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Investigating the prosocial psychopath model of the creative personality: Evidence from traits and psychophysiology☆

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ABSTRACT

The prosocial psychopath model of creativity (Galang, 2010) proposes that some highly creative personalities share certain neuropsychological features in common with people who are described as having psychopathic traits. A key part of the model predicts that psychopathy-related traits such as risk-taking behavior and lowered autonomic response as measured by electrodermal activity (EDA) in the context of risk will be related to creativity. Three studies are reported here that show evidence for the model. The results of Studies 1 and 2 indicate that traits related to psychopathy, specifically Boldness, correlate with creative achievement. Study 3 demonstrated that reduced EDA lability during the Iowa Gambling Task (IGT; Bechara et al., 1994) predicted better divergent thinking scores. Together, studies support the basic claims of the model regarding the link between emotional disinhibition and creativity.

1. Introduction

The trickster, thief, and rascal are figures of myth that straddle both virtue and vice. Whether as a hero (e.g. Hanuman) or a villain (e.g. Loki, sometimes), tricksters appeal to audiences because of their ability to solve problems through cleverness, and always with liberal applications of skullduggery.

Interestingly, the last 50 years of trait investigations have turned up a cluster of findings that seem to indicate that the trickster is alive and well in contemporary culture. An early example from the empirical literature is the MacKinnon study of architects (1964) which found that eminent architects were higher on aggression scores from the Adjective Check List (Gough & Heilbrun, 1965) compared to their less accomplished colleagues, as well as being lower on traits such as Responsibility and Communality (among others) from the California Psychological Inventory (Gough, 1975). Much later Eysenck (1993) pursued a line of research implicating psychoticism in creative genius. The studies in intervening decades are neatly summed up by the meta-analysis conducted by Feist (1998) which shows the positive correlation between creativity and socially undesirable personality, which he labeled "hostility". And at the start of the new century, Silvia, Kaufman, Reiter-Palmon, and Wigert (2011) more or less replicate the above findings by demonstrating that HEXACO arrogance–dishonesty is correlated with creative achievement. The relationship between creative persons and disagreeable traits has been a clearly replicable finding despite its relatively weak effect size. While it is the case that creative personalities, when looked at in the round, are mostly well-adjusted and benign (Chavez-Eakle, Lara, & Cruz-Fuentes, 2006; Fredrickson, 2004), this only makes this wrinkle in the nomological fabric all the more interesting. The creative personality, it turns out, might be equal parts genius and deviant.

1.1. Social psychological explanations

In contrast to the surprising degree of agreement regarding the traits of highly creative persons, theoretical accounts differ as to the implications of this curious association. Feist (1998) (as cited in Weisberg, 2006) favors a social psychological view that posits these traits as instrumental to scientific eminence. It might be the case, according to him, that successful professional scientists are the ones who are able to arrogate priority and resources to themselves, and are able to cajole or coerce others into subordinating their goals to theirs.

While Feist gives us an interesting interpersonal description of how creative fields might normatively encourage disagreeable behavior, we are not given an account of the possible intrapersonal mechanisms that supplement the social dynamics that he describes. Such an explanation might be supplied by ingenious experimental work by Gino and Ariely (2012) and Gino and Wiltermuth (2014) on dishonesty and creativity. Their work opens up another theoretical possibility, one

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that hinges upon the capacity for self-justification. In pointing out the link between rule-breaking and creativity, they have been able to claim that a mindset geared towards dishonesty (a kind of social rule-breaking) can encourage creative thinking, since achieving divergent, original results is often the outcome of going beyond some social or professional convention (e.g. cubism as an innovation in painting is a style that intentionally violates rules of visual representation and perspective). This of course, suggests some degree of conflation between imagination and deception, which is not entirely unlikely. Further, they have suggested a mechanism that implies that the act of justifying a falsehood is an inherently creative act, or at least would benefit from divergent thinking. Therefore, a creative mindset facilitates dishonesty by helping the person fabricate plausible explanations for a lie that makes them feel less culpable. Both of these mechanisms seemed to be confirmed in experiments where it had been demonstrated that you could prime dishonesty through creativity (Gino & Ariely, 2012), and, conversely, that you could prime creativity through dishonesty or rule-breaking (Gino & Wiltermuth, 2014).

1.2. Biopsychological explanations

The studies above on social processes and social cognitions rightly highlight the social nature of creative activity. However, they do not incorporate the implications of findings from personality trait studies, which strongly suggest that the phenomenon goes beyond dishonesty and is not merely situational. This is precisely the conceptual space explored by Eysenck (1993) in formulating his biopsychological account of creative genius. It is readily apparent that his ideas are in the same tradition as that long line of investigations into creativity that approach it by way of psychopathology (Weisberg, 2006). Eysenck makes it clear that he does not think that mental disorder produces or is necessary for creativity. Instead, he puts forward a dispositional lack of inhibition at the cognitive and behavioral level that could account for both pathological traits and creative tendencies. Eysenck draws support from studies of schizophrenia, in which unusual ideation is a major cognitive feature. Here, persons form unlikely associations between seemingly unrelated concepts, which he called "broad associative horizon" (Eysenck, 1993). Pointing out that this parallels the kind of cognitive process often thought to underlie creative thinking (Mednick, 1962), he goes on to propose that a common set of biological and cognitive features can lead to either high psychoticism (and therefore psychopathology) or to creativity, or, in many cases, to both. It was Eysenck who suggested that the operational equivalent of the broad associative horizon might be found in the phenomenon of latent inhibition (Eysenck, 1993). Learning experiments in animals including humans have shown that previous learning, especially with regard to stimuli that are initially non-consequential, can hamper a later learning episode if the previously non-consequential stimuli was now relevant to what was supposed to be learned (Lubow, Schnure, & Rifkin, 1976). A common structure in a mouse experiment is to expose the subject to a sound (the pre-exposed stimulus, PES) until it becomes habituated. At a later time, this same stimulus will be paired with an outcome (i.e. punishment or reward). In subsequent testing sessions, it will be observed that the efficiency of learning the stimulus–outcome association is reduced compared to mice that had no PES exposure prior to the punishment training episodes. It has long been observed that persons with schizophrenia reliably show diminished latent inhibition effects (Lubow & Gewritz, 1995), but it was only with the work of Carson, Peterson, and Higgins (2003) do we get the first evidence that it is indeed related to creativity.

Taking its cue from the theoretical work of Eysenck and the more recent work on latent inhibition, the Prosocial Psychopath model was proposed as an attempt at an integrative explanation that could account for the constellation of socially undesirable traits, and also shed light on the nature of the creative personality (Galang, 2010). From the perspective of the model, both creativity and traits like dishonesty and arrogance could be the result of atypical social conditioning, which has its origins in developmental neurobiology. The dopaminergic system, in particular, is implicated in the literature of both phenomena. Some of the basic cognitive processes thought to underlie creative ideation, such as latent inhibition (Carson et al., 2003), have been shown to be strongly diminished by dopamine (Lubow & Gewritz, 1995), something that Eysenck (1993) clearly saw as having significant implications (remember that Eysenck thought that diminished latent inhibition helps explain the "broad associative horizon").

One thing in particular that the Prosocial Psychopath model adds to Eysenck's account is an explanation of how less socially-agreeable traits and creative tendencies might originate from common neuropsychological features. It does this by conceptualizing both as outcomes of disinhibition processes. While the case for cognitive disinhibition in creative personalities has already been made by Eysenck (1993) and others (Carson et al., 2003; Mednick, 1962), the novel claim is that in some cases this could also be concomitant with emotional disinhibition. Work on the neurobiology of behavior and decision-making indicates that affective mechanisms of inhibition are intimately tied to social learning processes (Damasio, 1994; Raine, 1997; Raine & Venables, 1981). Theoretically, a more disinhibited emotional disposition could lead to a personality that is less conditioned into following socially acceptable norms. This manifests either as bold risk-taking or callous antisocial behavior, which interestingly are hallmarks of the psychopathic personality (Hall et al., 2014; Patrick, Fowles, & Krueger, 2009).

A major link that ties cognitive and emotional disinhibition together with creativity is the dopaminergic system, which is suspected to play a role in the mechanisms described above (Bechara, H. Damasio, A. R. Damasio 2001, as described in O'Carroll & Papps, 2003) and also in the orienting response involved in both novelty and reward learning (Arias-Carrión & Pöppel, 2007). It is telling that the hypothesis just described is borne out by consistent findings that dopamine agonist therapy in Parkinson's patients is associated with both increased risk-taking on the one hand (Avanzi et al., 2008; Voon et al., 2007), and sudden propensity for creative activity on the other (Inzelberg, 2013; Schrag & Trimble, 2001; Walker, Warwick, & Cercy, 2006). In addition, hypersexuality has been consistently observed in Parkinson's patients undergoing dopamine agonist therapy (Klos, Bower, Josephs, Matsumoto, & Ahlskog, 2005; Vogel & Schiffter, 1983). This is notable since it has been argued elsewhere that creativity (in the arts at least) might be a courtship strategy that leads to mating success (Miller, 2001; Nettle & Clegg, 2006). Although the Prosocial Psychopath model has not yet articulated any explicit evolutionary claims, the interconnections between psychopathy and hypersexuality as mating strategy (Kastner & Sellbom, 2012) would seem relevant to any further theorizing.

The studies reported below represent our initial attempts to specifically link psychopathy-related personality and psychophysiological traits with creative tendencies. In particular, our objectives were to replicate the correlations with creative achievement using scales that specifically tap psychopathy-related traits and determine if, as predicted by the model, traits relating to emotional disinhibition would be associated with creativity. Further, we wanted to investigate whether these associations would also be observable in non-questionnaire data, which would be especially relevant to the biopsychological claims of the model.

2. Study 1

We sought to replicate the findings in the personality trait literature regarding the association of socially-undesirable traits with creative achievement by focusing on the Dark Triad traits of Machiavellianism, Narcissism, and Psychopathy (Paulhus & Williams, 2002). These personality dimensions are thought to be roughly orthogonal, but have also shown substantial overlaps with each other and with Big Five