A modest proposal to link shyness and modesty: Investigating the relation within the framework of Big Five personality traits

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ABSTRACT

Shyness and modesty are similar constructs, but to date no study has investigated their relationship empirically, hence the goal of this study was to examine this relationship and how shyness and modesty are related to the Big Five model of personality. We administered a set of self-report measures of shyness, modesty and Big Five personality traits to 727 adults in Poland. The results conformed our expectations, revealing that shyness and modesty are positively correlated traits. Moreover, in regard to Big Five personality traits, both of them were negatively related to extraversion and positively to neuroticism, but only modesty was positively related to agreeableness. Our findings are discussed in light of previous research and theory.

1. Introduction

It is natural to call someone who is slightly withdrawn or avoids the attention of others both shy and modest. Shyness and modesty are human characteristics that have been intertwined for years, and not just in everyday language (Gregg, Hart, Sedikides, & Kumashiro, 2008). The tendency to link shyness and modesty was present in early psychology. In reviewing clinical-experimental research on the dominance-feeling (*ego-level*) – defined as "evaluation of the self" and "what the subject says about herself [or himself] in an intensive review, after a good rapport has been established" (Maslow, 1939, p. 3) – Maslow identified various attributes of personality and social behaviour which are empirically involved in this construct. *Low-dominance feeling* was characterised by the combination of characteristics as "shyness, timidity, embarrassability, [lack of] self-confidence, self-conscientiousness, inhibition, conventionality, modesty, fearfulness, poise, inferiority feelings, [lack of] social ease" (Maslow, 1939, p. 3).

Further research echoed Maslow's clinical findings: we can find traces of shyness in descriptions of modesty (Gregg et al., 2008; Hartman, 2015) and vice versa (Asendorpf, 2010; Liu, Bowker, Coplan, & Chen, 2018; Xu, Farver, Yu, & Zhang, 2009); however, none of the previous studies explicitly examined the relationship between modesty and shyness nor investigated their common qualities. Furthermore there are some perspectives that are not entirely consistent with the notion of linking these two constructs. For example, trait theory research has found more arguments for the separation of shyness and modesty than for their proximity. As a lower-order trait, modesty is clustered under agreeableness (Costa & McCrae, 1992), whereas shyness is placed under low extraversion or neuroticism (Costa & McCrae, 1992; Hofstee, De Raad, & Goldberg, 1992; John, 1990), which suggests that these two constructs are more distant from one another than one might expect.

This study aims to examine the direct relationship between modesty and shyness and to investigate the convergence and divergence of these constructs through the lens of the Big Five factor model of personality (Costa & McCrae, 1992; Goldberg, 1999). We posit that shyness and modesty are similar in terms of low extraversion, though are distinct from each other through neuroticism and agreeableness.

1.1. Defining shyness and modesty

1.1.1. Shyness

The very first models of shyness conceive it as a stable personality characteristic that manifests in social contexts. Shy individuals generally include shyness in their self-concept (they describe themselves as shy), they inhibit desired behaviours or avoid certain difficult social situations and experience intense discomfort, embarrassment and shame, or anxiety in such situations, which causes specific physiological symptoms (such as blushing or sweating) and negative self-attributions (Cheek & Briggs, 1990; Cheek & Buss, 1981; Costa & McCrae, 1992; Zimbardo, 1977). This approach to shyness seems to be fairly consistent in the literature.

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Table 1
Descriptive statistics, reliability estimates, and bivariate correlations for applied measures.

Variable	M(SD)	S	K	1	2	3	4	5	6	7	8	9
1. Shyness	2.94(0.87)	−0.10	−0.78	0.89(0.91)								
2. Modesty MRS	4.09(1.12)	−0.06	−0.49	0.44***	0.93(0.94)							
3. Modesty IPIP NEO-PI-R	3.18(0.60)	−0.15	−0.51	0.52***	0.70***	0.84(0.88)						
4. Modesty IPIP HEXACO	3.34(0.72)	−0.19	−0.65	0.32***	0.53***	0.80***	0.85(0.90)					
5. Extraversion	3.23(0.56)	−0.10	−0.59	−0.66***	−0.40***	−0.55***	−0.38***	0.90(0.92)				
6. Negative Emotionality	3.35(0.81)	−0.27	−0.51	0.46***	0.23***	0.27***	0.20***	−0.43***	0.89(0.92)			
7. Agreeableness	3.42(0.63)	−0.43	−0.05	−0.11**	0.13***	0.18***	0.27***	0.10**	−0.10**	0.82(0.85)		
8. Open-Mindedness	3.80(0.67)	−0.20	−0.41	−0.21***	−0.24***	−0.29***	−0.30***	0.31**	0.01	0.09*	0.82(0.86)	
9. Conscientiousness	3.27(0.77)	−0.11	−0.39	−0.31***	−0.07	−0.15***	−0.09*	0.38**	−0.30**	0.20**	0.12**	0.88(0.90)
10. Gender	–	–	–	−0.04	−0.05	−0.13***	−0.21***	0.06	−0.29***	−0.17***	−0.16***	−0.06

Note. Reliability estimates – Cronbach's alpha (and McDonald's omega) – are located on a diagonal. Negative values mean higher scores in females.

*** $p < .001$.

** $p < .01$.

* $p < .05$.

1.1.2. Modesty

Modesty seems to be defined in two ways: (1) in psychological terms, as "a moderate *self-view*—seeing oneself as intermediate, rather than as very positive or negative, on key personal attributes such as personality traits, abilities and skills, physical appearance, and social behavior" (Sedikides, Gregg, & Hart, 2007, p. 164) that could be cultivated as a strength of one's character (Peterson & Seligman, 2004) but also (2) in behavioural terms as a self-presentation tactic or strategy - "the [deliberate] underrepresentation of one's positive traits, contributions, expectations, or accomplishments" (Cialdini & De Nicolas, 1989, p. 626) - that is associated with a general acceptance of others (Chen, Bond, Chan, Tang, & Buchtel, 2009; Cialdini & De Nicolas, 1989; Whetstone, Okun, & Cialdini, 1992). These approaches to modesty seem to complement rather than exclude each other.

1.1.3. Shyness and modesty: similarities and differences

The similarities between shyness and modesty are highlighted in Maslow's (1939) theoretical interpretation of his clinical findings, i.e., that both constructs share the same low-dominant core, which is reflected in shy/modest behaviours, cognitions and feelings. Both are characterised by passive, withdrawn behavioural responses in social contexts, whereas only shyness induces intense behavioural inhibition and may lead to avoidance of difficult situations (Buss, 1986; Cheek & Buss, 1981). In modesty, the motivation for similar behavioural responses is to avoid attracting others' attention to oneself and/or disturbing social harmony (this motivation may manifest as compromise and conventionality; Chen et al., 2009; Costa & McCrae, 1992). On the cognitive level, both shyness and modesty entail perceiving oneself in a low position relative to other people. In the case of shyness this manifests as a sense of inferiority (Costa & McCrae, 1992; Zimbardo, 1977), whereas modesty implies a belief in one's own mediocrity and a refusal to see oneself as someone special (even despite actual success; Cialdini & De Nicolas, 1989; Hartman, 2015; Sedikides et al., 2007). In terms of feelings, both shyness and modesty are associated with a certain type of discomfort in social situations. For instance, shyness is associated with an intense anxiety (Buss, 1986; Cheek & Buss, 1981; Costa & McCrae, 1992; Zimbardo, 1977), whereas in the case of modesty there may be traces of embarrassment or anxiety (Freidlin, Littman-Ovadia, & Niemiec, 2017; Hartman, 2015), although such feelings are less intense than those experienced by shy people and have not been discussed thoroughly in the scientific literature.

The primary difference between these two constructs relates to attentional focus. Shyness involves the perception that excessive critical attention is focused on oneself (one's behaviours, thoughts, feelings), which makes it impossible for shy people to participate fully in social relations and weakens social efficiency (Buss, 1986; Zimbardo, 1977). In contrast modesty entails reducing the tension one associates with being the recipient of attention by shifting the focus of attention onto others. It contributes to a tendency to focus on other people and their needs (Chen et al., 2009; Sedikides et al., 2007), leading to another key difference between shyness and modesty; namely that prosociality is a characteristic of modesty. Empirical research indicates that modest individuals are perceived as socially well-adapted, as well as helpful and concerned for others (Bond, Kwan, & Li, 2000; Gregg et al., 2008). They seem to be socially attractive in face-to-face interactions (Powers & Zuroff, 1988) as their responses, which are adequate to the situation, make a positive impression in contrast to those of individuals who are excessively self-deprecating or boastful (Schlenker & Leary, 1982).

1.2. Locating shyness and modesty within the Big Five

Both shyness and modesty are recognised as traits and they have been investigated within the framework of Big Five personality traits, which are defined as general individual differences that are particularly important to functioning (Goldberg, 1999). These broad trait dimensions – extraversion, neuroticism, agreeableness, openness to experience, and conscientiousness – were derived from lexical analyses of the adjectives people use to describe themselves and others (John & Srivastava, 1999) and subsequently inspired personality psychologists to propose five-factor theoretical models and construct questionnaire measures, such as the popular NEO Personality Inventory (Costa & McCrae, 1992).

Existing research posits that shyness is equally related to extraversion and neuroticism (Jones, Schulkin, & Schmidt, 2014). For example, lexical research (Hofstee et al., 1992) and theoretical constructions (John, 1990) indicate that shyness is a core indicator of introversion, whereas models based on questionnaire data associate shyness with neuroticism (Costa & McCrae, 1992). Most of the existing empirical studies suggest that shyness is related to both low extraversion and high neuroticism (e.g., Kwiatkowska, Kwiatkowska, & Rogoza, 2016; La Sala, Skues, & Grant, 2014; Sato, Matsuda, & Carducci, 2018). Similarly, there is confusion about the relationship of modesty to the Big Five. It is most strongly related to agreeableness (Costa & McCrae, 1992), which is linked to interpersonal aspects of personality such as cooperation and the motivation to maintain positive social relations (Crowe, Lynam, & Miller, 2017), but empirical data suggest that it is also related to extraversion (e.g., Ashton, Lee, & de Vries, 2014; Crowe et al., 2017; Rammstedt & John, 2007). Thus modesty and shyness seem to be sister-constructs.

2. Current study

The aims of this research were to investigate the relationship between shyness and modesty and to analyse their differences and similarities within the framework of Big Five personality traits. We hypothesised that shyness is positively related to modesty (H1); that
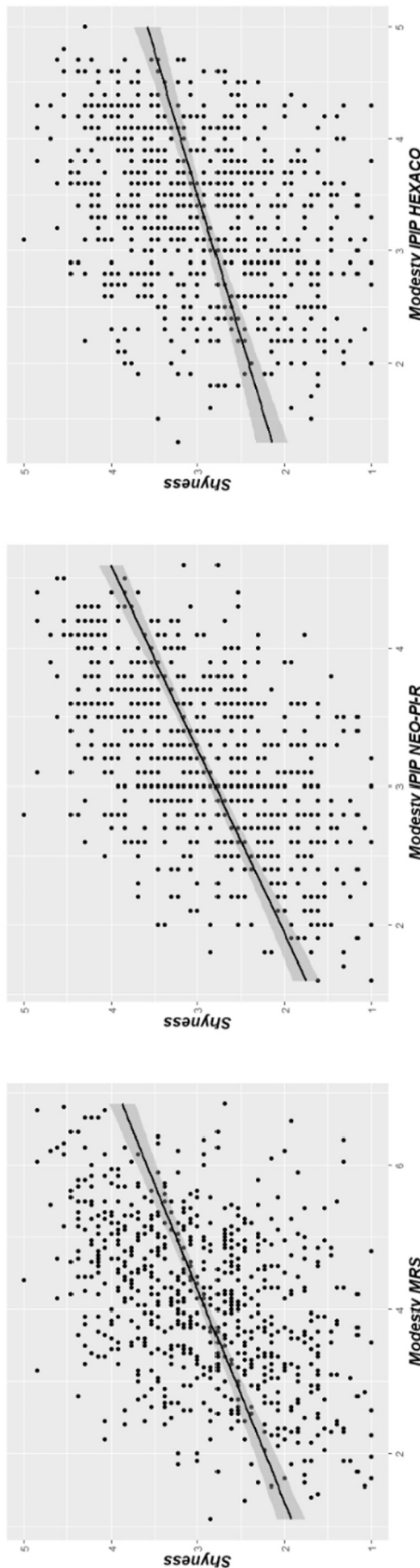
Fig. 1. Scatterplots representing correlations between shyness and modesty.

shyness and modesty would be negatively predicted by extraversion (H2) and shyness would be positively related to neuroticism (H3), while modesty would be positively related to agreeableness (H4).

3. Materials and methods

3.1. Participants and procedure

Participants were recruited via Facebook, the most popular social networking service in Poland. Respondents completed the questionnaire set anonymously, using an online platform – this procedure eliminated the problem of missing data. Respondents were offered the opportunity to be entered into a raffle offering small prizes. All procedures were approved by the institutional ethics board.

A total of 727 Polish young adults aged 18–35 years old (M = 22.19; SD = 2.54) completed the questionnaires; 30% of respondents were male. The sex ratio of our sample deviated from that of Facebook users, which is generally balanced (in 2018 48% of Polish Facebook users were male and 52% were female; Mikowska, Skalna, & Siwiński, 2018).

3.2. Measures

3.2.1. Shyness

The Revised Cheek and Buss Shyness Scale (RCBS; Cheek & Buss, 1981) is a popular self-report method of measuring shyness in which shyness is conceived as a personality trait related to discomfort and inhibition in the presence of others (Jones, Briggs, & Smith, 1986). The scale has a one-dimensional structure (Kwiatkowska et al., 2016; Kwiatkowska & Rogoza, 2017) and consists of 13 statements to which one responds using a five-point Likert scale.

3.2.2. Modesty

Our study was designed to explore convergence and divergence between shyness and modesty. Because we have empirical arguments to trust the results yielded by the RCBS (Kwiatkowska et al., 2016; Kwiatkowska & Rogoza, 2017), we decided to adopt single-trait multi-method approach. In this vein, we decided to administer several different scales measuring modesty which were used in previous research (Cai et al., 2011; Shi, Sedikides, Cai, Liu, & Yang, 2017). In this way we could more confidently test the hypothesised relation between shyness and modesty.

We measured modesty using three independent self-report instruments. The first, the Modest Responding Scale (MRS; Whetstone et al., 1992) consists of 20 statements to which responses are given using a seven-point Likert scale. The scale captures modesty in social situations, i.e. minimisation of one's real positive traits, contributions and abilities (Cai et al., 2011). We also administered two subscales derived from well-recognised measures in personality research, the International Personality Item Pool (IPIP) representation of the HEXACO Personality Inventory (IPIP HEXACO; Goldberg et al., 2006; Lee & Ashton, 2004) and the IPIP representation of the NEO-PI-R Personality Inventory (IPIP NEO-PI-R; Costa & McCrae, 1992; Goldberg et al., 2006).[1] Both subscales capture modesty conceived as viewing oneself as an ordinary person and being without any expectations of special treatment (Ashton et al., 2014). Each subscale consists of 10 items to which responses are given using a five-point Likert scale. The IPIP modesty scales have some overlap as they have three items in common; respondents completed a total of 17 IPIP items and were not required to respond to any of the items twice.

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[1] The IPIP is a publically available database of items and scales that are free to use. The items reflect the content of statements used in popular commercial inventories and have comparable psychometric properties (Goldberg et al., 2006).

Table 2

Summary of multiple linear regression analyses for Big Five personality traits and gender predicting shyness and modesty.

Predictor variable	Model 1: Shyness		Model 2: Modesty MRS		Model 3: Modesty IPIP NEO-PI-R		Model 4: Modesty IPIP HEXACO	
	β[95% CI]	t	β[95% CI]	t	β[95% CI]	t	β[95% CI]	t
Extraversion	**−0.55[−0.65; −0.45]**	**−16.53****	**−0.35[−0.51; −0.19]**	**−8.74****	**−0.50[−0.58; −0.43]**	**−14.01****	**−0.29[−0.39; −0.20]**	**−7.65****
Negative Emotionality	**0.23[0.16; 0.30]**	**7.03****	0.13[0.02; 0.24]	3.32**	0.08[0.03; 0.13]	2.17*	0.06[−0.01; 0.13]	1.63
Agreeableness	−0.02[−0.09; 0.06]	−0.58	**0.18[0.06; 0.30]**	**5.25****	**0.23[0.18; 0.29]**	**7.74****	**0.31[0.24; 0.38]**	**9.53****
Open-Mindedness	−0.03[−0.10; 0.04]	−1.01	−0.16[−0.27; −0.04]	−4.53**	−0.17[−0.22; −0.11]	−5.31**	−0.24[−0.31; −0.17]	−7.22**
Conscientiousness	−0.01[−0.08; 0.06]	−0.42	0.09[−0.01; 0.20]	2.47*	0.03[−0.02; 0.09]	1.04	−0.01[−0.08; 0.05]	−0.43
Gender	0.05[−0.06; 0.17]	1.84	0.04[−0.13; 0.22]	1.19	−0.04[−0.13; 0.04]	−1.36	−0.21[−0.24; −0.03]	−3.98**
R^2	0.48		0.23		0.39		0.31	
F-statistic	109.20**		34.96**		76.59**		53.06**	
df	6, 720		6, 720		6, 720		6, 720	

Note. Results of utmost importance to verify study hypotheses are bolded. Negative values mean higher scores in females.
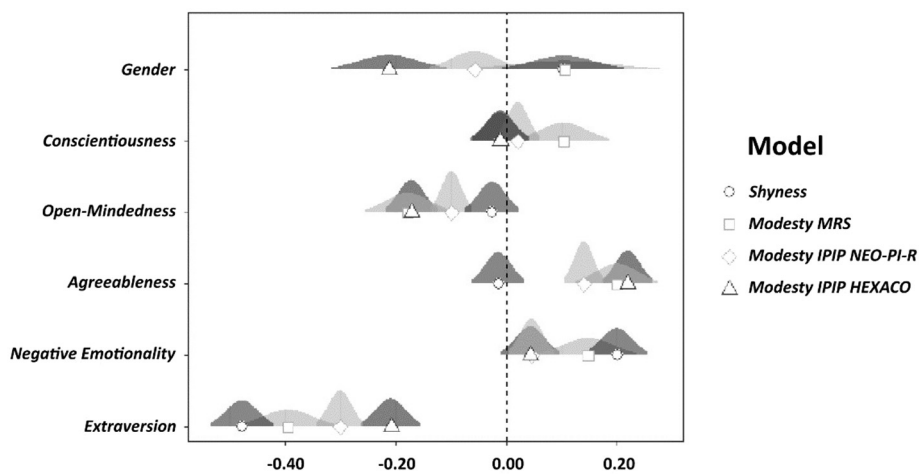
** $p < .001$.

* $p < .05$.

Fig. 2. Visual comparison of standardised beta coefficients. Note: Negative values mean higher scores in females.

3.2.3. Big Five personality traits

The Big Five Inventory-2 (BFI; Soto & John, 2017) is a 60-item self-report measure of Big Five personality traits to which responses are given using a five-point Likert scale. The BFI captures three facet scales per trait, but we have focused on the domain scales: extraversion, agreeableness, conscientiousness, negative emotionality (alternative label for neuroticism), and open-mindedness (alternative label for openness to experience or intellect).

3.3. Statistical analyses

We tested our hypotheses about the relationship between shyness and modesty by calculating Pearson product-moment correlation coefficients. We tested our hypotheses about the relationships of shyness and modesty to Big Five personality traits with multiple linear regression models. This analytical method is deemed to be superior to correlation coefficients, because it considers multicollinearity (i.e., it enables control of the shared variance when several variables are examined simultaneously). We ran four regression models in which shyness and modesty were independently predicted by the Big Five and gender as a control variable.

4. Results

4.1. Preliminary check

Descriptive statistics, reliability estimates and pairwise correlations between variables are presented in Table 1.

Skewness and kurtosis indices suggested that all variables were normally distributed. Estimates of alpha and omega coefficients indicated that all measures had very good reliability and thus our results can be seen as trustworthy. As a preliminary check we also verified the structure of administered measures of shyness and modesty via confirmatory factor analysis, but because the investigation of psychometric properties is out of the scope of this article these results are reported in the online supplementary material.

4.2. The relationship between shyness and modesty

Scatterplots comparing respondents' trait shyness and trait modesty are presented in Fig. 1.

All plots show a positive association between shyness and modesty. The slopes have a 20–30 degree angle; suggesting that the strength of the relationship is, at best, moderate. Pearson product-moment correlation coefficients were computed to provide a more precise estimate of the relationship (Table 1). There was a positive weak-to-moderate correlation between shyness and modesty; this relationship was consistent across multiple tests based on different self-report measures of modesty. Shyness was most strongly associated with modesty as measured by the subscale of IPIP NEO-PI-R, followed by the MRS and the IPIP HEXACO subscale. These results support the hypothesis that shyness and modesty are positively related (H1).

4.3. Relationships between shyness, modesty and the Big Five personality traits

Overall fits and standardised estimates for the multiple linear regression models of shyness and modesty regressed on Big Five personality traits are given in Table 2 and graphically represented in Fig. 2.

All four regression models provided a good fit to the data. Standardised beta coefficients indicated that extraversion was a weak-to-moderate negative predictor of both shyness and modesty, and the strongest predictor of both shyness and modesty among the Big Five traits. At first sight, IPIP HEXACO modesty was more strongly predicted by agreeableness, however the Wald test-based comparison between the coefficients showed that the estimate for agreeableness was not statistically different from the estimate for extraversion ($F = 0.06$; $p = .806$). This supports our hypothesis that shyness and modesty are negatively predicted by extraversion (H2); in addition, extraversion was the variable with the greatest predictive power. In line with our other hypotheses, negative emotionality was a weak positive predictor of shyness (H3), whereas agreeableness was a weak-to-moderate positive predictor of modesty (H4). We also found that open-mindedness and negative emotionality were weak negative predictors of modesty, which went beyond our hypotheses. The MRS modesty was also very weakly positively predicted by conscientiousness, but as conscientiousness was not related to any of the other measures of modesty and the significance of the correlation was modest ($p < .05$) this result is questionable (Benjamin et al., 2018). In most models, gender was not a significant predictor of both shyness and modesty. The prediction was significant only in Model 4 for modesty measured by the IPIP HEXACO subscale. Nevertheless, the lack of a similar result for other scales measuring modesty (in Model 2 and Model 3) undermines the relationship between gender and modesty.

In the interests of transparency we have included our data, R Script and R Markdown together with references to packages used for the analyses in the online supplementary material to this article and they are also available via the Open Science Framework platform through the following web link: https://osf.io/zr3aq

5. Discussion

It seems obvious that shyness and modesty are closely related, since colloquially these terms are often used interchangeably (Gregg et al., 2008; Hofstee et al., 1992). However, no previous empirical study has looked closely at their relationship. This study explored the relationship between both shyness and modesty and investigated their convergence and divergence through the lens of the Big Five broad dimensions. As hypothesised, our results revealed that: (1) modesty – measured with a variety of instruments – was consistently positively related to shyness; (2) of the Big Five, low extraversion was the strongest predictor of shyness and modesty; (3) second to low extraversion, shyness was predicted by neuroticism and (4) modesty was predicted by agreeableness.

These results confirm the initial hypotheses about the relationship between shyness and modesty (Asendorpf, 2010; Gregg et al., 2008; Liu et al., 2018; Maslow, 1939; Whetstone et al., 1992; Xu et al., 2009), but also indicate that their similarities are to be found above all in the motivational-behavioural component – which in our study was very broadly represented by extraversion. Both shy and modest individuals show limited behavioural activity and need for stimulation (Costa & McCrae, 1992) because they have very little social energy or, as Maslow (1939) preferred to call it, a very low *ego level*. In a sense that might be in line with current research on shyness, which seeks to identify different types of shyness while taking into account socio-cultural influences (Asendorpf, 2010; Liu et al., 2018; Xu et al., 2009). For example, Asendorpf (2010) emphasised that "shy behavior may be due not only to inhibition but also to self-regulation according to cultural norms favoring modesty, without underlying inhibition" (p. 161). One might

conclude, therefore, that shyness and modesty are associated with similar patterns of behavioural reactions arising from two different motivations – avoidance associated with innate fearfulness and the desire to conform to socio-cultural norms.

In line with this argument we demonstrated that shyness and modesty are differentiated by their relationships to two other Big Five dimensions – agreeableness and neuroticism. Shy and modest individuals are set apart through egocentrism nurtured by self-focus (Costa & McCrae, 1992; Zimbardo, 1977) and socialisation nurtured by other-focus (Bond et al., 2000; Chen et al., 2009; Sedikides et al., 2007). Modest individuals seem to be more prone to trusting, helping, and giving way to others (yet without any sense of inferiority) whereas shy people may be more self-centred, very sensitive to failure and somewhat indifferent to the problems of others. Such socially maladaptive and self-absorbed tendencies might also be sourced within the negative emotionality which, after low extraversion is the strongest Big Five marker of shyness as currently conceptualised (Costa & McCrae, 1992; Jones et al., 2014). Interestingly neuroticism did not play a major role in the differentiation of shyness from modesty although both constructs were positively predicted by negative emotionality, albeit very weakly in the case of modesty. Under current definitions modesty is minimally related to neuroticism (Hartman, 2015), but there is evidence of trace associations with neuroticism (Whetstone et al., 1992) or even social anxiety (Freidlin et al., 2017) and further research on this issue would be interesting.

6. Limitations

The disadvantage of our study is that the method of data collection (online survey distributed via a social networking service) and the resulting over representation of women in the sample seriously affects the generalisability of our results. Previous research has indicated that over-representation of women is typical with this method of participant recruitment (Whitaker, Stevelink, & Fear, 2017). Because the detection of interactions between gender and the other independent variables was not the goal of our study, we decided not to drop female participants to achieve gender balance; instead we focused on recruiting sufficient participants to detect the anticipated effects in the overall sample.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.paid.2019.05.026.

References

Asendorpf, J. B. (2010). Long-term development of shyness: Looking forward and looking backward. In K. H. Rubin, & R. J. Coplan (Eds.). *The development of shyness and social withdrawal* (pp. 157–175). New York, NY: Guilford Press.

Ashton, M. C., Lee, K., & de Vries, R. E. (2014). The HEXACO honesty-humility, agreeableness, and emotionality factors: A review of research and theory. *Personality and Social Psychology Review, 18*, 139–152. https://doi.org/10.1177/1088868314523838.

Benjamin, D. J., Berger, J. O., Johannesson, M., Nosek, B. A., Wagenmakers, E.-J., Berk, R., ... Johnson, V. E. (2018). Redefine statistical significance. *Nature Human Behaviour, 2*, 6–10. https://doi.org/10.1038/s41562-017-0189-z.

Bond, M. H., Kwan, V. S. Y., & Li, C. (2000). Decomposing a sense of superiority: The differential social impact of self-regard and regard for others. *Journal of Research in Personality, 34*, 537–553. https://doi.org/10.1006/jrpe.2000.2297.

Buss, A. H. (1986). A theory of shyness. In W. H. Jones, J. M. Cheek, & S. R. Briggs (Eds.). *Shyness: Perspectives on research and treatment* (pp. 39–46). New York: Plenum Press.

Cai, H., Sedikides, C., Gaertner, L., Wang, C., Carvallo, M., Xu, Y., ... Jackson, L. E. (2011). Tactical self-enhancement in China: Is modesty at the service of self-enhancement in East Asian culture? *Social Psychological and Personality Science, 2*, 59–64. https://doi.

org/10.1177/1948550610376599.

Cheek, J. M., & Briggs, S. R. (1990). Shyness as a personality trait. In W. R. Crozier (Ed.). *Shyness and embarrassment, perspectives from social psychology* (pp. 315 − 337). Cambridge: Cambridge University Press.

Cheek, J. M., & Buss, A. H. (1981). Shyness and sociability. *Journal of Personality and Social Psychology, 41*, 330–339. https://doi.org/10.1037/0022-3514.41.2.330.

Chen, S. X., Bond, M. H., Chan, B., Tang, D., & Buchtel, E. E. (2009). Behavioral manifestations of modesty. *Journal of Cross-Cultural Psychology, 40*, 603–626. https://doi.org/10.1177/0022022108330992.

Cialdini, R. B., & De Nicolas (1989). Self-presentation by association. *Journal of Personality and Social Psychology, 57*, 626–631. https://doi.org/10.1037/0022-3514.57.4.626.

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO personality inventory (NEO PI-R) and NEO five-factor inventory (NEO-FFI) professional manual.* Odessa, FL: Psychological Assessment Resources.

Crowe, M. L., Lynam, D. R., & Miller, J. D. (2017). Uncovering the structure of agreeableness from self-report measures. *Journal of Personality.* https://doi.org/10.1111/jopy.12358.

Freidlin, P., Littman-Ovadia, H., & Niemiec, R. M. (2017). Positive psychopathology: Social anxiety via character strengths underuse and overuse. *Personality and Individual Differences, 108*, 50–54. https://doi.org/10.1016/j.paid.2016.12.003.

Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Deary, F. Fruyt, & F. Ostendorf (Eds.). *Personality psychology in Europe* (pp. 7–28). Tilburg: Tilburg University Press.

Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. G. (2006). The International Personality Item Pool and the future of public-domain personality measures. *Journal of Research in Personality, 40*, 84–96. https://doi.org/10.1016/j.jrp.2005.08.007.

Gregg, A. P., Hart, C. M., Sedikides, C., & Kumashiro, M. (2008). Everyday conceptions of modesty: A prototype analysis. *Personality and Social Psychology Bulletin, 34*, 978–992. https://doi.org/10.1177/0146167208316734.

Hartman, L. M. (2015). Environmental modesty: Reclaiming an ancient virtue. *Journal of Religious Ethics, 43*, 475–492. https://doi.org/10.1111/jore.12106.

Hofstee, W. K. B., De Raad, B., & Goldberg, L. R. (1992). Integration of the Big Five and circumplex approaches to trait structure. *Journal of Personality and Social Psychology, 63*, 146–163. https://doi.org/10.1037/0022-3514.63.1.146.

John, O. P. (1990). The "Big Five" factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L. A. Pervin (Ed.). *Handbook of personality: Theory and research* (pp. 66–100). New York, NY: Guilford.

John, O. P., & Srivastava, S. (1999). The Big Five Trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin, & O. P. John (Eds.). *Handbook of personality: Theory and research* (pp. 102–138). New York, NY, US: Guilford Press.

Jones, K. M., Schulkin, J., & Schmidt, L. A. (2014). Shyness: Subtypes, psychosocial correlates, and treatment interventions. *Psychology, 5*, 244–254. https://doi.org/10.4236/psych.2014.53035.

Jones, W. H., Briggs, S. R., & Smith, T. G. (1986). Shyness: Conceptualization and measurement. *Journal of Personality and Social Psychology, 51*, 629–639. https://doi.org/10.1037/0022-3514.51.3.629.

Kwiatkowska, M. M., Kwiatkowska, K., & Rogoza, R. (2016). Polish adaptation of the revised Cheek and Buss shyness scale and a significance of shyness in the context of personality traits and metatraits. *Studia Psychologiczne, 54*, 1–17. https://doi.org/10.2478/V1067-010-0156-7.

Kwiatkowska, M. M., & Rogoza, R. (2017). A measurement invariance investigation of the differences in shyness between adolescents and adults. *Personality and Individual Differences, 116*, 331–335. https://doi.org/10.1016/j.paid.2017.05.012.

Lee, K., & Ashton, M. C. (2004). Psychometric properties of the HEXACO personality inventory. *Multivariate Behavioral Research, 39*, 329–358. https://doi.org/10.1207/s15327906mbr3902_8.

Liu, J., Bowker, J. C., Coplan, R. J., & Chen, X. (2018). Evaluating links among shyness, peer relations, and internalizing problems in Chinese young adolescents. *Journal of Research on Adolescence.* https://doi.org/10.1111/jora.12406.

Maslow, A. H. (1939). Dominance, personality, and social behavior in women. *The Journal of Social Psychology, 10*, 3–39. https://doi.org/10.1080/00224545.1939.9713343.

Mikowska, M., Skalna, A., & Siwiński, K. (2018). POLSKA.JEST.MOBI 2018. Retrieved from http://jestem.mobi/2018/04/raport-polska-jest-mobi-2018-do-pobrania.

Powers, T. A., & Zuroff, D. C. (1988). Interpersonal consequences of overt self-criticism: A comparison with neutral and self-enhancing presentations of self. *Journal of Personality and Social Psychology, 54*, 1054–1062. https://doi.org/10.1037/0022-3514.54.6.1054.

Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of Research in Personality, 41*, 203–212. https://doi.org/10.1016/j.jrp.2006.02.001.

La Sala, L., Skues, J., & Grant, S. (2014). Personality traits and Facebook use: The combined/interactive effect of extraversion, neuroticism and conscientiousness. Social Networking, 3, 211–219. doi:https://doi.org/10.4236/sn.2014.35026.

Sato, E., Matsuda, K., & Carducci, B. J. (2018). A factor analytical investigation of the Japanese translation of the Cheek-Buss Shyness Scale in support of the three-component model of shyness. *Personality and Individual Differences, 124*, 160–167. https://doi.org/10.1016/j.paid.2017.12.006.

Schlenker, B. R., & Leary, M. R. (1982). Audiences' reactions to self-enhancing, self-denigrating, and accurate self-presentations. *Journal of Experimental Social Psychology, 18*, 89–104. https://doi.org/10.1016/0022-1031(82)90083-X.

Sedikides, C., Gregg, A. P., & Hart, C. M. (2007). The importance of being modest. In C. Sedikides, & S. Spencer (Eds.). *The self: Frontiers in social psychology* (pp. 163–184). New York, NY: Psychology Press.

Shi, Y., Sedikides, C., Cai, H., Liu, Y., & Yang, Z. (2017). Disowning the self: The cultural value of modesty can attenuate self-positivity. *The Quarterly Journal of Experimental Psychology, 70*, 1023–1032. https://doi.org/10.1080/17470218.2015.1099711.

Soto, C. J., & John, O. P. (2017). The next Big Five Inventory (BFI-2): Developing and assessing a hierarchical model with 15 facets to enhance bandwidth, fidelity, and predictive power. *Journal of Personality and Social Psychology, 113*, 117–143. https://doi.org/10.1037/pspp0000096.

Whetstone, M. R., Okun, M. A., & Cialdini, R. B. (1992, June). *The Modest Responding Scale. Paper presented at the convention of the American Psychological Society, San Diego, CA.*

Whitaker, C., Stevelink, S., & Fear, N. (2017). The use of Facebook in recruiting participants for health research purposes: A systematic review. *Journal of Medical Internet Research, 19*(8), e290. https://doi.org/10.2196/jmir.7071.

Xu, Y., Farver, J. A. M., Yu, L., & Zhang, Z. (2009). Three types of shyness in Chinese children and the relation to effortful control. *Journal of Personality and Social Psychology, 97*, 1061–1073. https://doi.org/10.1037/a0016576.

Zimbardo, P. G. (1977). *Shyness: What it is, what to do about it.* Reading, MA: Addison Wesley Publishing Co.