings benefits to all. Kawachi and collaborators (1997) documented that a mutual trust system protected the health of members of trustful communes. Similarly, Elgar (2010) showed based on data from 33 countries that trust co-relates with life expectancy. However, other studies show that trust may also directly impact individual life satisfaction (Mueller, 2008). Thus, trust may probably promote life satisfaction both in a eusocial and direct way (Tov & Diener, 2009).

The third attitude identified for open society–civic engagement–carries for an individual both costs (engagement) and benefits if engagement changes his/her societal environment. For a society, as compared to an individual, a high level of civic engagement is conducive to societal life satisfaction: Civic engagement creates social capital of the society (Kenworthy, 1997; Lun & Bond, 2016), civic societies are better organized, better regulated, and more accurately respond to people's needs (Skidmore, 2001). Finally, the fourth quality–non-materialistic attitude–means less pressure for status and materialistic competition, and fosters higher sense of respectability. Whereas for individuals the association between materialism and low life satisfaction is documented but rather weak (Dittmar, Bond, Hurst, & Kasser, 2014), materialistic pressure on the level of a society considerably undermines societal life satisfaction (Welzel, 2013).

### Theoretical clarifications

The distinction between the proposed here open society and Inglehart's self-expression is theoretically justified and practically needed. Although these two dimensions can seem confounding, the four attitudes constituting open society, i.e. tolerance, trust, civic engagement and non-materialism, are qualitatively different from the fifth

attribute identified in self-expression – the sense of satisfaction in a society. Inglehart discovered the self-expression dimension by factor analyzing country-level averages of the World Values Survey items. However, factor analysis is a statistical procedure only – it produces results that require theoretical justification, and phenomena assembled into one factor need to be conceptually coherent (Kim & Mueller, 1978). Thus here, we propose to:

- (1) conceptually split Inglehart's self-expression and to separate causes (i.e. attitudes constituting open society) from result (i.e. sense of satisfaction in a society), and to
- (2) interpret the results of Inglehart's factor analysis as a confirmation to a strong association between open society attitudes and satisfaction in a society.

Open society and self-expression differ in the essence of their conceptualizations. They are based on different mechanisms (emancipative tendencies vs others-benefitting attitudes) and are centered around different subjects (self vs others). Importantly, the above re-interpretation lets us identify the mechanism responsible for the facilitation of satisfaction in societies – the others-benefitting character of open society attitudes fosters satisfaction in societies (see the previous section of the current paper).

Inglehart and Baker (2000) explain that self-expression values give high priority to emancipative orientation. In contrast, we highlight the others-benefitting character of four attitudes constituting the open society. This difference carries practical and theoretical implications. Focus on emancipation can lead to freedom- (of expression, of action, of construing selfhood) oriented activities, whereas sensitivity to others may lead to care- and welfare- oriented activities. If referring to theorizing on moral foundations, self-expression values with their emancipative orientation fall within liberty (vs oppression) moral code, whereas open-society attitudes are conceptually aligned with care (vs harm) moral foundation (Graham et al., 2011; Iyer, Koleva, Graham, Ditto, & Haidt, 2012). In practice, policies embedded in emancipation (i.e. based on liberal morality) may differ from policies embedded in sensitivity to others (i.e. based on care-driven morality). For example, the idea of a welfare state (Quadagno, 1987) can be more congruent with the concept of open society than with self-expression values.

The subject – self vs others – is the second key conceptual difference. Inglehart centers his conceptualization around individual self: *self-expression*, and *self-emancipation* are the key terms to understanding Inglehart's dimension. In contrast, we make others the focal point – open society is centered around *others-*

benefitting attitudes. In self-expression values, an agent's actions empower his or her freedom, and expression of his or her selfhood; in the open society concept, an agent's actions are benefitting other people. This difference in framing may carry consequences for motivations (e.g. see studies on recipient vs agent perspective; Wojciszke & Baryla, 2006), for social perception (e.g. see studies on agency/competence and morality/warmth; Abele & Wojciszke, 2014; Fiske, Cuddy, & Glick, 2007), or for construals of selfhood (e.g. see studies on independent and interdependent selfhoods; Markus & Kitayama, 1991; Vignoles et al., 2016). Finally, self-focus clearly fits conceptualizations of individualism, whereas others-focus can be recognized as carrying collectivistic qualities. See Table 2, for extended list of dualities that bear a resemblance to the discussed here self-expression and open society comparison.

We extract open society attitudes from the individualistic phenomena of self-expression values (Oyserman et al., 2002). Empirically, open society also overlaps with indices of individualism (see associations presented in Table 1 – their strength is between .68 and .96). Conceptually, however, open society may be recognized as carrying certain characteristics of collectivism: The others-benefitting character of open society attitudes is eusocial in nature and centered around others. We acknowledge this theoretical overlap and find it reasonable and conceptually coherent (see also Jasielska, Stolarski, & Bilewicz, 2018). First of all, 'loosely linked individuals who view themselves as independent of collectives' can be sensitive to the needs of people around (as studies on prosocial liberalism document; Reykowski, 2017). Second, 'giving priority to personal goals over the goals of others' does not mean the lack of concern about others. Members of open societies can pursue their own goals and be sensitive to other people's needs as well. Thus, societies that combine positives of both individualism (prosocial liberalism) and collectivism (sensitivity to others) are possible (e.g. welfare societies), and probably efficient in fostering satisfaction of their members.

## Methods

We check whether others-benefitting qualities of open societies are responsible for the individualism-satisfaction association, and whether they are eusocial in their nature.

### *Societal life satisfaction measures*

We extracted the societal life satisfaction meta factor from seven different, and available for free, rankings of

**Table 2.** Self-expression compared with open society, and similar dualities in social sciences.

	Self-Expression	Open Society
<b>Mechanism</b>	<i>Emancipative Tendencies</i> Emphasis on agent's free choice, equal opportunities, human empowerment, and expression of self.	<i>Others-Benefitting Attitudes</i> Emphasis on attitudes benefitting society.
<b>Subject</b>	<i>Self</i> Consequences directed mostly at agent's self-expression and self-emancipation.	<i>Others</i> Consequences directed mostly at people around agent.
<i>Examples of Similar Dualities (arranged from macro level to individual level phenomena [roughly]):</i>		
<b>Evolution</b> (Wilson & Hoelldobler, 2005)	<i>Individual-selection</i> Personal survival and reproduction of each of the colony/society members.	<i>Group-selection</i> Survival and reproduction of entire cooperative groups.
<b>Biology</b> (Boomsma & Richard, 2018; West, Fisher, Gardner, & Kiers, 2015; Wilson, 1975/2000)	<i>Individuality</i> Individual organisms prioritise their own potential.	<i>Eusociality</i> Individual organisms dedicate their own potential to raise the potential of the whole group.
<b>Types of states</b> (Doyle, 1985; Pierson, 1996)	<i>Liberal state</i> Political power is used to guarantee individual rights of equality before the law, free speech, and private property.	<i>Welfare state</i> Political power is used to modify the play of the market forces, and to increase equality of chances.
<b>Models of democracy</b> (Habermas, 1994)	<i>Liberal Democracy</i> Democracy as the process of finding compromises between competing interests.	<i>Communitarian Democracy</i> Democracy is linked to a concrete, substantively integrated ethical community.
<b>Political doctrines</b> (Reykowski, 2017)	<i>Liberal doctrines</i> Individual freedom is the absolute priority (unless it threatens freedom of other individuals).	<i>Socialistic doctrines</i> Individual freedom can be limited for the sake of society.
<b>Power construals</b> (Sassenberg, Ellemers, & Scheepers, 2012)	<i>Opportunity</i> Power as a focus on the possibility of the achievement of own goals.	<i>Responsibility</i> Power as a focus on the implications of own actions.
<b>Management styles</b> (Stogdill, 1950)	<i>Goal Achievement Orientation</i> Thinking on one's own, and working independently are valued.	<i>Relationship Orientation</i> Social skills, group harmony, and loyalty to the team are valued.
<b>Moral foundations</b> (Graham et al., 2011; Iyer et al., 2012)	<i>Liberty</i> Reactance and resentment towards those who dominate and restrict liberty.	<i>Care</i> Feeling (and dislike) of the pain of others; linked to virtues of kindness, gentleness, and nurturance.
<b>Developmental tasks</b> (Erikson, 1950)	<i>Autonomy</i> Developmental problem: Can I act on myself? Failure leads to shame and doubt.	<i>Trust</i> Developmental problem: Can I trust others? Failure leads to mistrust.
<b>Selfhoods</b> (Markus & Kitayama, 1991; Vignoles et al., 2016)	<i>Independent</i> Independent view of the self as bounded, unitary and stable.	<i>Interdependent</i> Interdependent view of the self as closely connected to others, and fluid.
<b>Dimensions of social cognition</b> (Abele & Wojciszke, 2014)	<i>Agency</i> Stretched along traits related to competence, ability and social status, e.g. skilful, determined, intelligent.	<i>Communion</i> Stretched along traits related to morality, warmth and supportive social connections, e.g. warm, sociable, empathic.

Note: Emancipative tendencies and others-benefitting attitudes overlap. By contrasting them, we do not propose that they exclude each other, but we wish to highlight differences between Inglehart's self-expression and its our re-interpretation into open society. We acknowledge that both mechanisms operate concurrently, but we also posit that to identify antecedents of some phenomena one may need to employ emancipative tendencies (e.g. sense of freedom in a given society), whereas to understand other phenomena one may need to employ others-benefitting attitudes (e.g. discussed in the current paper sense of satisfaction in a society). However, after all, self-expression and open society constitute two sides of the same phenomena, and we expect them to mutually reinforce.

societal life satisfaction: subjective well-being from Diener and collaborators (1995), satisfaction with life from Veenhoven (2017), happiness from Díez-Medrano (2017b), satisfaction with life from Kuppens and collaborators (2008), life satisfaction from Minkov (2009), happiness from the World Happiness Report (WHR; Helliwell, Layard, & Sachs, 2015), and the latest life satisfaction variable from World Values Survey (WVS). All indexes were standardized, and the mean was calculated for each country from standardized variables (Cronbach's alpha = .91). Drawing from multiple data sources allowed to minimize bias originating in reliance on a single method (e.g. both WHR and Veenhoven provide data for the large number of countries but

adopt different methodology – Cantril ladder administered in Gallup's poll vs compilation of various sources respectively). Other cross-cultural studies also extracted meta-factor from various country-level datasets grasping similar phenomena (e.g. Kryś et al., 2018).

### **Human development syndrome measures**

Data on individualism were taken from Hofstede (2017). Schwartz (2008), in his taxonomy of cultural values, provided three different dimensions related to the human development syndrome: intellectual autonomy (+), affective autonomy (+), and embeddedness (-). They are closely co-related (.75 <  $r_s$  < .89, see Table 1), and all three are also

co-related with the satisfaction in societies meta factor ( $.56 < r_s < .64$ , see Table 1). Therefore, we combined them into a single dimension. However, we also confirmed that the findings remain substantially the same for all three Schwartz dimensions analyzed separately. Inglehart's self-expression scores were calculated from data provided by World Values Survey according to the syntax provided by Díez-Medrano (2017a).

### **Open society scores**

Calculation of the open society scores was also based on the World Values Survey data. In calculations, we followed the Díez Medrano (2017a) approach but selected only four items of our interest: tolerance towards homosexuals (item F118), trust towards other people (item A165), readiness to sign a petition (item E025), and post-materialism index (variable Y002). The reliability of open society turned out to be satisfactory ( $\alpha = .81$ ). The World Values Survey in the moment of preparation of the current paper offers six waves of data, but not every wave covers every country. Thus, when calculating scores, for each country we selected the latest available data. We provide syntax with calculations as the separate file of the supplementary materials. We carried out a similar procedure on the level of individuals and found out that open society is not a reliable variable to analyze attitudes of individuals ( $\alpha = .45$ ). Thus, open society, like other human development syndrome dimensions, can be recognized as a country level variable only.

### **Analyzed countries**

Our analyses covered each country for which data of our interest are available for free, but, coverage of countries in various cross-country projects does not overlap. Thus, not every measure is available for every country. On the diagonal of Table 1, we present the number of countries that was available for a given measure, above the diagonal (upper right part of Table 1) we present the correlations between variables, and below the diagonal (lower left part of Table 1) the number of countries that overlap for the given two measures (N for correlation calculation). The number of overlapping countries becomes even smaller for regressions (when three or more variables are taken into account), thus, for analyses detecting which component of the human development syndrome better predicts the satisfaction in societies meta factor, we could use data from 47 countries overlapping in all four analyzed measures (individualism, three dimensions of Schwartz, open society, and the satisfaction in societies meta factor).

### **Country-level analyses**

The strength of the relationship between variables of interest was estimated using linear regression analyses. Because economic prosperity is considered to be a significant predictor of both satisfaction in societies and the human development syndrome, we wanted to make sure that the analyzed mechanisms are independent of economic prosperity. Therefore, all regression analyses are presented in two versions: with and without controlling for economic prosperity (log transformed GDP per capita). Data on GDP per capita were taken from the World Bank database (2017). As for Libya, Andorra, Puerto Rico, and Venezuela the 2015 GDP per capita was not provided, therefore we took the latest available data on their GDP per capita, i.e. from 2011, 2014, 2013, 2013 respectively.

### **Two-level analysis**

We used WVS dataset to carry out two-level models. Before we ran the two-level analysis, we calculated the intra class correlation coefficient and learned that two-level analysis is justified – country level explains 16% of variance in individual life satisfaction. In the two level analysis, open society served as a country level independent variable, and four attitudes constituting open society served as individual level independent variables (we analyze four individual level variables separately, because they do not constitute a reliable measure at the level of individuals – see the above section: open society scores). We also calculated the effects of the cross-level interactions to control whether individuals' attitudes constituting open society do maintain the character of their association with personal life satisfaction in any type of society (high vs low on open society dimension). Because WVS measured variables of our interest on different scales, we standardized the variables. We standardized individual level independent variables within countries (which also allowed us to group-mean center them), and dependent variable we standardized within the whole sample. The procedure of computing open society (i.e. country level variable used in two-level model) produced an already standardized open society variable (and grand mean-centered). Additionally, the standardization of variables allowed for the calculation of standardized coefficients (standardization in two-level modelling was adopted also by Hornsey et al., 2018). WVS offers data from over 300,000 participants thus we report the coefficients with  $p < .0001$  as significant.

All analyses were carried out with IBM SPSS Statistics version 24. The syntax for all transformations and analyses (regressions and two-level model) is available as supplementary material.

## Results

### Country-level analyses

First, we checked which of the three human development syndromes – Hofstede's, Schwartz's, and coined here open society – associates with societal life satisfaction (mean level of life satisfaction in each country). We did so by regressing the life satisfaction meta factor (extracted from seven large cross country comparisons of life satisfaction) on these three indexes concurrently. Open society turned out to be the only one that with statistical significance that positively predicts societal life satisfaction. The effect sizes for open society and satisfaction in societies association were large:  $\beta = .98$  and  $\beta = .88$  (for models without and with controlling for economic prosperity respectively; see Table 3). Furthermore, when other dimensions were controlled, Hofstede's individualism, i.e. the most common measure of the human development syndrome, changed direction of its association with satisfaction in societies from significant positive ( $r = .35$ ) to negative ( $\beta = -.27$ ,  $p = .07$ ; see Table 3). VIF coefficients lower than three (see Note to Table 3) indicate that multicollinearity, i.e. high correlations among measured variables, is not a problem in our analyses.

Additional regression confirmed that when open society was controlled for, Hofstede's individualism associated negatively with societal life satisfaction ( $\beta_{\text{individualism}} = -.35$ ,  $p = .010$ , 95% CI [-.61, -.09];  $\beta_{\text{open society}} = .92$ ,  $p < .001$ , 95% CI [.66, 1.18]; VIF = 1.9;  $N_{\text{countries}} = 55$ ); also when economic prosperity was controlled for ( $\beta_{\text{individualism}} = -.38$ ,  $p = .006$ , 95% CI [-.65, -.12];  $\beta_{\text{open society}} = .81$ ,  $p < .001$ , 95% CI [.50, 1.13]; VIF < 2.8;  $N_{\text{countries}} = 55$ ). Thus, when others-benefiting qualities of the human development syndrome are controlled for, the remaining processes underlying individualism (e.g. focus on personal achievement, individual autonomy, competition; Uchida et al., 2015) hinder societal life satisfaction.

### Two-level analysis

We carried out two-level analysis to check the postulated eusocial character of the open society and life satisfaction association. It confirmed that country level variable of open society is a good predictor of the sense of life satisfaction of individuals ( $\beta_{\text{open society}} = .20$ , see Table 4). Two attitudes constituting open society – tolerance and civic engagement – did not facilitate personal life satisfaction of individuals endorsing them. Two other attitudes turned out to facilitate personal life satisfaction weakly ( $\beta_{\text{trust}} = .06$ ,  $\beta_{\text{non-materialism}} = .02$ , see Table 4) which confirms the results of previous studies on the association between trust and materialism with life satisfaction (Dittmar et al., 2014; Mueller, 2008). No statistically

**Table 3.** Regressions of satisfaction in societies on three dimensions of the human development syndrome (and economic prosperity).

source	human development syndrome	zero order correlation with DV	model A			$R^2 = .54$		model B			$R^2 = .57$	
			$\beta$ [95% CI]	partial correlation	$t$	$p$	$\beta$ [95% CI]	partial correlation	$t$	$p$		
own calculation	open society	.71***	.98 [.62, 1.34]	.64	5.5	<.001	.88 [.50, 1.26]	.58	4.7	<.001		
Hofstede	Individualism	.35*	-.24 [-.54, .06]	-.24	1.6	.11	-.27 [-.57, .02]	-.28	1.9	.070		
Schwartz	autonomy/embeddedness	.47***	-.14 [-.47, .20]	-.12	.8	.42	-.21 [-.56, .13]	-.19	1.2	.22		
World Bank	economic prosperity	.58***	-	-	-	-	.25 [-.08, .57]	.23	1.5	.14		

Note: Dependent variable – Satisfaction in Societies Meta Factor (life satisfaction index extracted from seven different measures of societal life satisfaction). Models A and B present analyses without and with economic prosperity controlled for respectively. Open society combines four attitudes: 1. tolerance, 2. trust, 3. civic engagement, and 4. non-materialism. Schwartz autonomy/embeddedness combines three Schwartz dimensions: intellectual autonomy (+), affective autonomy (+), and embeddedness (-) and results for each dimension analysed separately remain substantially the same. Economic prosperity – log transformed GDP *per capita* 2015 (for Libya, Andorra, Puerto Rico, Venezuela the latest GDP *per capita* available, i.e. 2011, 2014, 2013, 2013 respectively). Ns = 47, VIFs < 3.



**Table 4.** Parameters of two-level model with life satisfaction as dependent variable.

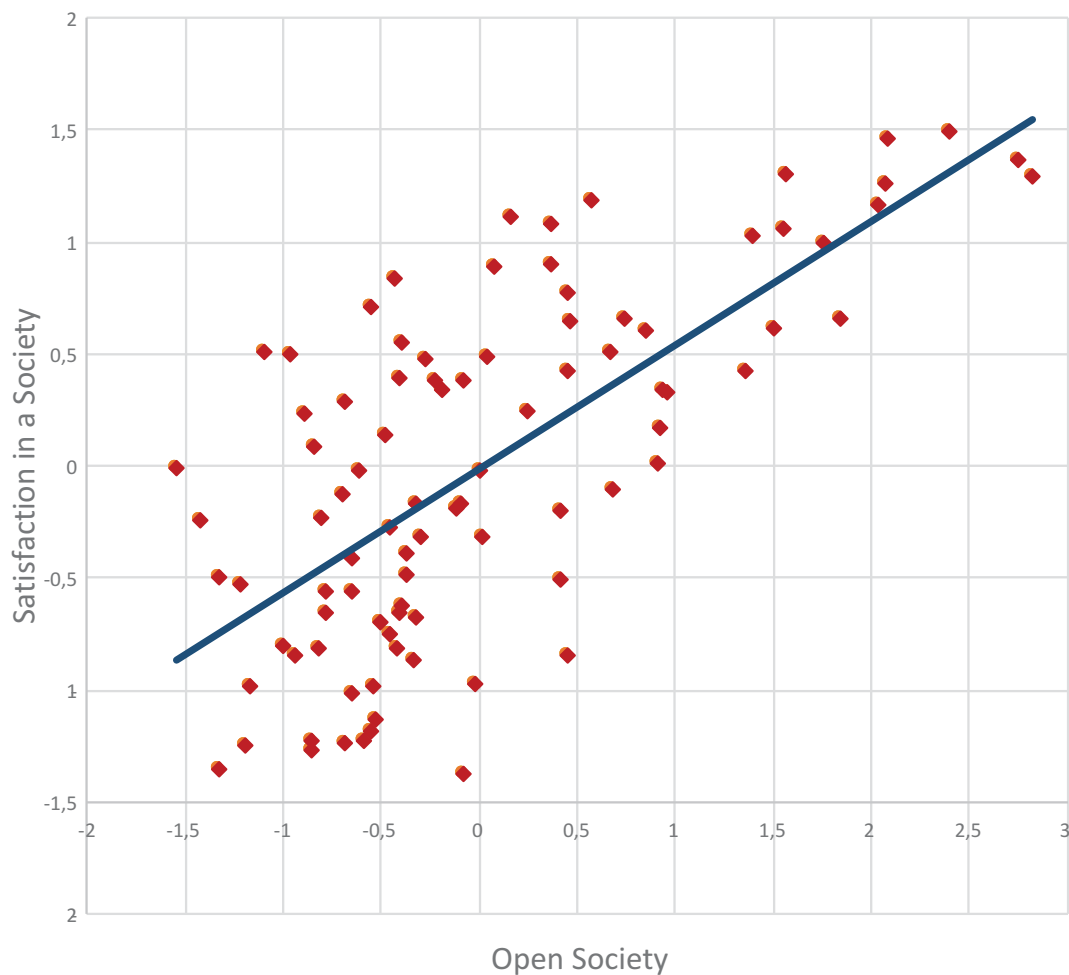
	regression coefficient [99.99% CI]	t	p
Culture level variable:			
open society	.20 [.05, .35]	5.5	<.0001
Individual level variables:			
trust	.06 [.03, .09]	9.0	<.0001
civic engagement	.01 [-.01, .04]	2.2	.03
tolerance	.01 [-.01, .04]	2.4	.02
non materialism	.02 [.01, .04]	5.9	<.0001
Cross-level interactions:			
trust x open society	.01 [-.02, .04]	1.4	.17
civic engagement x open society	<.01 [-.02, .03]	.5	.64
tolerance x open society	<.01 [-.02, .03]	.4	.71
non materialism x open society	-.01 [-.03, .004]	3.2	.002

Note:  $N_{\text{participants}} = 125,487$ ;  $N_{\text{cultures}} = 92$ .

significant cross-level interaction was found, which further documents that individuals' attitudes constituting open society do not change character of their association with personal life satisfaction in any type of society (neither high nor low on open society dimension).

## Discussion

Up to now, some could conclude that individualism in each form brings life satisfaction to societies. Here, we document the complex nature of this association and indicate the mechanism responsible for higher declarations of life satisfaction in individualistic societies. Members of societies declare higher life satisfaction if they constitute a specific form of individualism – open society (see Figure 1). In contrast, when open society attitudes are controlled for, the most often studied Hofstede's facet of individualism turns out to be detrimental to societal life satisfaction. In other words, if others-benefitting qualities of individualism are partialled out, satisfaction in societies is associated with collectivism (and not individualism). Importantly, open society attitudes do not promote individual satisfaction directly; Individuals endorsing open society attitudes are not considerably more satisfied than prejudiced, suspicious, and uninvolved in civic issues and materialistic members of the same society.



**Figure 1.** Scatter plot with best-fitting regression line showing the association between the open society (societies with high levels of tolerance, trust, civic engagement, and non-materialism) and the satisfaction in societies (meta factor extracted from seven measures).

The fact that the described here mechanism is eusocial in its nature carries important practical implications. The direct benefits (i.e. easily observable or experienced) of an individual adopting the open society attitudes are rather weak and limited to trust and non-materialism. Therefore, if we wish to promote the open society facet of individualism, the incentives towards adopting it need to be orchestrated by numerous actors: governing bodies, international and local organizations, and every single person who wishes a society lives a more satisfactory life. Furthermore, if liberalism, as political orientation common for people in individualistic societies, is to bring societal well-being then it has to be endorsed in its prosocial form. Libertarianism—the ego-centric form of liberalism—will probably not make societies more satisfied (and only several of the most successful individuals may benefit from it, maybe). The negative association of Hofstede's individualism with satisfaction in societies (when open society is controlled for) may even suggest the detrimental role of libertarianism for satisfaction in societies.

Before conclusions are drawn, it is important to acknowledge several limitations of this study. First, we acknowledge that the causality is probably bi-directional and that satisfied societies may facilitate open society attitudes. Open society attitudes are others-directed, whereas sense of satisfaction is intrapersonal, thus, we found it likely that societally shared attitudes have stronger influence on sense of satisfaction, than shared level of satisfaction has on attitudes. The hypothesis on the bi-directional nature of association is complementary to our reasoning, thus, it does not undermine the conclusions presented here. Second, in calculating the open society scores we relied on self-reports. This carries some risks of inaccuracy in reporting. In particular, in cross-country studies, it is possible that people in various countries interpreted questions differently. It is important to replicate the current findings with more objective measures of open society. Third, the understanding of psychological well-being varies between individuals and cultures (for a comment see supplementary on-line materials). Future studies may describe mechanisms enhancing societal interdependent happiness (Hitokoto & Uchida, 2015), or societies whose citizens describe their lives as meaningful (Heintzelman & King, 2014; Oishi & Diener, 2014). Generalization of our results shall remain limited to satisfaction in societies.

We acknowledge that the open society, coined here, and Inglehart's self-expression dimensions can seem confounding – their  $r = .96$  (see Table 1). However, we believe that splitting self-expression into open society and satisfaction in societies is theoretically justified and practically needed. Open society and self-expression are based on different mechanisms (emancipative tendencies vs others-

benefitting attitudes), and centered around a different subject (self vs others). Importantly, by doing so, we separate causes (open society attitudes) from effects (state of satisfaction in a society). Finally, our re-interpretation let us describe the mechanism enhancing satisfaction in societies – these are others-benefitting qualities of open societies that increase satisfaction in societies.

Despite some limitations, our study showed that the pathway to satisfaction in societies leads not through individualism *per se*, but by promoting open society attitudes. It is noteworthy that the others-benefitting qualities of open society attitudes, although derived from studies on individualism, fit the conceptualization of collectivism; and that when open society is controlled for, then satisfaction in societies is predicted by collectivism (and not individualism). Could sensitivity to others be the key to satisfaction in societies?

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