

## Personality within the Light and Dark Triad Dimensions

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### Abstract:

Our study examined how broad personality traits, such as the HEXACO model, relate to prosocial (Light Triad) and aversive (Dark Triad) tendencies. A sample of 187 Brazilian adults ( $M = 31.39$ ,  $SD = 11.54$ ) completed measures of the HEXACO, the Light Triad, and the Dark Triad. Honesty-Humility showed medium negative correlations with the Dark Triad, whereas agreeableness and extraversion were positively associated with the Light Triad. A restricted path model demonstrated distinct prediction patterns. Agreeableness positively predicted all Light Triad traits, whereas conscientiousness negatively predicted all Dark Triad traits. These findings reinforce that the Light and Dark Triads are not opposite ends of a single continuum. Instead, they are grounded in different dispositional systems, with the Dark Triad linked to impulsive and antagonistic tendencies and the Light Triad associated with interpersonal warmth and prosocial orientations.

### Dark Triad; HEXACO; Light Triad; Personality Psychology

Assessing how personality is associated with everyday behaviors enables researchers to assess theories developed to define explanatory patterns of human behavior [1]. Common to theories is the idea that individuals present behavioral patterns that can be defined as stable components [2], yet also undergo variations throughout life depending on the context, culture, and environment. More recent evidence suggests that trait stability reaches its peak in early adulthood, and after the age of 25, there is a substantial increase only for emotional stability and lesser stability for maladaptive traits [3,4]. In this study, we aim to deepen our understanding of the re-

lationships between broad personalities and the Dark and Light Triads.

Among the different theoretical personality models, the Big Five stands out [5]. The Big Five defines traits based on the dimensions of extraversion, neuroticism, agreeableness, conscientiousness, and openness to experience, with robust evidence of their replicability in different cultures. Despite its prominence and applicability, it is known that there is an overvaluation of the scope of the Big Five because the model cannot take into account all significant personality variations, resulting in the proposition of alternative models that aim to contribute to the measurement of other traits or aspects not included in the Big Five factors [6]. In this regard, there are other theories, such as the HEXACO [7] or more specific ones that seek to conceptualize socially undesirable [8] or prosocial traits [9,10].

The HEXACO model is an alternative model for conceptualizing personality that maintains the five factors present in the Big Five model

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and adds a sixth component: Honesty-Humility (HH). This new factor aims to represent prosocial aspects, specifically the tendency towards cooperation, justice, and interest in establishing genuine relationships without seeking personal gains [7]. The HEXACO model establishes HH as a form of altruism, describing it as an active reciprocal type. In a complementary way, agreeableness would also be a form of altruism, but of the reactive reciprocal type. Individuals with high levels of HH tend to be more likely to follow rules and laws and are uninterested in receiving special treatment or maximizing personal gains. In turn, people with low levels of HH can be callous and prone to breaking the rules to achieve their goals, self-centered, and motivated by material gains.

Regarding socially undesirable and dysfunctional personality traits, the Dark Triad model focuses on Machiavellianism and subclinical variations of psychopathy and narcissism [8]. Machiavellianism refers to a manipulative and cynical personality; narcissism is characterized by a lack of empathy and need for admiration, and psychopathy is characterized by antisocial behaviors, low anxiety, and low empathy. In addition to their individual characteristics, the three traits share a common core formed by manipulation, insensitivity, orientation towards social dominance, as well as callousness. This shared core results in actions such as disobedience of social and moral norms, cheating, lying, and transgressions.

In contrast, Positive Psychology [11] provides additional perspectives for understanding personality [10]. Among the positive psychological traits, pro-sociality emphasizes the elements that can favor life in society through the adoption of behaviors that can deliberately benefit other people [12]. Alongside this, character strengths, as disseminated by Peterson and Seligman [10], have, among others, the function of promoting healthier social relationships [13]. Kaufman et al. [9] proposed the Light Triad as a representation of prosocial behaviors formed by traits of benevolent orientation, namely Kantianism, humanism, and faith in humanity. Kantianism explains the ability to establish relationships with other people in a respectful way and without the intention of receiving something in return. Humanism refers to the awareness that

every person has value and dignity in their essence. Faith in humanity is conceptualized as the genuine belief that people are essentially kind. Though related in their positive nature, the Light Triad dimensions have shown distinct correlations with other variables [14].

Although both the Light and Dark Triads describe interpersonal tendencies, findings indicate that they are not opposite poles. Previous studies show weak-to-moderate negative correlations [9] (between  $-.07$  narcissism and faith in humanity, and  $-.51$  between psychopathy and Kantianism), suggesting some overlapping but distinct motivational systems: the Dark Triad captures self-serving, antagonistic, and exploitative strategies, whereas the Light Triad identifies benevolent, other-oriented interpersonal motivations [15].

The relationships between the HEXACO and the Dark and Light Triad have been explored previously, and meta-analytic results showed that the HH factor presented strong and negative correlations with the Dark Triad, with the sincerity and justice facets being more associated with Machiavellianism and psychopathy, and the modesty facet with narcissism [16]. In addition, both the HH factor and its respective facets were positively correlated with the Light Triad factors with low magnitude [9]. Other HEXACO dimensions contribute less consistently, reinforcing HH as the primary basis underlying prosocial versus exploitative tendencies. Furthermore, regarding the relationship between the Dark and Light Triads, studies have identified negative correlations ranging from weak to moderate [9,17]. Ramos-Vera et al. [15] compared data from five countries and reported weak correlations between prosocial and socially undesirable traits according to culture, suggesting that both triads are not opposites but represent different constructs.

Therefore, considering personality as a multifaceted construct [1], which requires the combination of several theoretical models for a broader understanding, the present study considered three models (i.e., HEXACO, the Dark Triad, and the Light Triad) to analyze the associations between them in a sample of Brazilians. More specifically, we sought to test the explanatory potential of the HEXACO in relation to the Dark Triad and Light Triad factors. Thus, if both tri-

ads were opposites, a similar pattern of prediction from the HEXACO model can be expected. Based on previous studies, we formulated the following hypotheses: (1) Honesty-Humility will show negative associations with the Dark Triad traits; (2) Honesty-Humility and Agreeableness will show positive associations with the Light Triad traits; (3) The pattern of HEXACO predictors will differ across the Dark and Light Triads, consistent with the notion that these constructs are not direct opposites.

## METHOD

### Participants and Procedures

We performed an a priori power analysis to estimate the minimum sample size. Based on the average correlations between the Light Triad and Dark Triad reported by Kaufman et al. [9], we used  $r = .30$  as the expected effect size. The analysis was conducted in R using the *pwr* package with the following syntax: `pwr.r.test(r = 0.30, power = 0.95, sig.level = 0.05)`. Results indicated that 137.76 participants would be required to achieve 95% power at  $\alpha = .05$  (two-tailed). Our sample size exceeds this threshold, as participants were 187 (60.96% identified as women) adults aged between 18 and 68 years old ( $M = 31.39$ ,  $SD = 11.54$ ). Most were single (65.77%) or married (26.73%) and had completed High School (55.61%) or had an undergraduate degree (26.73%). Our research protocol was approved by a Research Ethics Committee and agreed with the Declaration of Helsinki. Items in Brazilian Portuguese were presented using the Google Forms platform. Participants were volunteers, and each provided informed consent.

### Instruments

*HEXACO-60* [18]. To assess personality, we used the HEXACO-60 in the Brazilian-Portuguese version, which has previously shown adequate reliability  $H\alpha = 0.80$ ,  $E\alpha = 0.64$ ,  $X\alpha = 0.81$ ,  $A\alpha = 0.77$ ,  $C\alpha = 0.74$ , and  $O\alpha = 0.74$  [19]. The measure has 60 items and six dimensions (i.e., H – Honesty-Humility, E – Emotionality, X – eXtraversion, A – agreeableness, C – Conscientiousness, and O – Openness to experience). Partic-

ipants used a Likert scale (1 = *Strongly disagree* to 5 = *Strongly agree*); some item examples are “I would be quite bored by a visit to an art gallery” and “I sometimes feel that I am a worthless person.”

*Dirty Dozen* [20]. To assess the Dark Triad of personality, we used the Dirty Dozen in the Brazilian-Portuguese version, which has previously shown adequate psychometric properties CFI = 0.95 and RMSEA = 0.07, and reliability Machiavellianism  $\alpha = 0.80$ , narcissism  $\alpha = 0.80$ , and psychopathy  $\alpha = 0.66$  [21]. The measure has 12 items and three dimensions (i.e., Machiavellianism, narcissism, and psychopathy). Participants used a Likert scale (1 = *Strongly disagree* to 5 = *Strongly agree*); some item examples are “I tend to manipulate others to get my way” and “I tend to lack remorse.”

*Light Triad* [9]. To assess the Light Triad of personality, we used the Light Triad Scale in the Brazilian-Portuguese version, which has previously shown adequate psychometric properties CFI = 0.99 and RMSEA = 0.03, and reliability faith in humanity  $\alpha = 0.72$ , humanism  $\alpha = 0.84$ , and Kantianism  $\alpha = 0.69$  [12]. The measure has 12 items and three dimensions (i.e., Faith in humanity, humanism, and Kantianism). Participants used a Likert scale (1 = *Strongly disagree* to 5 = *Strongly agree*); some item examples are “I tend to see the best in people” and “When I talk to people, I am rarely thinking about what I want from them.”

*Sociodemographic questionnaire*. Participants answered a questionnaire stating their gender, age, marital status, and education level.

### Data Analysis

Following descriptive statistics and correlations, we further analyzed the data by using a restricted path model to estimate the prediction of the HEXACO personality model with the Dark Triad and Light Triad. We used the Maximum Likelihood Robust Estimator (MLR) and performed the data analysis using the software JASP and MPlus 8. To assess the model adequacy, we considered the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). Acceptable values must fall > than .90 for CFI and TLI and <.08 for RMSEA [22].

## RESULTS

Descriptive statistics and Pearson's correlations are in Table 1. HH showed a medium negative correlation with all three traits of the Dark Triad. In contrast, Extraversion and Agreeableness positively correlated with all three traits of the Light Triad. When considering the significance of  $p < .01$ , only Machiavellianism and Kantianism showed a medium negative correlation, while the other variables, despite being negatively correlated, did not reach a level of significance. Regarding mean differences between men and women, only psychopathy yielded significant results,  $t(185) = -3.03$ ,  $p = .003$ ,  $d = -.46$  ( $Men_{mean} = 9.05$ ,  $Women_{mean} = 7.33$ ).

Subsequently, we perform a path model, with HEXACO predicting the Light and Dark Triads. The model, presented in Figure 1, yielded an excellent result  $c2(22) = 24.418$ ,  $p = .32$ ,  $CFI = .994$ ,  $TLI = .987$ ,  $RMSEA = .024$  [CI 90% .000 – .067]. The main dimensions of the HEXACO model that explained the Dark Triad negatively were Conscientiousness, while Agreeableness had positive beta values for the Light Triad.

## DISCUSSION

Aversive and prosocial personality traits have been of interest to psychologists and researchers as these traits prevent or promote better engagement, healthier relationships, adaptations, and coping with difficulties [13]. In this study, we aimed to investigate the relationships between the HEXACO personality model and subclinical traits (i.e., the Dark Triad and the Light Triad). We have two main findings: the correlation pattern and the prediction model.

First, HH showed negative correlations with the Dark Triad (which confirms our hypothesis 1), substantiating evidence that low HH indicates a tendency toward exploitation, entitlement, and disregard for moral norms [7]. Machiavellianism demonstrated the strongest negative correlation, consistent with its emphasis on strategic manipulation and cynicism [8]. Taken together, our findings reinforce the view that HH captures an aversion to dishonest, manipulative, and norm-violating behavior (i.e., core components of the Dark Triad). On the other hand, the

Light Triad traits were associated with agreeableness (which partially confirms our hypothesis 2). This aligns with theoretical models of agreeableness as reflecting empathy, prosociality, and a cooperative interpersonal orientation [7]. Unlike HH, which represents an active commitment to fairness and sincerity, agreeableness primarily reflects interpersonal warmth and tolerance. Thus, the Light Triad appears more closely associated with relational benevolence and positive views of others than with the moralistic aspects captured by HH.

Second, the prediction model further clarified these distinctions, highlighting unique pathways from HEXACO traits to the Dark and Light Triads (which confirms our hypothesis 3). Conscientiousness emerged as a significant negative predictor of the Dark Triad when using the Dirty Dozen measure. Low conscientiousness reflects impulsivity, poor self-regulation, and disregard for long-term consequences, characteristics that align with antisocial and norm-violating tendencies commonly observed in the Dark Triad [8]. In contrast, agreeableness was the strongest predictor of the Light Triad, reinforcing its conceptual roots in empathy, trust, and cooperative social behavior [9]. Overall, our results suggest that the Dark and Light Triads are grounded in different dispositional systems. The Dark Triad aligns with antagonism, impulsivity, and self-serving motivations, whereas the Light Triad reflects empathy, relational warmth, and a prosocial orientation.

## Limitations

Our study is, nonetheless, limited. Among them, it is noteworthy to state that the Light Triad Scale is a recent measure, therefore, with less evidence than the other two. Thus, it is essential that further investigations into its psychometric qualities are carried out to investigate its overlap with broader personality models in different cultures. Also, our overrepresentation of women could have distorted our findings, especially knowing that women tend to present higher scores of prosocial traits while men tend to present higher scores of socially undesirable ones. Finally, we solely relied on self-report measures, and it is known that positive constructs are more

prone to social desirability, which may have impacted our results. We suggested that new research include strategies to minimize or control response bias, in particular, assessing social approval to test how impression management may influence participants' responses in the Light and Dark Triad traits. Overall, our study was able to once again confirm the proposition that the Dark Triad and the Light Triad are not merely opposites, and their pattern with broader personality models vary.

### Ethical Compliance Section

**Funding:** The authors have no funding to disclose.

**Compliance with Ethical Standards:** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee at [anonymized for review] and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

**Conflicts of Interest:** The authors declare they have no conflicts of interest.

**Informed Consent:** Informed consent was obtained from all individual adult participants included in the study.

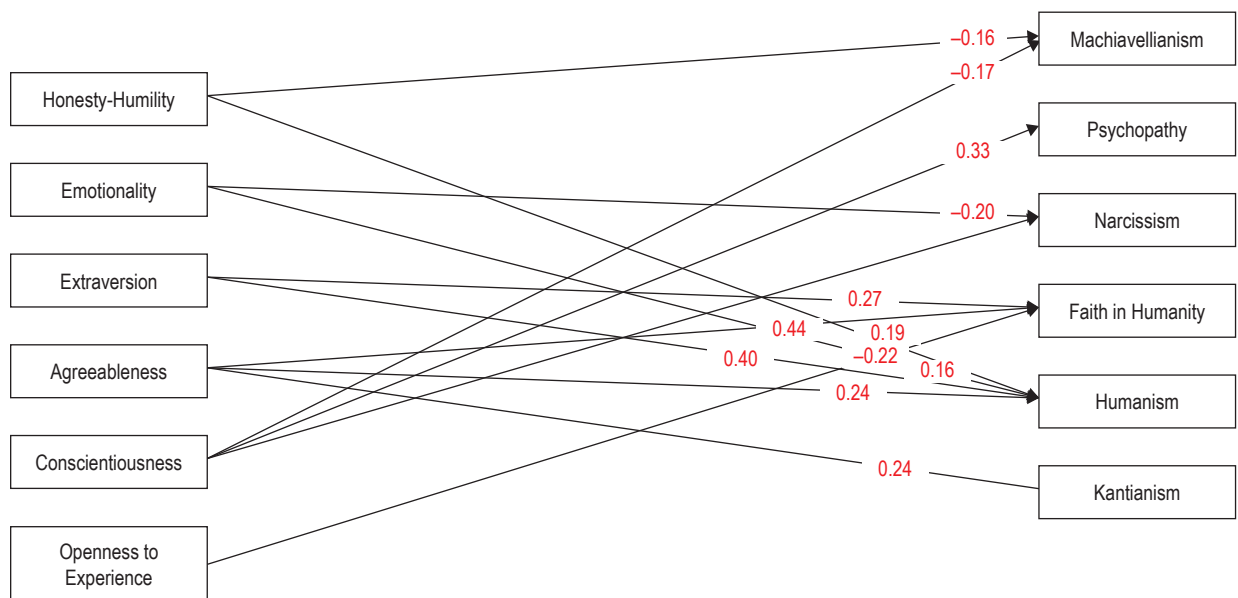
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**Table 1.** Descriptive Statistics and Pearson Correlation

|                   | ω   | Mean  | SD   | H     | E    | X    | A    | C     | O     | M     | P    | N    | FH   | Hu   |
|-------------------|-----|-------|------|-------|------|------|------|-------|-------|-------|------|------|------|------|
| H                 | .70 | 32.20 | 6.22 |       |      |      |      |       |       |       |      |      |      |      |
| E                 | .65 | 32.05 | 5.01 | .25*  |      |      |      |       |       |       |      |      |      |      |
| X                 | .75 | 30.94 | 5.82 | .39*  | .12  |      |      |       |       |       |      |      |      |      |
| A                 | .68 | 31.84 | 5.16 | .26*  | -.07 | .38* |      |       |       |       |      |      |      |      |
| C                 | .76 | 32.89 | 6.03 | .63*  | .23  | .36* | .24* |       |       |       |      |      |      |      |
| O                 | .64 | 33.39 | 5.80 | .37*  | .01  | .29* | .25* | .49*  |       |       |      |      |      |      |
| Machiavellianism  | .88 | 7.73  | 4.07 | -.29* | .02  | -.16 | -.12 | -.27* | -.18  |       |      |      |      |      |
| Psychopathy       | .80 | 8.00  | 3.86 | -.22* | -.08 | -.11 | -.15 | -.33* | -.24* | .73*  |      |      |      |      |
| Narcissism        | .88 | 10.54 | 4.75 | -.24* | .11  | -.04 | -.15 | -.26* | -.17  | .51*  | .49* |      |      |      |
| Faith in Humanity | .76 | 13.08 | 3.63 | .12   | .07  | .40* | .49* | .07   | -.01  | -.03  | -.01 | .03  |      |      |
| Humanism          | .77 | 16.41 | 2.82 | .07   | .19  | .46* | .34* | .11   | .18   | -.19  | -.20 | .03  | .47* |      |
| Kantianism        | .59 | 15.79 | 2.89 | .13   | .11  | .20  | .24* | .08   | .10   | -.27* | -.11 | -.19 | .33* | .40* |

Notes. \* $p < .01$ . ω – McDonald's Omega; H – Honesty-Humility; E – Emotionality; X – Extraversion; A – Agreeableness; C – Conscientiousness; O – Openness to Experience; M – Machiavellianism; P – Psychopathy; N – Narcissism; FH – Faith in Humanity; Hu – Humanism; K – Kantianism.



**Figure 1.** Path Model of the HEXACO predicting the Light and Dark Triads.