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The Continuum of Conscientiousness: The Antagonistic Interests among Obsessive and Antisocial Personalities

Abstract: The five factor trait of conscientiousness is a supertrait, denoting on one hand a pattern of excessive labor, rigidity, orderliness and compulsivity, and on the other hand a pattern of strict rectitude, scrupulosity, dutifulness and morality. In both respects the obsessive-compulsive personality is conscientious; indeed, it has been labeled a disorder of extreme conscientiousness (Widiger et al., 2009). Antisocial personality disorder, in the present paper, is described as occupying the opposite end of the conscientiousness continuum. The antisocial is impulsive rather than compulsive, illicit rather than licit, and furtive rather than forthright. After clinically comparing the obsessive and antisocial personalities, the present paper invokes evolutionary theory to explain their resultant behavioral, ideological, political and demographic differences.

Key words: Obsessive, Antisocial, Personality, Conscientiousness, Evolution, Society

Introduction

Congenitally sensitive to stimulation and averse to risk, those exhibiting obsessive-compulsive personality disorder are oriented towards the maintenance of environmental homeostasis. The obsessive-compulsive person being dominated by *shoulds* and *musts* (Horney, 1937; Millon & Davis, 1996) is engaged in a perpetual battle against entropy and uncertainty. A Freudian analysis of the obsessive will find him suffering under the dominion of a punitive superego that demands conformity to high standards of ethics and morality (Pfohl & Blum, 1991). Again invoking Freudian theory, if the goal of life is to maximize pleasure and minimize pain, the obsessive spectacularly succeeds in the latter while, at most times, neglects even the pursuit of the former. In more modern parlance, the obsessive is loss averse. Obsessives intuitively think categorically and concretely. Where others see gradation, continuum and quantitative change, the obsessive sees thresholds, categories and qualitative shift. Because of their fearful temperament and their need for order, obsessives are more likely to identify with authority, crave authority and make sharp distinctions between

legitimate and illegitimate authority. Superordinate goals guide obsessive action and dominate obsessive thought; immediate pleasures are sacrificed to future ends and self-imposed standards characteristically trump natural desires. Pollak (1987) further describes the obsessive-compulsive personality in the following passage:

“Obsessive-compulsive personalities tend to be cheerless and sober. Gait and posture may be tight... They are viewed by others as diligent and hard working, particularly when it comes to activity involving attention to detail and tidiness, but, as an extension of this, they are also seen as rigid, unspontaneous, and pedantic. Preoccupied with order, efficiency, and strict adherence to rules and regulations, they are also perceived as perfectionistic and legalistic. They are also experienced by others as stubborn, willful, stingy, withholding and unimaginative.”

Mammon-like in greed, mendacious, malignant, malevolent, and Machiavellian, the vilified antisocial flouts his responsibilities and forsakes his obligations. The antisocial personality is cunning and wily, parasitic and exploitative; he is the Kokopelli of the American Southwest, the fox of Grimm's Tales and the snake in the Garden of Eden. Oriented towards maximal pleasure with only a vague awareness of potential pains, the antisocial explores the

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environment in search of opportunities. His superego is the runt of the litter, exerting little pressure to act in accordance with an inner code of morality. Indeed, Reich employs Freudian terminology to describe the antisocial as arising from a weak superego that “failed to gain expression,” and which in turn, allows the id greater input (Millon & Davis, 1996). The antisocial sees the other as a tool to exploit. He is flexible and protean, affecting and posturing while concealing his internal emotional state. The antisocial is tempted by material success and even the accolades of his fellows, and yet, he is often deficient in the self-discipline required to honestly attain them. Still, “only a minor subset of the antisocial personality pattern comes into conflict with the law. Many find themselves commended and reinforced in our competitive society, where tough, hard-headed realism is admired as an attribute necessary for survival” (Millon & Davis, 1996). As Pollak (1987) so aptly described the obsessive personality, Millon and Davis (1996) concisely describe the antisocial personality:

“...a callous concern for the feelings and needs of others; a persistent and gross attitude of irresponsibility, as evident in a disregard for prevailing social norms, rules, and obligations; though having no difficulty in establishing relationships, there is an incapacity to maintain them over extended periods; a very low tolerance for frustration and a low threshold for discharging aggression, including violence; an incapacity to experience guilt and to profit from troublesome experiences, particularly punishment...”

Simply juxtaposing these short descriptive passages is likely to elicit comparisons and make the reader ever more aware of how distinctly the obsessive and antisocial patterns diverge. The present paper contends that the antisocial and obsessive patterns have diametrically opposing interests, and so are antagonistic, occasionally in reality and perpetually in spirit. While conscientiousness is only one of the five factor traits, the present paper argues that conscientiousness is the principle self-defining feature of both personality patterns from which stem the lion’s share of observed differences in behavior, emotion and subjectivity. When researchers and clinicians define, describe and diagnose the antisocial or the obsessive pattern, it is implicitly the terminology of conscientiousness which is invoked. Again, while important distinctions between antisocial and obsessive behavior can be made when considering differences in extraversion and certain facets of neuroticism, it is their residence on opposite poles of the conscientiousness continuum that makes them truly opposite and antagonistic. Presently, these personalities will be reviewed 1) generally as they relate to research on conscientiousness, 2) with respect to goal attainment, and 3) through an analysis of the Hare Psychopathy Checklist. Thereafter, the discussion section will use alternative evolutionary etiologies to better understand why these patterns diverge so dramatically and discuss implications for their differential reaction to authority and social order.

Conscientiousness

One of five traits within Costa and McCrae’s lexically driven five factor model of personality, conscientiousness denotes an inclination towards, obligation, responsibility, labor and scrupulosity that is delineated into six facets: Competence, order, dutifulness, achievement striving, self-discipline and deliberation. “The trait of conscientiousness reflects the capacity for reliable work and enduring commitment...dependability in adhering to social contracts such as marriage, and tenacity in goal pursuit...” (Buss, 2011). Excessive conscientiousness causes the carrier to become “preoccupied with order, rules, schedules, and organization,” which in turn “undermines leisure activities” to the irritation of relations and friends...” Indeed, the extremely conscientious person is a “workaholic, sacrificing friends, family and other relationships for achievement or success.” Conscientiousness elicits a “rigid adherence to rules and standards” and a dogmatic fixation on “moral or ethical principles.” Finally, the highly conscientious person displays “rigid self-discipline and an inability to...relax”...or act with “spontaneity” (Widiger, Costa, and McCrae, 2009). The concordance between extended descriptions of conscientiousness and obsessive-compulsive personality disorder are striking. Indeed, the last five sentences in the preceding paragraph, taken from Widiger et al.’s (2009) description of conscientiousness, could be mistaken as a paraphrase of five of the eight criteria necessary for a diagnosis of obsessive-compulsive personality disorder: Conscientiousness seems to relate to criteria one (“preoccupied with details” and “order”), two (“shows perfectionism”), three (“is excessively devoted to work”), four (“is overconscientious, scrupulous and inflexible about matters of morality...”) and, to a lesser extent, eight (“shows rigidity and stubbornness”).

Other researchers, such as Warner et al. (2004) explicitly describe the relationship between obsessive personality and conscientiousness, stating that obsessive-compulsive personality disorder is associated with all facets of conscientiousness. Results of the Baltimore Longitudinal Study produced a “Confirmation of [the] expected” correlation between “obsessive-compulsive symptomatology with Conscientiousness.” (Widiger & Costa, 2002) Trull and McCrae (2009) state that conscientiousness “was positively related to obsessive-compulsive personality disorder...”

Measures of five factor personality traits, usually assessed through the NEO-PI-R (note that this assessment instrument as well as all others are described at length in Appendix I), sometimes elicit a ceiling effect when applied to clinically significant personality disorders. The obsessive-compulsive personality encounters such a ceiling in regards to questions that tap conscientiousness. Both obsessives and people that are simply conscientious might equally endorse items that assess, for instance, neatness and order, thus rendering the two groups indistinguishable. The relationship between obsessive-compulsive personality and conscientiousness is accordingly attenuated. Essentially, because five-factor personality inventories are designed

for the general population, they do not capture the clinical extremes of obsessive conscientiousness. As described by Samuel and Widiger (2011), the work of Haigler and Widiger (2001) extended the ceiling of the NEO personality inventory through scale manipulation; a process that successfully differentiated those with a modicum of conscientiousness from those with obsessive-compulsive personalities:

Haigler and Widiger (2001) experimentally manipulated each NEO PI-R conscientiousness item by adding terms such as “excessively,” “too much,” or “preoccupied.” It is important to note that they did not manipulate the NEO PI-R items to become indicators of OCPD, but rather, more maladaptive conscientiousness. For example, the item “I keep my belongings neat and clean” became “I keep my belongings *excessively* neat and clean.” They found that the original NEO PI-R conscientiousness domain correlated .27 with the OCPD scale from the SNAP (Clark, 1993), .15 with the Minnesota Multiphasic Personality Inventory–2 (MMPI-2) OCPD scale (Morey, Waugh, & Blashfield, 1985), and .02 with the PDQ-4 OCPD scale (Hyler, 1994). The experimentally manipulated conscientiousness scale increased the correlations with the OCPD scales to .69, .47, and .69 with the SNAP, MMPI-2, and PDQ-4, respectively.

More recently, more systematically and more conscientiously than all the above cited studies, Samuel & Widiger (2011) conducted an analysis of seven distinct measures of obsessive-compulsive personality disorder as they related to six distinct measures of conscientiousness. After reviewing their findings, Samuel and Widiger (2011) strongly demonstrate the association between conscientiousness and obsessive personality: “The results of the present study provide compelling support for this hypothesized link. The correlations ... demonstrated that the six conscientiousness-related scales correlate significantly with all but one OCPD scale, consistent with theoretical expectations” (Samuel & Widiger, 2011). Thus, obsessive personality does appear to be as Widiger et al. (2009) state, a “disorder of excessive conscientiousness.” On the other hand, conscientiousness was negatively related to “ATS [antisocial personality disorder]” (Trull & McCrae, 2009), an association that will be directly described.

In contrast to extreme conscientiousness, excessively low conscientiousness potentiates underachievement, “personal and occupational aimlessness,” a “disregard of rules and responsibilities,” and “trouble with the law” (Widiger, Costa, and McCrae, 2009). Without a modicum of conscientiousness, self-structure and goal persistence become impossible. Depressed conscientiousness limits skill acquisitions and inhibits the actualization of career goals. The person low in conscientiousness is “undependable, unreliable, and at times immoral and unethical.” He is likewise, “...aimless, shiftless, and directionless; has no clear goals, plans or direction in life; drifts from one job, aspiration, or place to another”. Without some degree of conscientiousness a person cannot engage in sustained employment nor can he curtail his “hedonistic” impulses (Costa & Widiger, 2009). There is a want of superordinate goals and an inability to perform distasteful subordinate tasks.

Just as the diagnostic criteria for obsessive personality can be transcribed into a description of excessively high conscientiousness, “the diagnostic criteria for ATS [antisocial personality disorder] essentially provide a set of behavioral examples of excessively low Conscientiousness” (Widiger, et al., 2002). Widiger and colleagues (2002) go on to describe the antisocial as lacking in perseverance and scrupulosity and as showing a reluctance to “plan ahead.” The antisocial is “untrustworthy and unreliable;” and antisocials “...frequently fail to meet or intentionally negate obligations of a marital, parental, employment or financial nature.” The antisocial, instead of being responsible, and far from being compulsive, is more often “aimless, unreliable, lax, negligent, and hedonistic” (Widiger et al., 2002). Decuyper and colleagues (2009) report that the antisocial personality is reliably low on the trait of conscientiousness, a consensus derived from a meta-analytic review of more than 26 independent samples. Miller, Lynam and Leukefeld (2003) found conscientiousness to be inversely related to antisocial traits. When looking individually at facet scores, the order facet showed no relationship to antisocial traits, but *competence, dutifulness, deliberation, achievement striving* and *self-discipline* showed a negative association with at least three of the five measures of antisocial personality administered in Miller et al.’s study. Likewise, Harpur, Hart and Hare (2002) state that “C [conscientiousness] must also rank as a dimension on which all practitioners would agree that psychopaths should score low.” Harpur et al.’s (2002) data suggests that antisocial characteristics include “irresponsibility, undependability, a lack of deliberation, and a lack of persistence.” They cite a broad pattern of “impulsivity” as definitional to the antisocial pattern. Of course the impulsivity of the antisocial is antithetical to the compulsivity of the obsessive, leaving these respective personality styles on opposite ends of the conscientiousness continuum.

Goal Attainment: Risk and Reward

Conscientious action entails, more than all else, subordination of the immediate will in service of the future object. The excessively conscientious person readily assumes responsibility and takes the long road in pursuit of the distant goal. Alternatively, those possessed of a negligible amount of conscientiousness will experience immediate gratification as irrepressibly tantalizing, while experiencing the distant reward as frustratingly out of reach. With obsessives being high in conscientiousness and antisocials being low in conscientiousness, it follows that the obsessive is distinguished by scrupulous dedication to future ends while the antisocial is distinguished by a hedonistic weakness for instantaneous satisfaction. Separated by temperament, the extraverted antisocial seeks to stimulate a chronically under-aroused nervous system, while the introverted obsessive seeks to shield a chronically overwrought nervous system: The antisocial acts, the obsessive contemplates; the antisocial seeks gain, the obsessive protects against loss; the antisocial

craves excitement, the obsessive craves predictability; the antisocial is erratic and incautious, the obsessive is anxious and fearful.

Exhibiting a restricted future orientation (Petry, 2002; Petry, 2006; Sher & Trull, 1994), displaying impulsivity (American Psychiatric Association, 2000), and discounting future rewards (Ostaszewski, 1997), the antisocial does not delay gratification to the same degree as normals and controls. Consequently, Sher and Trull (1994) consider antisocial personality disorder to constitute a “failure of self control” and refer to it as a class of “disinhibitory psychopathology.” Antisocials have been found to have reduced startle responses and reduced galvanic skin conductance, both of which physiological findings correlate with self-report data that suggests reduced experiential anxiety. Similarly, “...antisocials were slow to condition to warning signals of fear and were inclined to be unresponsive to painful stimuli...” (Millon & Davis, 1996). Using the Newman Card Playing Task, a test that offers increasing risk the longer it is played, antisocials have been found to desist later and thereby assume more risk than controls (Blair & Frith, 2000). These experimentally derived results are not simply an artifact of artificial laboratory conditions. Wang (2006) understands community based estimates of pathological gamblers to, in approximately thirty-five percent of cases, have antisocial traits or antisocial personality disorder. Similarly, the work of Slutske and colleagues (2001), suggests that the antisocial pattern is disposed to use and sometimes abuse games of chance. Constitutionally deterred from generating sustained efforts towards moderate rewards, the antisocial assumes risk as an alternative.

On the other hand, the obsessive mind is racked with anxious strain: “The constant presence of tension is so much a part of their everyday life that it is difficult to say where personality ends and where the anxiety symptoms begin” (Millon & Davis, 1996). What the antisocial experiences as stimulation, the obsessive experiences as anxiety. Accordingly, Chapman et al. (2007) describe the obsessive personality “...as an exemplar of a PD [personality disorder] that may be linked with aversion to risk.” In Chapman et al.’s research, those with an obsessive personality organization chose to avoid high stakes games that could provide ample rewards with correspondingly ample punishments. In contrast to control subjects who assumed, and thereafter maintained, only moderate degrees of risk, obsessive-compulsive participants progressively limited their risk of loss by continuing to choose more conservative gambles as the trials progressed: “OCPD individuals demonstrated a more precipitous drop in their choices from the risky decks toward the last trial of the task, suggesting that they may be particularly prone to the development of a conservative, cautious response style.”

An earlier study by Rosenwald (1972) is consistent with Chapman et al.’s work. Rosenwald’s experimental work with obsessives, under the heading of anal character, found that obsessives “processed more work” and “wagered less money in a betting task.” The obsessive, rather than seeking stimulation, seeks stability, routine and safety.

In essence, the obsessive, being burdened by an excess of conscientiousness, trains his compulsive efforts on distant, but assuredly attainable rewards, while the antisocial, lacking in conscientiousness, often dishonestly and immorally pursues the immediate, large payoff. Following this basic temperamental difference, antisocials and obsessives pursue different life choices and seek success in different ways. Proximally, these differences in conscientiousness and their resultant effects on goal attainment likely follow from differences in frontal lobe function. The frontal lobes enable executive functioning, which Morgan and Lilienfeld (2000) define as an “umbrella term that refers to the cognitive processes that allow for future, goal-oriented behavior.” Citing nine separate studies, Deckel, Hesselbrock and Bauer (1996) report, “that increased frontal left-hemisphere EEG activation was associated with a decreased likelihood of the diagnosis of ASP [antisocial personality disorder]...” Differences and deficiencies in antisocial frontal lobe function and executive control have been variously described by Völlm and colleagues (2004), Zeier and colleagues (2012) and Schneidera and colleagues (2000). Although Nelson et al. (1996) link obsessive harm avoidance to the serotonergic system and Joyce et al. (2003) link obsessive symptomology to the dopaminergic system, there is no body of literature describing obsessive frontal lobe functioning. Though there are no pertinent studies of obsessive frontal lobe function, the obsessive manifests a sort of perverse pleasure in delaying gratification, suggesting compulsivity that is every bit as marked as the impulsivity documented by imaging studies of the antisocial brain.

The Hare Psychopathy Checklist

Known for its reliability and parsimony, and long considered a standard in antisocial assessment, the Hare Psychopathy Checklist (PCL-R) uses twenty items to capture the antisocial pattern. Like other widely used psychopathy assessment measures, such as the Levenson Self-Report Psychopathy Scale (LSRP), the PCL-R shows a strong and negative correlation between psychopathy and conscientiousness (Lynam, 2002; Harpur, Hart & Hare, 1994; Widiger & Lynam, 1998). Though PCL-R items also relate strongly and negatively to agreeableness¹, marked reductions across several facets of conscientiousness, alone “...capture the aspects of psychopathy associated with impulsivity, lack of long-term goals, a failure to

¹ Both agreeableness and conscientiousness are necessary to capture the full breadth of responses on the PCL-R (Harpur, Hart & Hare, 1994; Widiger & Lynam, 1998). Not only on the PCL-R but across trait studies generally, agreeableness and conscientiousness seem to describe antisocial personality disorder at the domain level, whereas associations with the other three traits have to be analyzed more locally at the facet level (Derefinko & Lynam, 2006; Miller, Lynam, Widiger & Leukefeld, 2001). Nevertheless, in this section of the present paper, the focus will naturally be on conscientiousness and its relation to PCL-R items. Conscientiousness, having been broadly acknowledged to denote both industry and scrupulosity, seems to capture PCL-R items four to nine, eleven to eighteen and twenty. Others, like items two, three and ten, for example, more clearly load on other traits.

accept responsibility, and irresponsibility” (Miller, Lynam, Widiger & Leukefeld, 2001). Conscientiousness, or more precisely a lack thereof, is ever more apparent in PCL-R items when one recalls that conscientiousness is a *supertrait* denoting dutifulness and scrupulousness on one side and dedication and industriousness on the other. Consequently, it should not be surprising that the obsessive pattern, by virtue of its being so fully opposite and so eminently high in conscientiousness, is also in some sense captured by the PCL-R. Thinking of these traits on a continuum of conscientiousness, the antisocial would serve as the anchor on one end of the scale and the obsessive would serve as the anchor on the other. Accordingly, what follows is a stepwise theoretical commentary on the 19 of the 20 Hare Psychopathy items (item 19 is omitted because of its specific relationship to the criminal justice system) as they alternately relate to the obsessive personality pattern (unless otherwise specified, the following features of the obsessive pattern are taken from a collective reading of Pollak, 1987; Pfohl and Blum, 1991; Millon and Davis, 1996; McCann, 2009; and Hertler, 2013;2013b).

The obsessive is more often abrasive than charming (1. glib-superficial charm). Grandiosity, if present at all, simply manifests itself in punctuated bursts, which represent an aberration from the baseline of self-doubt (2. grandiose sense of self-worth). The obsessive personality has been defined by Gibbs Gallagher, South and Oltmanns (2003) as oriented around low sensation seeking. A creature of routine, the obsessive thrives on a structured and stable environment, showing a high tolerance for tedium (3. need for stimulation-proneness to boredom). As codified in DSM-IV criterion four (is over-conscientious, scrupulous, and inflexible about matters of morality, ethics, or values) the obsessive personality is disposed towards truth and an honest representation of his internal state (American Psychiatric Association, 2000) (4. pathological lying). The core of anxiety on which the obsessive personality is structured effectively prevents even the disposition to unethical manipulation (5. conning-manipulative). Self-inflicted psychological flagellation and excessive anxiety, guilt and shame swell in response to transgression (6. lack of remorse or guilt). Affect is felt strongly though expressed sparingly (7. shallow affect). The obsessive is fully capable of feeling empathy even though associated rigidity and dogma sometimes interfere with the experience of empathy and sympathy (8. callous-lack of empathy). Self-reliant, independent and hardworking, the obsessive requests succor only when the true pinch of necessity is felt (9. parasitic lifestyle). Characteristically overcontrolled, the obsessive only displays short bursts of behavioral dyscontrol under extreme circumstances (10. poor behavioral controls). Referring again to DSM-IV criterion four, the sedulous obsessive is more likely to restrict sexual activity within the confines of a monogamous relationship (11. promiscuous sexual behavior). Identification with, fear of, and respect for authority are traits of the obsessive manifested both early and late in life (12. early behavioral problems). Unable to enjoy the pleasures of the moment, the obsessive consistently adopts or creates demanding

long term goals under which he compels himself to serve (13. lack of realistic long-term goals). Governed by the shoulds, oughts and musts, the over-incorporative obsessive deliberates and ponders prior to acting (14. impulsivity). Consistent with obsessive personality being characterized as a disorder of excessive conscientiousness (Widiger et al., 2009), the obsessive responsibly fulfills obligations (15. irresponsibility) and often accepts responsibility for outcomes (16. failure to accept responsibility for actions). The need for stability, routine and support predisposes the obsessive to seek stability in a partner that is sanctified by an enduring marital relationship (17. many short-term marital relationships). There is no known relationship between the obsessive personality and early delinquency (18. juvenile delinquency); furthermore, misconduct of any sort would contradict the associated features of scrupulosity. Finally, the obsessive is neither criminal nor versatile (20. criminal versatility); rather, the obsessive is renowned for his rigidity and transparent honesty. In conclusion, using the Hare Psychopathy Checklist, with its ability to capture the trait of conscientiousness so many of its items, renders the obsessive and antisocial personalities ever more distinct and shows them to be diagnostically and temperamentally opposite.

Discussion

So the antisocial and obsessive personalities are opposites, occupying extremes on the conscientiousness continuum. On the trait of conscientiousness, these personalities are utterly different, as supported by clinical description, five-factor trait studies, and assessment instruments. In large measure, both are cited as disorders because, in residing at such extreme ends of the conscientiousness continuum, they are immoderate and imbalanced. Emanating from their respective statuses on the conscientiousness factor, obsessives and antisocials express extremely different amounts of planned behavior, with the former being contemplative, over-controlled, over-incorporative and compulsive and the latter being capricious, disinhibited, rash and impulsive. In and of itself, this observation has heuristic value and clinical utility. The obsessive and antisocial personalities are thereby differentially diagnosed with more confidence and, at the same time are individually identified with greater precision. But, why might they diverge so sharply?

The answer lies in the way of etiology; understanding why these personality styles diverge so significantly comes from understanding why they exist in the first place. The standard model of their origins is of course that they are both disorders, acquired more than born. First, by strict analytic orthodoxy, obsessive character arises through parental overcontrol and harshness during either the anal phase of development (Gay, 1989; Millon & Davis, 1996) or more generally throughout childhood (McCann, 2009; Eskedal & Demitri, 2006). Second, the antisocial personality is variously described as a disorder of emotional dysfunction, impulsive aggression (Blair & Frith, 2000), cortical deficiency (Völlm et al. 2004) or as a

failure of self-control (Sher & Trull, 1994) stemming from a synergy of diathesis and stress, with genetic predispositions to antisocial dysfunction being elicited by an abusive or impoverished environment (Cicchetti & Cohen, 2006). In both cases, there is an alternative evolutionary etiology, and it is through understanding these alternatives that studying the obsessive and antisocial side by side becomes more than a comparative exercise with clinical heuristic value. Understanding the obsessive and antisocial patterns, not as psychogenically acquired clinical disorders, but as evolved frequency dependent strategies brings about greater understandings. With this new focus they are no longer different disorders but competing strategies employing wholly different means in the struggle for existence. In this view, they become antagonists as opposed to mere opposites.

Antisocial Personality as an Evolved Strategy

Drawing upon previous work (Kenrick, Dantchik & MacFarlane, 1983; MacMillan & Kofoed, 1984; Kofoed & MacMillan, 1986; Harpending & Sobus, 1987; Cohen & Machalek, 1988), Mealey (1995) understands the antisocial or sociopath² to be an evolutionarily designed behavioral-affective pattern formulated specifically for exploitative exchanges with the larger population.³ In this way, the antisocial or sociopath preys upon the larger honest, conforming and laboring segment of society. Mealey asserts that the antisocial has evolved a blunted set of “secondary emotions,” enabling the antisocial to contemplate criminal acts unrestrained by anxiety, to execute them unchecked by empathy and to enjoy their fruits unhindered by guilt. To this triad are added sensation seeking and a roving propensity. These features elicit movement: As the rolling stone gathers no moss, so the roving antisocial gathers no reputation. The antisocial pattern is maintained by balancing selection,

specifically negative frequency dependent balancing selection (Penke, Denissen & Miller 2007), which means that its viability is dependent on its numbers. As too many express this antisocial pattern, it becomes less remunerative. As antisocial types wax, the remainder of the population wanes; and that remainder becomes ever more alert to exploitation. Thus, antisocial proportions are checked early on, unable to cross a population barrier beyond which lies the point of diminishing returns. As Mealey estimates, only about three to four percent of the population then is antisocial. It follows from this line of reasoning that the antisocial personality is not disordered; it is not mental pathology. These persons are functioning as they were designed to function. Though society at large disapproves of their impulses, deprives them of their freedom and deplores their behavior, antisocial persons are not exhibiting pathology (Mealey, 1995). Society thinks much the same of the mosquito and the leech; these are animals that disgust; pests to be smitten and eradicated. Nevertheless, from the detached Darwinian perspective, the parasitism of the leech is as wonderfully evolved as the speed of the cheetah. Though we deplore the former and laud the latter, each is an exquisite adaptation to its respective environmental niche. Like the leech and like the mosquito, the antisocial is parasitical, but instead of attacking other species, it attacks its own. There are precedents for this in the natural world. Most commonly, this intraspecific parasitism takes the form of mate poaching, as seen in small bodied and female mimics among salmon (Kenrick et al., 2002), small marine isopods, swordtails (Gross, 1996) and the ruff (Davies, Krebs, & West, 2012). Furthermore, there are fully fifty three bird species exhibiting intraspecific nest parasitism (Yom-Tov, 2008) and even some observations of intraspecific parasitism among social insects in particular species of ants (Buschinger, 2009), wasps (Buys, 2012) and bees (Alves et al., 2009).

² The term ‘sociopath’ appears in the title of Mealey’s paper. As she makes clear in the body of her text, the term sociopath is often used interchangeably with ‘psychopath’ and ‘antisocial personality disorder.’ Though some subtle distinctions are made, throughout the paper, Mealey uses the term sociopath inclusively to refer to the general pattern described by the American Psychiatric Association as antisocial personality disorder in the Diagnostic and Statistical Manual of Mental Disorders, fourth edition.

³ Stoltenberg (1997), like other critics of Mealy, and Mealy herself, understands the inheritance and basic genetic transmission of sociopathy to be a prerequisite for applying evolutionary reasoning. Of course, a phenotype cannot be selected for or against without an underlying genotype. While sociopathy has a heritable component, it seems to be a heritable disposition only, meaning that the pattern will not develop without certain environmental stimulation. For this reason, Stoltenberg believes that Mealey’s sociobiological explanation does not pass the aforementioned initial crucial test. So it is the potential for antisocial behavior, more than the behavior itself that seems to be reliably intergenerationally transmitted. This is consistent with the traditional understanding of antisocial personality as arising through diathesis and stress (Cicchetti & Cohen, 2006). An evolutionary understanding of antisocial personality disorder reinterprets the diathesis stress model. As in traditional models, there is still diathesis (constitutional, genetically based dispositions) and there is still stress (inconsistent resources and unreliable care giving, possible abuse and poor attachment). However there is this subtle difference: The diathesis is not a constitutional weakness that is expressed in the presence of stress, but the unfolding of a behavioral/affective pattern that is adapted to the circumstances of stress. As described by Brune (2008), the expression of the antisocial pattern does not signify dysfunction, but denotes the adoption of an alternative life history; one that is risky, independent and self-serving and thus congruent with the turmoil and inconsistency to which the antisocial was exposed early on.

The unfolding of the antisocial pattern is essentially an instance of human phenotypic plasticity. Phenotypic plasticity is not always present, but when present (as it seems to be with the antisocial), phenotypic plasticity can be “reversible or irreversible” (Travis, 2009). Examples of reversible phenotypic plasticity include changes in “mitochondrial density in terrestrial vertebrates in response to experiencing lower oxygen levels” as well as “changes in specific fatty acids incorporated into animal cell membranes in response to changing thermal conditions.” However, antisocial personality disorder, if it truly is an instance of phenotypic plasticity, is of the second kind; it is irreversible phenotypic plasticity. Examples of irreversible phenotypic plasticity in animals include spines and thickened carapace (the outer shells) in water fleas raised in the presence of “predatory fly larva” and the development of spines in certain species of acacia trees after they have been fed upon (Travis, 2009). The antisocial genotype seems to turn into the familiar antisocial phenotype in the presence of certain environmental cues during development. This understanding of the antisocial personality as a conditional strategy is not necessarily the view that Mealey originally had conceptualized, but it is one that maintains the integrity of the theory in the face of the criticisms made by Stoltenberg (1997).

Obsessive Personality as an Evolved Strategy

Standard psychogenic etiologies are contradicted by behavioral genetics research, which finds obsessive character to be highly heritable (.78) and not significantly influenced by parental rearing practices (Torgersen et al. 2000; Hertler 2013).⁴ Still, as Freud intuited, obsessive traits somehow belong together (Gay, 1989). An evolutionary etiology posited by Hertler (2013b) validates Freud's intuition, describing obsessive traits as "more valuable in aggregate than in isolation." In this view, obsessive personality is more aptly understood as a behavioral profile (van Oers & Sinn, 2013), a behavioral syndrome (Carere & Maestripieri, 2013) a coherent behavioral package (Nettle, 2006), or a suite of adaptations (Careau et al., 2009; Michalski & Shackelford, 2010). Just as blunted anxiety, empathy and guilt combine to enable the antisocial strategy, so do anxious tension, conscientious action and future oriented thought combine to enable the obsessive strategy. As humans migrated out of Africa into the temperate regions beyond, the relative force of selective pressures shifted from unpredictable density dependent factors, such as intraspecific competition, to predictable density independent factors, such as climatic stress. With northward migration, competition with others for the concentrated and accessible abundance of the tropics was replaced by the selective stress of an intensely seasonal environment that imposed predictable and prolonged periods of dearth and cold. Obsessive psychology is an adaptation to that shift in selective pressures (Hertler, 2013b). An ever-present feeling of urgency (Salzman, 1985), compulsive conscientiousness (Millon & Davis, 1996), sharp, future oriented attention (Shapiro, 1999; Salzman, 1985), and the propensity to conserve through miserliness and hoarding (American Psychiatric Association, 2013) are heritable psychological adaptations ensuring that times of easy living are used to prepare for times of hard living (Hertler, 2013b). Ever-present urgency, and the compulsive conscientiousness that derives of it, would be a liability in equatorial regions, inhibiting alliance formation, increasing stress, and expending energy to no purpose. Yet, migration opened up a niche, in which these dispositions and behaviors were eminently adaptive; and that niche was eventually filled by obsessive character. It follows from this line of reasoning that the obsessive personality is not disordered; it is not mental pathology. These persons are functioning as they have evolved to function. Clinically and socially, the obsessive is understood as a conspicuously imbalanced pathological extreme that subordinates love to work. Nevertheless, the nagging anxieties, the focused attention, the constant preparation and the reflexive labors of the obsessive represent an alternative to competing strategies, such as cheating, dominance, ingratiation and alliance formation. The obsessive occupies a niche in the

social landscape, one that narrows or widens depending upon environmental variables. The evolutionary logic of the obsessive strategy becomes more apparent in harsh environments where resources are scarce and scattered. In those environments that do not provide abundance and that do not support masses; in those environments where cold seasonally restricts vegetative growth; in those environments where pair bonding is of necessity; and in those environments in which population densities are not high enough to amply support the strategy of dominance and aggression or of deception and manipulation, obsessive numbers will rise.

Obsessives and Antisocials as Ancient Antagonists

Whenever strategies and interests diverge so dramatically, conflict will ensue. The obsessive bears the signs of such conflict in the form of vigilance and violence. First, obsessives are ever vigilant. As demonstrated by Morey, Grilo, Zanarini and Gunderson (2004), obsessives show elevations in "stress related paranoia." Risk averse (Chapman et al., 2007) and harm avoidant (Spinhoven, et al., 2009) obsessives display focused vigilance (Shapiro, 1999) that is likely responsible for the modest correlations between obsessive and paranoid presentations (Samuels & Costa, 2012). Second, obsessives, though characteristically over-controlled, are very occasionally violent. As demonstrated by Greve and Adams (2002), obsessives exhibit impulsive ejaculations of anger; fleeting aberrations from the general obsessive pattern of affective over-control, reserve, formality, and outward diffidence. Villemarette-Pittman et al. (2004) studied this trait further and labeled it "behavioral disinhibition." So, paranoia aids in threat detection, while behavioral disinhibition aids in threat deterrence; both are self-protective mechanisms 'acquired' as obsessives fended off predatory and parasitic encroachment, thereby ensuring the viability of the obsessive strategy of long term investment. Selective pressures would have naturally appended these features to the core strategy of future oriented action, which includes conservation, preparation, storage and acquisition. Without ever present vigilance and punishing fits of violence, the obsessive would have become a dominated strategy.

Again using the terminology of game theory, antisocial personality disorder is likened to a cheating strategy. The antisocial does not follow the rules of reciprocity and instead uses his capacity for dissimulation to mimic those that do (Harpending, 1987). As such, they blend into the crowd, wolves among sheep. With social stasis, communal living and a finite range, the antisocial has little chance of exploiting others more than once. At the first instance of exploitation, the antisocial would have earned a negative reputation from which he could not escape. Reprisal or banishment would follow. So while the

⁴ In contrast to the antisocial pattern which appears to be a conditional strategy dependent upon certain environmental stressors for its expression, the obsessive pattern appears to be a fixed strategy that invariably unfolds across various environmental contingencies (Hertler, 2013b). So, while the antisocial strategy is a single genotype resulting in one of two phenotypes, the obsessive strategy is a single genotype resulting in a single phenotype. Thus, the antisocial genotype shows moderate phenotypic plasticity, while the obsessive genotype shows little.

obsessive looks for treachery, the antisocial employs glib charm to avoid detection. And while the obsessive stays put, the antisocial roves so as to avoid repeated encounters, or iterative games

Reactions to Social Order

Using police forces, courts and penitentiaries, mature societies monopolize violence, restricting it to impersonal legal channels (North, Wallis & Weingast, 2009). To the extent that there is governmental law and order, society progresses from the state of nature to some variant of a Lockean version of social contract that guarantees the right to life, liberty and property. Thus, in the mature society, the viability of the obsessive's future oriented thought and proclivity for planning depend less on personal vigilance and violence, and more upon the predictability and safety conferred by the criminal justice system.

Stability is important for all and only assumes greater importance for the obsessive in proportion to his greater degree of future oriented planning and the acquisitions and holdings that come of it. Protecting private property is especially relevant to the obsessive who is more likely to save for tomorrow what might be used today. Much more than members of the general population, the parsimonious obsessive (Gay, 1989) hoards objects and conserves money in anticipation of "future catastrophes" (American Psychiatric Association, 2000). As discussed in Hertler (2013b), by protecting property and person, political stability and law makes the obsessive's conserving and hoarding propensity and the future oriented inclinations more strategically feasible; as Fromm said, it "fortifies" their "position." (Millon & Davis, 1996; page 484) After all, sowing a crop in the spring only makes sense if one can expect to harvest it in the fall. As a strategy, future oriented planning thrives in the soil of social stability; it is its natural manure. The obsessive then relies upon governmental order to secure the linkage between investment and reward. It follows from this that obsessives are "rigidly deferential to authority and rules and insist on quite literal compliance, with no rule bending for extenuating circumstances" (American Psychiatric Association, 2000).⁵ Obsessives want the law to punish violations with unwavering strictness so as to guarantee predictability, safety and order. The obsessive will gravitate to those conditions that enable the plausible maintenance of an extreme version, if not exactly in a belief in a just world, at least a belief in a world that is orderly and comprehensible. In sum, if the obsessive personality represents an evolved strategy predicated on honest labor and future investment, then it is not surprising that obsessives favor specified laws that are rigidly adhered to and which help make the obsessive strategy viable.

Low on conscientiousness, possessing little future oriented thought, impulsive and immoral, the antisocial flouts principles of justice and order and contrives to circumvent the laws that actualize these principles. The antisocial does not have the necessary degree of conscientiousness to plant the crop in the spring and so, cannot honestly harvest it in the fall. The "untrustworthy and unreliable" antisocial who "...frequently fails to meet or intentionally negates obligation of a marital, parental, employment or financial nature" (Millon & Davis, 1996) seeks to circumvent legal control. As instability, anonymity and space wax, so does the viability of a sociopathic strategy. Following such reasoning, Harpending (1987) predicts that antisocials will have some capacity for dissimulation; also, they will be more nomadic, changing social groups to avoid detection. Similarly, Mealey (1995) uses game theoretic models to delineate factors that enhance the success of the antisocial strategy, among these are: 1) large group size; 2) anonymity within a group; 3) low risk of cooperation; 4) high potential payoff for defection and 5) mild punishment for cheating and defecting. This form of social organization will allow the exploitative antisocial to anonymously navigate through a large, stable group from which much can be extorted and in which the antisocial can take solace that he will not be capitally punished should he misstep. In other words, the antisocial wants to play a series of non-iterative games with those who have been playing iterative games within a population of honorable opponents. In this way, the antisocial starts with an implicit foundation of trust built upon, not personal reputation, but the collective honesty of society, which has disposed the antisocial's adversary to cooperate with and trust others; the antisocial then leaves after exploiting the trusting opponent, thereby prohibiting retaliation (Mealey, 1995). With respect to game theory and evolution, the work of Mealey and others on antisocial personality is consistent with the work of Wilson, Near and Miller's (1996) work on Machiavellian character (descriptions of the antisocial and Machiavellian types overlap so greatly so as to be nearly synonymous). Not surprisingly, Wilson et al. understand "Machiavellianism [to be] similar to a defect strategy in evolutionary game theory, which is relatively quick to exploit more cooperative social strategies without provocation." Machiavellians also are described as prone to rove so as to avoid repetitious encounters (Dugatkin & Wilson, 1991). To external raters, those high in Machiavellianism were more convincing liars (Wilson et al., 1996). For the Machiavellian and the antisocial alike, self-interest dominates communion, competition dominates cooperation and the ends dominate the means. These character types subordinate empathetic affiliation to personal satisfaction, viewing others as vehicles with which to obtain desired ends or impediments

⁵ The obsessive's relationship to authority, as described by the American Psychiatric Association and other sources, is rather complex. As just described, obsessives are extreme in their adherence to established authority; they identify with it and sanction it to an extreme degree. On the other hand, they are sometimes just as extreme in hating and resisting authority. As described in Hertler (2013b) the obsessive will adopt one or the other of these extremes to the degree to which the established authority is just and predictable and guarantees the security of person and the right of property. In other words, the obsessive is only extremely obedient and supportive of the established authority to the extent to which it renders his strategy supportable. As authority becomes unreliable and ineffective, it fails to support the obsessive strategy; and as authority becomes corrupt and unjust, it directly undermines the obsessive strategy.

to those ends. Given the antisocial's close relationship to a defect strategy as per game theory, it is not surprising that he favors social systems and environmental circumstances in which reprisals, retaliation and punishment are infrequent and unreliably distributed. Computer models repeatedly show that only punishment controls the success of defecting programs; and the more reliably punishment for defection is dispensed the less viable defection becomes.

Because obsessive and antisocial interests diverge radically, their identification with, appreciation of, and integration into the modern social order will diverge radically. The obsessive will favor the accountability of transparency, justice, stability and simplicity; the antisocial will favor the shelter of opacity, inequity, disorder and complexity. Ironically, husbandry, and the permanent settlements that it enabled, seems to have created conditions necessary for the increased viability and proliferation of both the antisocial and obsessive patterns. In essence, modernity has bequeathed the gift of social order, through the aegis of the mature state, to the obsessive orientation; but to maintain the balance, modernity has bequeathed the gift of anonymity, through the aegis of the large city, to the antisocial orientation. In this manner, an ancient antagonism that had heretofore been exclusively unfurled informally within dyads and small groups was increasingly unfurled within the complexities of mature states with their just legal systems and anonymous cities. The modernization of society results only in the modification of this ancient antagonism. The rules are somewhat different, but the proportions, competing interest and antagonisms remain the same.

Future Research

Implicit in this theoretical track are a number of testable hypotheses that could potentially empirically demonstrate the divide between the obsessive and antisocial personalities. One might administer the Hare Psychopathy Checklist to a group of obsessive personalities to determine whether, as suggested, they sharply diverge from antisocial types on this measure.⁶ One could also, for instance, independently measure differences in mating, monogamy, divorce and commitment. However, in line with some of the above mentioned variables, future research should, above all else, begin to look for life history correlates. Life history is a branch of evolutionary biology that studies some of the following variables: age and size at maturity, number and size of offspring, lifespan and aging (Stearns, 1992; Stearns & Hoekstra, 2005). Only recently have subtle variations on life history traits, such in growth rates, sexual maturation rates and mortality schedules, been detected within the human population (Rushton, 1985; Rushton, 1987; Figueredo et al., 2005; Ellis, Figueredo, Brumbach

& Schlomer, 2009; Sherman, Figueredo & Funder, 2013). Interestingly, "conscientiousness may be particularly well-positioned to capture individual differences in life history" (Weiss & Adams, 2013, page 105). Moreover, it seems that there is some preliminary research connecting antisocial personality to fast life histories (Jonason, Koenig & Tost, 2010; Jonason, Webster, Schmitt, Li & Crysel, 2012; McDonald, Donnellan & Navarrete, 2012; Wenner, Bianchi, Figueredo, Rushton & Jacobs, 2013). There is, however, no research, theoretical or empirical, suggesting that obsessive character is marked by a slow life history. If this were to be established, the antisocial and obsessive personalities, with their residence on extreme poles of the conscientiousness continuum, would be understood as divergent strategies across the most basic and most profound of individual differences.

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⁶ In applying the Hare Psychopathy Checklist to a sample of obsessives, a ceiling effect might be observed. In other words, given the features of the scale, the obsessive might appear to be like all others who are not antisocial. As it stands, the features of the scale are not likely sensitive to the degree to which the obsessive and antisocial personalities diverge. Consequently, the scale might have to be adapted in order to, so to speak, raise the ceiling. This can be done by following the example of Haigler and Widiger (2001) who, as described in the literature review, altered a measure of the five factor model so as to minimize its ceiling effect when studying conscientiousness in obsessive personalities. It will be recalled that this scale manipulation greatly enhanced the correlation between conscientiousness and obsessive personalities and such might be the case with regards to the Hare Psychopathy Checklist

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Appendix I

1. Widely used and implicitly trusted, the NEO Personality Inventory Revised (NEO-PI-R) is understood to accurately operationalize the Five-Factor Model (Widiger & Trull, 1997). Both the development of the Five Factor Model and this measure of it are associated Dr. Paul T. Costa, Jr. and Dr. Robert R. McCrae. The NEO-PI-R is comprised of 240 self-report items loading onto thirty facets, which then load on five domains. The domains are the five factor traits of Neuroticism, Extraversion, Conscientiousness, Agreeableness, and Openness to Experience.
2. The SNAP, Schedule for Adaptive and Non-Adaptive Personality, is a personality rating form that is most formally referred to as the Schedule for Adaptive and Non-Adaptive Self-Description Rating Form (SNAP-RSF). The SNAP uses a "bottom-up" approach to personality assessment. The test is divided into the following fifteen categories: (1) Mistrust, (2) Manipulation, (3) Aggression (4) Self-Harm (5) Eccentric Perceptions, (6) Dependency, (7) Negative Temperament, (8) Exhibitionism, (9) Entitlement, (10) Detachment,

- (11) Positive Temperament, (12) Impulsivity, (13) Propriety, (14) Workaholism, and (15) Disinhibition. These fifteen traits load on one of three superordinate clusters: Positive Temperament, Negative Temperament or Disinhibition (Wilt, Schalet & Durbin, 2010).
3. The MMPI-II is the second edition of the Minnesota Multiphasic Personality Inventory; an assessment tool widely used in forensic, clinical and research settings (Cramer, 1995). The MMPI-II is at once a self-report measure and a personality measure. It asks directly about symptoms of common disorders, but it also has questions that, though they do not seem to be directly relevant to personality or pathology, reliably separate certain groups; for example, depressed from non-depressed persons or schizophrenic from non-schizophrenic persons. In this way, it was designed to distinguish between different disorders, thus aiding in differential diagnosis (Selborn, Ben-Porath & Graham, 2006). Aside from scales directly measuring pathology, the MMPI-II has other scales, such as the fake bad, lie, TRIN and VRIN scales, all of which in some way detect problematic responding. Thus, the MMPI-II is capable of detecting misrepresentations of any variety, whether intentional or unintentional.
 4. The PDQ-4 or Personality Diagnostic Questionnaire is a "screening measure of personality psychopathology" containing eighty-five statements that are rated as true or false by respondents. Being specifically dedicated to personality assessment it mirrors the categories found in the fourth edition of the Diagnostic Manual of Mental Disorders, which is a compendium of mental illness published by the American Psychiatric Association in 1994. With personality disorders as its focus, some have complained that it is biased towards false positives, finding personality disorders in more persons than expected (Taylor, James, Bobadilla & Reeves, 2008).
 5. The Newman Card Playing Task is a computer administered measure of perseveration and impulsivity and other forms of disinhibitory pathology. It is comprised of 100 computer-based cards often referred to as a deck. There are further similarities to real card playing decks: Though the number and proportion is different, the cards in the Newman Card Playing Task show letters, such as J for Jack, K for King and Q for queen. They also show the numbers 2 to 10 as in a traditional playing deck of cards. This task separates those that predominantly seek rewards from those that predominantly avoid punishment. It does this by systematically lowering the probability of winning. Players begin with a ninety percent chance of winning, which sinks to a ten percent chance of winning over the course of one-hundred trials. The loss and risk averse generally stop early; much earlier than sensation seeking impulsive types. (Newman, Patterson & Kosson, 1987; Shapiro, Quay, Hogan & Schwartz, 1988).
 6. As stated above, the PCL-R, otherwise known as the Hare Psychopathy Checklist-Revised, is a standard and well established measure of psychopathy. Hundreds of research papers have featured the PCL-R, often in the assessment of high sensation seeking, criminality, callousness and other antisocial personality features. As described in the text, this instrument consists of twenty items assessing traits such as manipulation, parasitic behavior, pathological lying, poor behavioral controls, lack of remorse and lack of empathy (Neumann, Johansson & Hare, 2013)
 7. The LSRP or Levinson Self-Report Psychopathy Scale, like the PCL-R with which it is correlated, measures psychopathy. It is designed to detect antisocial and psychopathic tendencies in the general non-incarcerated population using twenty-six self-report items. Accordingly, the LSRP used college students rather than inmates as its initial normative sample. Nevertheless, the LSRP has been shown to be effective at measuring psychopathy in clinical and non-clinical as well as incarcerated and non-incarcerated samples (Sellbom, 2011).