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Facing a psychopath: Detecting the dark triad from emotionally-neutral faces, using prototypes from the Personality Faceaurus

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ABSTRACT

Is facial structure a valid cue of the dark triad of personality (Machiavellianism, narcissism, and psychopathy)? I obtained self-reports and peer reports of personality as well as expression-neutral photographs of targets, and then I created prototypes of people high and low on each of the three dimensions by digitally combining select photographs of Caucasian targets. The results indicated that unacquainted observers reliably detected the dark triad composite, especially in female prototypes. Thus, not only is the dark triad a set of psycho-social characteristics—it may also be a set of physical–morphological characteristics. In the Discussion, I introduce a website that stores these personality prototypes and many others (http://www.nickholtzman.com/faceaurus.htm).

1. Introduction

At times, even the darkest personalities can shine. For example, narcissists, who in the long-run are perceived unfavorably, are actually perceived favorably during the first hour of interaction with others (Paulhus, 1998). Such people are apt to succeed in a variety of brief interactions (Back, Schmukle, & Egloff, 2010; Campbell, 2005; Curry, Chesters, & Viding, 2011; Holtzman & Strube, 2011). In brief interactions, dark triad personalities—Machiavellians, narcissists, and psychopaths—can take advantage of people (McHoskey, 2001), successfully extract resources (Campbell, Bush, Brunell, & Shelton, 2005), and commit crimes (Neumann & Hare, 2008). Thus, a basic social challenge for onlookers is to identify dark personalities as early as possible, so as to avoid exploitation (Byrne, 1996; Funder, 1995).

Several "thin slice" studies have demonstrated successful early-detection of dark triad traits (Back et al., 2010; Fowler, Lilienfeld, & Patrick, 2009; Friedman, Oltmanns, Gleason, & Turkheimer, 2006; Holtzman & Strube, 2010; Vazire, Naumann, Rentfrow, & Gosling, 2008). Because most of these studies focused on self-expression (e.g., clothing style), the appearances of participants in those studies were uncontrolled (and in some cases, targets were encouraged to wear self-expressive clothing). Thus, it remains unclear whether basic physical cues are valid indications of the dark triad. Because there is variation in self-expression items, such as clothing, and because people can easily manipulate such aspects of their appearance, it would be helpful to identify valid cues to the dark triad that are less variable across situations and are less modifiable. Specifically, reliably identifiable physical signatures that remain more stable across situations could be very valuable to the onlookers whose self-interest depends on rapid identification of exploitative traits. Craniofacial structure in particular is potentially an excellent cue to utilize because—unlike clothing—a person cannot so easily change one's craniofacial structure.

Although the literature on craniofacial structure has not covered the dark triad, it has included studies of traits in the dominance spectrum (Berry & McArthur, 1986; Borkenau, Brecke, Mottig, & Paelecke, 2009; Perrett et al., 1998; Todorov, in press). Because dominance overlaps with the dark triad substantially (Bradlee & Emmons, 1992), the jangle fallacy (i.e., using different names for very similar constructs) may be relevant to the relationship between the two. Thus, traditional scientific language may be preventing research translation in this area. Many of the effects for facial dominance, such as its link to testosteronization (Carré, McCormick, & Mondloch, 2009; Perrett et al., 1998), could hold true for similar constructs in the trait literature, such as Machiavellianism, narcissism, and psychopathy.

En route to exploring the relationship between the dark triad and facial morphology, I obtain self-reports and peer reports of the dark triad. The three members of the triad, Machiavellianism, narcissism, and psychopathy do indeed overlap empirically (e.g.,

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Jonason, Li, Webster, & Schmitt, 2009), as is exemplified by a shared tendency to be disagreeable (Jonason & Webster, 2010). Moreover, the constructs are conceptually similar: They share a degree of manipulativeness and they each elicit social aversion in part due to their exploitative proclivities. Yet, they are distinguishable (Paulhus & Williams, 2002). Key distinctions include that Machiavellians are more introverted and scheming (Paulhus & Williams, 2002), narcissists are particularly egotistical and vain (Morf & Rhodewalt, 2001), and psychopaths are reckless and may exhibit criminal tendencies (Neumann & Hare, 2008). Despite the exponential growth of the dark triad literature in the past two decades, this is the first attempt that I know of to explore the craniofacial structures of the dark triad in a well-controlled study.

The primary goal here is to explore whether human faces are valid cues of the dark triad of personality. A secondary goal is to encourage research about the relationship between facial morphology and personality. Thus, I have created an online thesaurus of digital prototype faces for numerous personality traits—a "Personality Faceaurus", [http://www.nickholtzman.com/faceaurus.htm]—described in the Section 4.2.

2. Method

2.1. Target participants

Targets (i.e., photographed participants) participated in exchange for partial course credit. Targets whose photographs were used in this study were a subgroup of participants from a larger study ($N = 209$). Members of the subgroup (a) consented to have their pictures used for the Faceaurus, (b) are Caucasian, (c) had at least one peer provide an informant report, and (d) successfully followed the instructions described below. This subsample included 48 women and 33 men (M age = 19.47).

2.2. Targets' self-reports

Reported in Table 1 are the key descriptive statistics for the self-reports of personality. The dark triad traits were measured using the Mach-IV (Christie & Geis, 1970), the Narcissistic Personality Inventory-40 (Raskin & Terry, 1988), the Narcissistic Personality Disorder subscale of the Multi-Source Assessment of Personality Pathology (MAPP; Oltmanns & Turkheimer, 2006), and the Self-Report Psychopathy scale (Paulhus, Neumann, & Hare, in press). Except for the MAPP, all self-report measures have been validated and are commonly employed.

2.3. Peer-reports

Measuring personality in part by using peer reports has increasingly become the standard in psychology (Vazire, 2006), especially because peers have better insight into certain traits than the self does (Vazire, 2010). One advantageous method that distinguishes this study from prior studies of personality and facial morphology is that it incorporates peer reports. To acquire peer reports, I asked targets to provide the email addresses of up to 10 peers (same-sex and opposite-sex friends; acquaintances from one's home town and college; current and ex-intimate partner; total peer sample: M age = 20.04, SD = 1.83). Of the 588 peer reports in the larger project, 208 corresponded to the 81 Caucasian targets in this particular study. The peers were emailed a link to a webpage where they were informed of the purpose of the study and were asked to provide reports regarding the dark triad. Key descriptive statistics for the peer reports are listed in Table 1.

The peers responded to questions about acquaintance level and target personality traits. Most peers reported knowing the targets quite well ($M = 7.32$, $SD = 0.99$, on a scale of 1 [not very well] to 9 [very well]). Peers completed custom measures of the dark triad as well as the MAPP-narcissism scale (Oltmanns & Turkheimer, 2006). To create custom measures of the dark triad, I wrote one item corresponding to each facet of the major theories of Machiavellianism (six facets; McHoskey, Worzel, & Szyarto, 1998, Table 1), narcissism, (four and seven facets; Emmons, 1984; Raskin & Terry, 1988), and psychopathy (four facets; Neumann & Hare, 2008). An example Machiavellianism item is "is strategic, manipulative about people". An example narcissism item is "has high vanity; is

Table 1
Descriptive statistics for self-reports and peer reports.

	Self-reports				Peer reports			
	Mach	Narcissism		Psycho	Mach	Narcissism		Psycho
Scale name	MachIV	NPI	MAPP	SRP-III	Custom	Custom	MAPP	Custom
Num. of items	20	40	11	64	6	11	11	4
Likert scale	1–6	1–2	1–5	1–5	1–9	1–9	1–5	1–9
Scale anchors	SDA-SA	Forced Ch.	0–100%	SDA-SA	SDA-SA	SDA-SA	0–100%	SDA-SA
Female targets								
Mean (*SD*), full sample	3.08 (0.57)	1.34 (0.17)	2.11 (0.49)	2.05 (0.39)	4.29 (0.76)	3.81 (1.02)	1.89 (0.49)	2.55 (0.82)
Mean (*SD*), sub-sample	3.02 (0.46)	1.32 (0.17)	2.02 (0.45)	2.00 (0.40)	4.23 (0.75)	3.84 (0.88)	1.91 (0.45)	2.58 (0.81)
Mean, Highest 10	3.53	1.58	2.38	2.52	5.07	4.96	2.36	3.44
Mean, lowest 10	2.61	1.19	1.54	1.53	3.48	2.78	1.39	1.87
α, full sample	0.84	0.86	0.76	0.90	0.22	0.85	0.85	0.59
α, sub-sample	0.78	0.88	0.73	0.93	0.00	0.75	0.83	0.15
ICC [1,1], sub-sample	na	na	na	na	0.55	0.18	0.70	0.35
ICC [1,k], sub-sample	na	na	na	na	0.81	0.42	0.88	0.64
Male targets								
Mean (*SD*), full sample	3.22 (0.50)	1.38 (0.16)	2.27 (0.52)	2.41 (0.37)	4.59 (0.79)	3.97 (1.06)	1.93 (0.55)	2.85 (1.11)
Mean (*SD*), sub-sample	3.23 (0.39)	1.36 (0.17)	2.13 (0.52)	2.38 (0.37)	4.38 (0.81)	4.10 (1.01)	1.91 (0.51)	2.77 (1.04)
Mean, Highest 10	3.48	1.63	2.64	2.63	5.25	4.90	2.30	3.84
Mean, lowest 10	2.89	1.25	1.74	1.92	3.81	3.29	1.52	2.08
α, full sample	0.76	0.83	0.76	0.89	0.13	0.84	0.85	0.65
α, sub-sample	0.65	0.86	0.76	0.89	0.19	0.84	0.89	0.41
ICC [1,1], sub-sample	na	na	na	na	0.12	0.38	0.94	0.64
ICC [1,k], sub-sample	na	na	na	na	0.36	0.71	0.98	0.88

Abbreviations: Forced Ch. = Forced Choice; ICC = Intraclass Correlation; SDA-SA = Strongly Disagree to Strongly Agree.
For targets, the full sample and sub-sample sizes were as follows: Females ($N = 117,48$); Males ($N = 92,33$).
The α values were based on the peer type from whom I obtained the most responses (opposite sex friends from college).