

This is the accepted version of the manuscript below in press by Elsevier in *Personality and Individual Differences*, available at <https://doi.org/10.1016/j.paid.2021.111083>

Aldrovandi, S., Dhillon, J., & Rentzelas, P. (in press). To achieve and to conform: Motivational values predict social comparison orientation. *Personality and Individual Differences*. doi: 10.1016/j.paid.2021.111083.

To Achieve and to Conform: Motivational Values Predict Social Comparison Orientation

Silvio Aldrovandi<sup>1\*</sup>, Jaspal Dhillon<sup>1a</sup>, Panagiotis Rentzelas<sup>1</sup>

<sup>1</sup> Department of Psychology, Birmingham City University, 4 Cardigan Street, Birmingham, B4 7BD, United Kingdom

<sup>a</sup> Was a Postgraduate student at Birmingham City University at the time the research was carried out.

### Abstract

As personal motivational values have been shown to associate with personality traits, we explore whether they also predict social comparison orientation (SCO), the proclivity to compare with other people in order to inform self-evaluation judgements. Participants completed the Portrait Values Questionnaire (Schwartz et al., 2001) to measure personal values and INCOM (Gibbons & Buunk, 1999) to assess SCO. Bayesian analyses revealed that the personal values of achievement and conformity strongly predicted SCO. The association between SCO and three other personal values—power, universalism, and benevolence—were mediated by achievement. The findings suggest that the tendency to compare to others is determined by very two different motivational values, gaining personal success through demonstrating competence according to social standards and exercising behaviours and attitudes that adhere to social norms.

*Keywords:* social comparisons; motivational values; achievement; conformity; power.

Social Comparison Orientation (SCO) personality trait refers to the inclination to compare to others (Gibbons & Gerrard, 1995). SCO has been shown to be associated with stable personality traits and individual characteristics. For instance, people high in neuroticism and extraversion engage more frequently in social comparisons, albeit due to different reasons (e.g., van der Zee, Buunk, & Sanderman, 1999). Darnon, Dompnier, Golloeron and Butera (2010) showed that the drive of competitive people to achieve goals and pursue mastery was a strong predictor of SCO. Similarly, individuals who have a keen interest in or are influenced by the moods and feelings of others—people who score highly on empathy—tend to have high SCO (e.g., Wehrens et al., 2010).

The above features reflect elements that are captured by the concept of personal motivational values. Schwartz (1992) recognises that the 10 overriding values—benevolence, universalism, self-direction, security, conformity, hedonism, achievement, tradition, stimulation and power—to some degree complement or conflict with each other. For example, hedonism and stimulation would coalesce in the pursuit of pleasant arousal; similarly, both achievement and power lead the individuals to seek social superiority and esteem.

When considering Schwartz's (1992) theory of basic human values, clear similarities can be observed with the underlying motivational factors underpinning SCO. Achievement and power values stress the pursuit not only of individual interests, but also of some level of supremacy over others. Universalism and benevolence values represent a fundamental concern and empathy for the welfare of other people (Schwartz, 2012) and have been shown to predict pro-social behaviour preferences (Heilman & Kusev, 2020). Whilst values such as self-direction, stimulation, achievement and power underpin a personal focus, the values of security, conformity, and tradition reflect a social focus.

Evidence from the literature investigating the association between personality traits and motivational values offers indirect suggestions that the latter might associate with SCO. Extraversion positively associates with SCO and it correlates with the values of achievement, stimulation and hedonism (Roccas, Sagiv, Schwartz, & Knafo, 2002), thus suggesting that people who place high importance on these values may also frequently socially compare and relate with others. Roccas et al. (2002) showed that conscientiousness correlated with conformity and achievement values: SCO could be one of the strategies adopted by conscientious people in order to avoid disruption and to maintain social order. The openness trait was found to be associated with values of universalism and self-direction; the emphasis of independence along with an acceptance of different perspectives meant it correlated negatively with values of conformity, security and tradition (Roccas et al., 2002). Buunk et al. (2005) reported that trait openness was associated with decreased SCO; as such, these findings would suggest that the above values of universalism and self-direction might negatively relate to SCO.

This study thus examines the relationship between people's motivational values and their tendency to compare with others, and it proposes the following hypotheses:

H<sub>1</sub>: Individuals who highly value achievement, power, stimulation, hedonism and conformity will report higher SCO levels.

H<sub>2</sub>: Individuals who more highly value universalism and self-direction will report lower levels of SCO.

## **Method**

### **Participants**

An a priori power analysis was conducted using the software package G\*Power (Faul, Erdfelder, Lang, & Buchner, 2007). A sample size of 118 was required to achieve power = .80, anticipating a medium effect size (e.g., Roccas et al., 2002; van Der Zee et al., 1999) and

considering the number of predictors. Due to practical constraints, under-recruitment took place. Bayesian analyses were performed in order to test the robustness of the findings.

A total of 100 participants (75 males) took part in the online study. Participants' age ranged from 20 to 60 ( $M = 36.29$ ,  $SD = 8.54$ ) and they were recruited via social media sites (see Supplementary Materials for additional information), with a small proportion being recruited via a West Midlands University's participation credit scheme. Participants needed to be fluent in English and aged at least 18 years old.

### **Design and Materials**

**The Portrait Values Questionnaire.** The PVQ (Schwartz et al., 2001) asked the participants to compare themselves with 40 different short, gender-matched portraits; each portrait depicted a person's goals and implied the importance of a value. Participants responded to each description using a Likert scale ranging from 1 = 'not like me at all' to 6 = 'very much like me'. The score for each value was then calculated as the difference between the sum of all the scores for the value's relevant items and the grand mean for all the 40 items; thus, the PVQ measures the relative importance of each individual value against all the other values, without explicitly mentioning any of them.

**Iowa-Netherlands Comparison Orientation Measure.** The INCOM (Gibbons & Buunk, 1999) includes 11 statements to measure SCO and participants were asked to respond to each statement on a five-point scale ranging from 1 = 'I strongly disagree' to 5 = 'I strongly agree'. High scores indicate high proclivity to compare to others.

### **Procedure**

As no remuneration was offered, engagement with the survey was fostered by informing participants that they would be presented with their 10 personal value scores at the end of the survey. The study was approved by the University's ethics committee. Once directed to the survey hosted on Qualtrics®, participants were asked to confirm their gender

as this information allowed for the PVQ portraits to be framed using the corresponding pronoun to increase saliency. Participants were randomly assigned to complete either the INCOM or PVQ first to control for order effects. Completion of the survey was self-paced.

### Results

Four participants were excluded from the analyses as they had a considerable amount of missing data (>38%), which were not missing completely at random, MRC Little's Test,  $\chi^2(3) = 15.70, p = .001$ . The predictors were the 10 values from the PVQ (Cronbach's  $\alpha = .85$ ) and the outcome was the total SCO (Cronbach's  $\alpha = .77$ ).

Descriptive statistics and correlational analyses are presented in the Supplementary Materials (Tables A1 and A2). A medium to strong correlation was observed between SCO and achievement,  $r = .41$ , whilst the outcome correlated weakly to moderately with power, universalism and benevolence,  $.21 < |rs| < .28$ .

A linear regression Bayesian analysis was run. We performed the equivalent of a hierarchical regression by including age and gender in the null model. We used BAS sampling method and a uniform model prior with the  $r$  scale of JZS prior on parameters set to .35 (default). When different model priors (e.g., beta-binomial), sampling method (e.g., MCM) and different prior widths were used (from  $r = .25$  to  $r = .50$ ), the results did not change in a meaningful way. We utilised the model-averaged posterior distribution for the regression coefficients and we compared each model to the null model to estimate Bayes Factors (see Table A3 in the Supplementary Materials). The analysis shows that best model was the one that included achievement and conformity, which also feature in all the 10 best models.

More importantly, posterior summary coefficients analysis on each individual predictor offered substantial and very strong evidence for the coefficients for conformity,  $BF_{10} = 5.25$ , and achievement,  $BF_{10} = 33.03$ , respectively (all other  $BF_{10} < 0.55$ ; see Table 1

below). The same outcome was observed when a parametric hierarchical regression analysis was performed instead (see Table A4, Supplementary Materials).

Table 1. *Posterior summaries of coefficients for the individual predictors.*

Coefficient	P(incl)	P(incl data)	BF <sub>inclusion</sub>	Mean	SD	95% Confidence Interval	
						Lower	Upper
Power	0.50	0.32	0.46	0.12	0.46	-0.67	1.30
Achievement	0.50	0.97	33.03	2.23	0.83	0.00	3.51
Hedonism	0.50	0.34	0.53	0.17	0.50	-0.58	1.44
Stimulation	0.50	0.34	0.51	-0.15	0.48	-1.34	0.75
Self-Direction	0.50	0.30	0.43	-0.02	0.61	-1.69	1.45
Universalism	0.50	0.31	0.46	-0.13	0.62	-1.76	1.02
Benevolence	0.50	0.32	0.47	-0.19	0.68	-2.28	0.86
Conformity	0.50	0.84	5.25	1.44	0.93	0.00	2.99
Tradition	0.50	0.35	0.54	0.20	0.54	-0.60	1.68
Security	0.50	0.29	0.41	0.03	0.51	-1.13	1.42

*Notes.* Prior, P(incl) and posterior, P(incl|data) probabilities and Bayes Factors (BF<sub>inclusion</sub>) for the 10 predictors of SCO.

Because three predictors (Power, Universalism and Benevolence) were associated with SCO but did not significantly predict it, mediation analysis using bootstrapping (1,000 replications) were performed with Achievement as the mediator. The three analyses revealed that none of the direct effects (all  $ps > .432$ ) but all three total effects were significant (all  $ps < .033$ ). The indirect effects of Power ( $B = 1.46$ ,  $SE = 0.45$ ; 95% CI = 0.55, 2.62), Universalism ( $B = -1.37$ ,  $SE = 0.49$ ; 95% CI = -2.73, -0.56) and Benevolence ( $B = -1.91$ ,  $SE = 0.65$ ; 95% CI = -3.46, -0.75) were significant (all  $ps < .006$ ).

## Discussion

The findings indicate that the motivational values of conformity and achievement significantly predicted SCO. Contrary to the second hypothesis, the results indicated that no motivational values negatively predicted SCO; only universalism and benevolence exhibited a negative association with SCO, which was however mediated by achievement. These

outcomes suggest that only achievement and conformity are reliable indicators of people's proclivity to compare to others. The latter is a clear feature of both values, although its motivational underpinnings are rather different: Whilst the value of achievement supports the pursuit of personal success through demonstrating competence according to social standards (e.g., *I compare so that I can determine whether I am better than others*), conformity leads to exercising behaviours and attitudes that adhere to social norms (e.g., *I compare so that I fit in with social standards*).

Although power and achievement correlated, only the latter significantly predicted SCO. Research by Johnson and Lammers (2012) assessed how power can lead to self-assurance and to devoting fewer resources in trying to understand others. However, their research was concerned with the psychological state of experiencing power, rather than the life guiding principle expressed by Schwartz (1994). The portraits used to define achievement—'ambitious', 'successful' and 'influential'—would seem to be comparable with those for power, 'wealth', 'authority' and 'social recognition'. Nevertheless, Schwartz (1994) argues that unlike power, the achievement value is based on exhibiting successful performance according to some social standard. As a result, much like the value of conformity, extrinsic approval is fundamental in the motivation to achieve, but, unlike conformity, high achievers might be less inclined to be the same as everybody else. The relationship between the value of achievement and SCO most closely represents the conceptual essence of Festinger's Social Comparison Theory (1954) in that, to achieve, it is necessary to know how others are doing to understand one's place in the hierarchy.

Although benevolence and conformity both encourage shared and empathetic social relations, conformity is reliant on the use of SCO to avoid breaching social standards; on the other hand, benevolent people's behaviour is not as much driven by social acknowledgement (Schwartz, 2012), which could explain why benevolence did not predict SCO. In contrast to



the in-group focus of benevolence, Schwartz (1994) would describe universalism as valuing the wider welfare and interests; this emphasis on ‘seeing the bigger picture’ above overtly altruistic concerns may explain why universalism did not associate with the proclivity to compare to other people.

The present study bridged two well-researched areas of individual differences, social comparison orientation and motivational values; it suggests that SCO can be used as a strategy to deal with social uncertainty and as a self-protective measure: Conformity can help to avoid conflict and achievement can bolster one’s sense of competence in successfully meeting social standards (Schwartz, 2012). Further research is required to establish the reliability of these conclusions as the study was under-powered and data were collected on a single sample. Whilst the robustness of the main findings observed via Bayesian analyses go some way to appease these concerns, in this study the precise nature of the contribution of each motivational value to SCO cannot be ascertained adequately through follow-up analyses. Thus replication studies are essential in order to corroborate the above findings and to further qualify them.

## References

- Buunk, B. P., Nauta, A., & Molleman, E. (2005). In search of the true group animal: The effects of affiliation orientation and social comparison orientation upon group satisfaction. *European Journal of Personality*, *19*, 69–81. doi: 10.1002/per.532.
- Darnon, C., Dompnier, B., Gilliéron, O., & Butera, F. (2010). The interplay of mastery and performance goals in social comparison: A multiple-goal perspective. *Journal of Educational Psychology*, *102*, 212–222. <https://psycnet.apa.org/doi/10.1037/a0018161>
- van Der Zee, K. I., Buunk, B. P., Sanderman, R., Botke, G., & Van Den Bergh, F. (1999). The Big Five and identification–contrast processes in social comparison in adjustment to cancer treatment. *European Journal of Personality*, *13*, 307–326. [https://doi.org/10.1002/\(SICI\)1099-0984\(199907/08\)13:4%3C307::AID-PER342%3E3.0.CO;2-R](https://doi.org/10.1002/(SICI)1099-0984(199907/08)13:4%3C307::AID-PER342%3E3.0.CO;2-R)
- Faul, F., Erdfelder, E., Lang, A.G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175–191. <https://doi.org/10.3758/BF03193146>
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, *7*, 117–140. <https://doi.org/10.1177%2F001872675400700202>
- Gibbons, F. X., & Buunk, B. P. (1999). Individual differences in social comparison: The development of a measure of social comparison orientation. *Journal of Personality and Social Psychology*, *76*, 129–142. doi: 10.1037/0022-3514.76.1.129.
- Gibbons, F. X., & Gerrard, M. (1995). Predicting young adults' health risk behaviour. *Journal of Personality and Social Psychology*, *69*, 505–517. <https://doi.org/10.1037//0022-3514.69.3.505>

Heilman, R. M., & Kusev, P. (2020). Personal values associated with prosocial decisions.

*Behavioral Sciences*, 10, 77. <https://dx.doi.org/10.3390%2Fbs10040077>

Johnson, C. S., & Lammers, J. (2012). The powerful disregard social comparison

information. *Journal of Experimental Social Psychology*, 48, 329–333.

<https://doi.org/10.1016/j.jesp.2011.10.010>

Roccas, S., Sagiv, L., Schwartz, S. H., & Knafo, A. (2002). The big five personality factors

and personal values. *Personality and Social Psychology Bulletin*, 28, 789–801.

<https://doi.org/10.1177%2F0146167202289008>

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical

advances and empirical tests in 20 countries. *Advances in Experimental Social*

*Psychology*, 25, 1–65. [https://doi.org/10.1016/S0065-2601\(08\)60281-6](https://doi.org/10.1016/S0065-2601(08)60281-6)

Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human

values? *Journal of Social Issues*, 50, 19–45. [https://doi.org/10.1111/j.1540-](https://doi.org/10.1111/j.1540-4560.1994.tb01196.x)

[4560.1994.tb01196.x](https://doi.org/10.1111/j.1540-4560.1994.tb01196.x)

Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. *Online readings*

*in Psychology and Culture*, 2, 11. <https://doi.org/10.9707/2307-0919.1116>

Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V. (2001).

Extending the cross-cultural validity of the theory of basic human values with a

different method of measurement. *Journal of Cross-Cultural Psychology*, 32, 519–

542. <https://doi.org/10.1177/0022022101032005001>

Wehrens, M. J., Buunk, A. P., Lubbers, M. J., Dijkstra, P., Kuyper, H., & van der Werf, G. P.

(2010). The relationship between affective response to social comparison and

academic performance in high school. *Contemporary Educational Psychology*, 35,

203–214. <https://doi.org/10.1016/j.cedpsych.2010.01.001>